

A low-angle, action shot of three runners in motion on a wet cobblestone street. The runner in the foreground is wearing a white long-sleeved shirt, dark shorts, and white Nike Zoom sneakers with a prominent pink swoosh. The runner behind them is wearing a light blue shirt and grey shorts. The third runner is partially visible on the right, wearing a dark blue shirt and shorts. In the background, the ornate architecture of a large cathedral with a prominent dome is visible under a clear sky.

NIKE, INC. CHEMISTRY PLAYBOOK RESTRICTED SUBSTANCES LIST

GLOBAL SUSTAINABILITY — CHEMISTRY
November 2025 | Version 1.1



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2025 MID-YEAR CHANGE LOG

This change log provides information about the most significant changes to chemical limits in the Nike Restricted Substances List (RSL). It is not intended to be all inclusive.

CAS NO.	SUBSTANCE / MATERIAL	MODIFICATION	PAGE
Various	Per- & Polyfluoroalkyl Substances (PFAS)	- Updated test method for targeted PFAS analysis in textiles and other materials to EN 17681-1:2025. - The method for leather remains EN ISO 23702-1:2023. - Added method for polymers: EN ISO 23702-1:2023 using THF extraction followed by methanol precipitation (1:1) - Added total fluorine method: EN 17813:2023	<u>60</u>
3147-75-9	UV Absorbers	- Added UV 329 with a 1000 ppm limit due to its inclusion on the REACH SVHC list.	<u>71</u>
3896-11-5	UV Absorbers	- Dropped limit on UV 328 to 100 ppm due to new EU POP restriction.	<u>71</u>
Various	Volatile Organic Compounds (VOCs)	- Removed 2,4-toluene diisocyanate due to boiling point and analytical issues. - Included link to new AFIRM VOC Testing Guidance.	<u>73</u>
7439-92-1	Lead	- Dropped limit of lead in batteries or button cells to 100 mg/kg with laboratory limit of 10 mg/kg.	<u>97</u>

The background image shows three female athletes in motion within a gym. The athlete in the center is a Black woman with long braids, wearing a black and red Nike Pro Motion crop top and leggings, captured mid-stride. To her left, a white woman in a white and grey Nike Pro Motion outfit is also running. To the right, another Black woman in a bright pink Nike Pro Motion outfit is running. They are in a room with large arched windows and blue lockers in the background.

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ABOUT THE NIKE CHEMISTRY PLAYBOOK

From the early efforts of Bill Bowerman, NIKE, Inc.'s¹ original innovator, to our ongoing obsession with creating exceptional and innovative product, effective and responsible use of chemistry elevates Nike's product performance and shapes manufacturing on a global scale.

This legacy influences our perspective on the positive role chemistry plays in creating products for global athletes.

Chemistry is the foundation of our materials. We recognize that it must be effectively and responsibly managed to maximize its value and minimize risks. To accomplish this, we use a chemical prioritization strategy that integrates regulatory compliance with proactive efforts to scale cleaner chemistry and integrate chemistry into our business as points of innovation, opportunity and efficiency.

Through the adoption of cleaner chemistries, we aim to reduce the overall environmental impact of our chemical footprint by carefully selecting chemicals that align to Nike's internal standards and industry-aligned commitments.

We created the Nike Chemistry Playbook to communicate our cleaner chemistry strategy and to clearly define expectations for facilities.

KEY ELEMENTS OF THE PLAYBOOK

The Nike, Inc. Chemistry Playbook & Restricted Substances List highlights Nike's areas of focus:

- Impactful reduction of hazardous chemicals.
- How screening chemistries accelerates the adoption of cleaner chemistries.
- Our expectations for effective and responsible chemicals management within facilities.
- Why it's important to control chemical inputs in manufacturing facilities.
- Why output management, including wastewater and air emissions, is essential for chemistry.
- Chemistry compliance guidance for all materials, products and packaging associated with Nike.

¹ Nike, Inc. or Nike means NIKE, Inc. and its direct and indirect subsidiaries, which include portfolio brands and divisions such as NIKE Brand, Jordan Brand, and Converse.



OUR VISION

REDUCE DISCHARGE OF HAZARDOUS CHEMICALS



We believe in a fair, more sustainable future — one where everyone thrives on a healthy planet and level playing field.

OVERVIEW

Reducing discharge of hazardous chemicals is a core component of our company vision and Nike's journey to help protect the future of sport. In chemistry, we support this vision by ensuring strong compliance requirements across our supply chain and by adopting cleaner chemistry alternatives for priority chemicals.

This aspiration requires significant levels of innovation and collaboration — especially in the field of chemistry. To achieve our vision, new projects and continuous collaboration will need to be defined. Our agile, evolving process will continue through robust, data-driven targets and strong industry collaboration.

OUR CHEMISTRY STRATEGY

It is a complex process to select cleaner chemistries for a project. Nike's chemistry strategy targets priority chemicals to achieve the greatest impact.

To set criteria for our strategy, Nike chemical experts consider the health and environmental impacts of the individual chemicals and chemistry mixtures. Our global teams also track the regulatory landscape and new scientific findings where needed. Finally, we look at the scenarios of use, which include volumes, types of application and the availability of alternatives to set realistic targets for the future.

These criteria, and the values that underpin them, enable Nike to efficiently pursue ongoing improvements in priority chemical substitution and/or removal. This allows us to pilot new technologies that may not have been feasible in the past. Chemistry shapes our innovation projects, and these projects represent the future of our supply chain.

KEY ELEMENTS IN ACHIEVING NIKE'S VISION

1. Proactively assess chemicals, identify their impact, and minimize or eliminate the use of less preferred chemistries.
2. Phase out or reduce priority chemistries throughout our innovation pathway and our supply chain.
3. Evolve the use of cleaner chemicals across the industry.
4. Advance cleaner chemistry by evolving upstream visibility to create a verified chemical footprint across key facilities.



THE CHEMICAL UNIVERSE

When Nike innovates new materials and methods of make, we may find chemicals that are cleaner and perform better than those currently in use. Conversely, during our exploration, we may encounter chemistries that should be avoided. To advance cleaner chemistry, Nike performs a chemical assessment to review incoming chemistries against many different criteria.

Many chemistries, however, lack complete data about their characteristics. To achieve Nike's vision of a cleaner chemistry future, we need to continuously find a wider scope of scientific data and better tools to view and share information. That's why Nike collaborates with other companies and scientific experts to develop methods that enable informed, risk-based decisions.



CHEMICALS IN THE NIKE SUPPLY CHAIN

In Nike's supply chain, there are an estimated 4,000 chemicals potentially in use in a wide number of formulations.

CHEMICAL HAZARDS

Nike performs chemical assessments to review incoming chemistries against many different criteria. Continuous improvement of processes and materials drives the use of cleaner chemistries.

CHEMICALS ON THE NIKE RSL

The Nike Restricted Substances List (RSL) restricts hundreds of chemicals that have been regulated or voluntarily phased out of our manufacturing processes. These chemistries are tightly controlled to minimize their use in the supply chain.



CHEMICAL PHASE OUTS & REDUCTIONS

Nike continues to advance better chemistry alternatives by phasing out substances of concern and finding technically and economically feasible alternatives. Many chemical substances listed on the Nike RSL are being phased out or have already been eliminated from use; however, they remain in our testing program to avoid unintentional use.

Table 1 highlights chemical phase outs that Nike has recently completed as well as ongoing phase outs still in flight.

Table 1.

CHEMICAL PHASE OUTS & REDUCTIONS IN NIKE'S SUPPLY CHAIN

CHEMICAL SUBSTANCE / CLASS	PHASE OUT APPLICABILITY	CURRENT STATE
PFAS Substances	Prohibited from use.	Completed — monitoring phase
Zinc Pyrithione	Prohibited from use.	Completed — monitoring phase
PVC Materials	Prohibited from use.	Completed — monitoring phase
Dimethylformamide (DMFa)	All uses of DMFa in synthetic leather and PU skins.	Continued reductions through Nike RSL Testing Program; projected 2030 completion
Dicumyl Peroxide (DCP)	All EVA foams used in footwear are DCP-free.	Projected 2026 completion
Bisphenols	Prohibited from use in thermal receipt papers in all Nike-owned and operated facilities.	Projected 2027 completion



A NEW APPROACH TO ODOR MANAGEMENT

At Nike, serving the athlete* and creating the future of sport drives us to innovate — to find effective solutions for demanding challenges by applying creativity and technical knowledge in ways that advance the performance of materials and products. Importantly, we are incrementally embedding sustainability into our approach to innovation.

Innovation teams at Nike looked at odor management from a new perspective, focusing on odor molecules rather than the microbes that produce them. This shift in thinking enabled the teams to deliver a finish that reduces odors without having to use antimicrobial technologies.

Nike product teams have also taken a close look at where we use odor management chemistry and evaluated its necessity. In cases where we have eliminated the treatment, we are still able to provide the product performance athletes need.

This approach will help keep more chemistries out of the supply chain and wastewater, and will help reduce impacts across the product life cycle.

* If you have a body, you are an athlete.





FORMAMIDE REDUCTION IN YOGA MATS

Formamide can be a byproduct from certain blowing agents used in EVA manufacturing processes. Formamide is tightly regulated, as reflected in the Nike RSL.

Nike continually looks for opportunities to reduce undesired chemical usage in products. We worked with our supply chain partners to reduce formamide in EVA foam materials, such as in Nike yoga mats.

Material quality, weight and texture are critical to yoga mat performance. Thanks to the expertise and diligence of facilities, we created a new material that reduces potential formamide by more than 75%.

We are proud of the outcome achieved in our yoga mats. Nike's commitment to sustainable chemistry enables us to offer the best products possible to athletes while outpacing legislated requirements.





USING BETTER SOLVENTS IN FINISHED-GOODS FACTORIES

Nike's work to address the use of petroleum-based solvents within manufacturing has a decades-long history: Between 1995 and 2014, Nike reduced solvent use by 96% per pair of shoes through the adoption of water-based adhesives. (See Figure 1.) While our progress in footwear manufacturing has been significant, we know there is still opportunity for improvement.

As part of Nike's 2025 Cleaner Chemistry targets, we have looked for opportunities to meet our 10% solvent reduction target for inks and paints by reviewing models, production numbers and solvent fractions in key areas — including in inks and paints applied to footwear.

We have worked with other brands to achieve alignment on the industry-wide management and restrictions of certain solvents listed in the Nike RSL and ZDHC MRSL.

GUIDANCE FOR CLEANER SOLVENTS

Facilities must limit excess solvent usage in all applications and pursue water-based alternatives and other solvents that are considered cleaner alternatives.

- **ZDHC Responsible Solvents Approach Guide.** This guide supports the industry as it transitions towards safer alternatives for solvents.
- **Water-based Solvents.** Whenever possible and feasible, Nike prioritizes water-based over petroleum-based solvents due to their safer chemical hazard profile. Water-based solvents

include a liquifying agent that takes the form of water and therefore have lower volatile organic compound (VOC) emissions. They are also a preferred alternative for workers' health and safety.

- **Other Preferred Solvents.** Not all petroleum-based solvents are equal from a hazard perspective. Using Nike's chemical assessment process, we have identified certain solvents that are preferred over those that are more hazardous. Examples of petroleum-based solvents Nike prioritizes as better alternatives are listed in Table 2, on the next page.

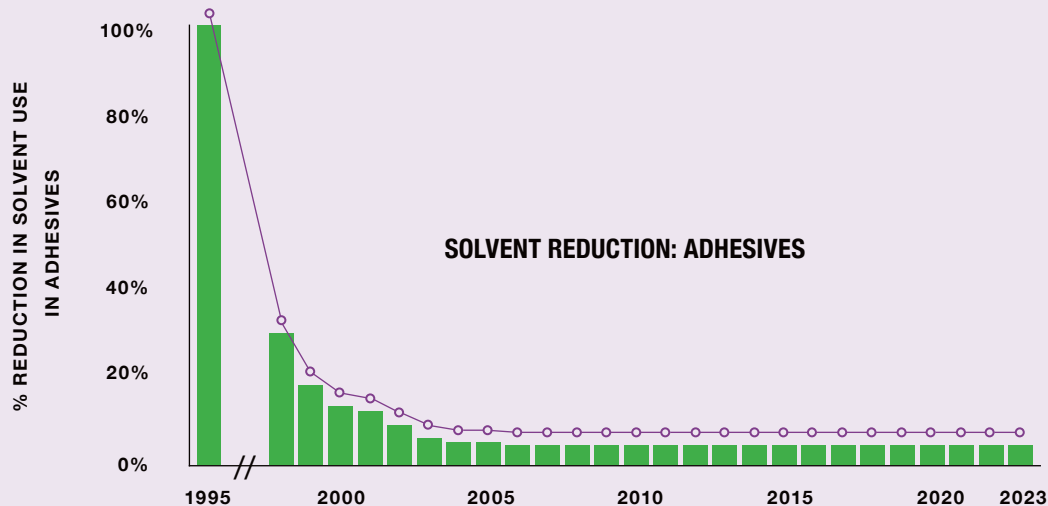


Figure 1.
REDUCTION IN THE USE OF PETROLEUM-BASED SOLVENTS FROM 1995 – 2023 IN NIKE FOOTWEAR

By adopting water-based adhesives, Nike has reduced solvent use by 96% per pair of shoes since 1995.

Looking forward to 2025, we are actively driving a further reduction of 10% in the amount of solvents used in inks and paints applied to footwear.



Table 2.

NIKE-PREFERRED SOLVENTS

Disclaimer: Nike takes no responsibility for the use of these solvents in particular products or processes. Whether a solvent is appropriate for use should be assessed on a case-by-case basis and for each specific jurisdiction where the facility is located. This is not an exhaustive list of all solvents that may be suitable for use in products. Additionally, the solvents listed have not been deemed harmless to the workers interfacing with them. Facilities should conduct a thorough exposure assessment to quantify the risk, based on the application. For more information on the exposure assessment process or additional preferred solvent lists, please review the [Nike Industrial Hygiene Playbook](#) and the [ZDHC Responsible Solvents Approach Guide](#).

	CAS NO.	SUBSTANCE
1	110-98-5	1,1'-Oxydipropen-2-ol
2	6920-22-5	DL-Hexane-1,2-diol
3	107-88-0	Butane-1,3-diol
4	504-63-2	Propane-1,3-diol
5	629-11-8	Hexane-1,6-diol
6	100-79-8	2,2-Dimethyl-1,3-Dioxolane-4-methanol
7	56539-66-3	3-Methoxy-3-methylbutan-1-ol
8	1117-86-8	Caprylyl glycol
9	143-28-2	(Z)-Octadec-9-enol
10	25265-71-8	Oxydipropanol
11	24800-44-0	Tripropylene glycol
12	112-60-7	Tetraethylene glycol
13	1569-01-3	1-Propoxypropan-2-ol
14	107-41-5	2-Methylpentane-2,4-diol
15	102-76-1	Glycerol triacetate

	CAS NO.	SUBSTANCE
16	110-27-0	Isopropylmyristate
17	123-95-5	Butyl stearate
18	763-69-9	Ethyl 3-ethoxypropionate
19	108-32-7	Propylene carbonate
20	1119-40-0	Dimethyl glutarate
21	627-93-0	Dimethyl adipate
22	106-65-0	Dimethyl succinate
23	97-64-3	Ethyl lactate
24	14035-94-0	Dimethyl methylglutarate
25	55934-93-5	Tripropylene glycol n-butyl ether
26	108-32-7	Propylene carbonate
27	8001-79-4	Castor oil
28	56-81-5	Glycerol
29	8042-47-5	White mineral oil, petroleum
30	9004-74-4	Polyethylene glycol monomethyl ether



ELIMINATING PER- & POLYFLUOROALKYL SUBSTANCES (PFAS)

DURABLE WATER REPELLENT FINISHES

Nike began removing per- and polyfluoroalkyl substances (PFAS) from our supply chain in 2015 when we phased out C8-based durable water repellent (DWR) finishes. We kept pushing, making the bold commitment to convert to entirely PFAS-free DWR finishes. We're proud to have met our goal and, as of 2022, all DWR finishes used in Nike products are entirely PFAS-free.

Achieving our PFAS goals while meeting our performance requirements wasn't easy. To find solutions, we brought partners from across the supply chain — chemical facilities, material mills and factory teams — to the table. Through these collaborative efforts, we completed our transition to PFAS-free DWR finishes.

PTFE MEMBRANES

The final phase of our transition to remove PFAS from materials has been the conversion of polytetrafluoroethylene (PTFE) membranes. These membranes were used in a variety of water resistance applications in apparel and footwear. All PTFE-based membranes have been converted to PFAS-free materials, and all PFAS use is prohibited in production.

Nike is proud of its diligent work to reduce PFAS use in our industry. The project has validated the need to have a prospective view of sustainable chemistry, looking for opportunities to improve before regulatory mandates take effect. Because of early work to remove PFAS from our supply chain, we are well positioned to comply with upcoming regulations.

Nike updated its RSL and testing requirements to align with regulations that focus on total organic fluorine instead of targeted PFAS chemicals (such as PFOA or PFOS). We are tracking test data closely as part of our continued efforts to work with material facilities to help enable compliance.



A female athlete with short blonde hair is sitting on a red metal bench against a grey concrete wall. She is wearing a white Nike football jersey with 'NIKE' printed across the chest, white pants, and red Nike sneakers with white socks. She is also wearing white shoulder pads and arm pads. Her right leg is bent and resting on a white football helmet on the ground. Her left arm is resting on the bench.

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FOUNDATIONAL EXPECTATIONS

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OVERVIEW

At Nike, our Code of Conduct (Code) states that chemicals must be managed properly. Using compliant chemistries is just part of the journey facilities take to make RSL-compliant materials and finished goods, and to enable compliance with wastewater and air emissions guidelines. From the procurement of chemical formulations to handling, storage, use, and output management, chemistry must be managed properly and safely at every step.

From the first page of the Code, our expectations are clear:

At Nike, we believe that while there is no finish line, there is a clear starting line. The Nike Code of Conduct (Code) and Code Leadership Standards (the CLS) lay out the minimum standards we expect facilities to meet. These minimum standards are integral to Nike's supplier strategies — how we evaluate baseline performance and determine the suppliers we will continue to engage with as we grow our business. We work with suppliers that share our commitment to the welfare of workers, use natural resources responsibly and efficiently, manage their businesses responsibly and sustainably, and seek to move beyond the minimum standards.

Standards for chemical management are outlined in Nike Code Leadership Standards (the CLS), section 10, Chemicals Are Managed Properly CLS, followed by specific details on how facilities are expected to meet requirements:

The facility demonstrates a consistent, effective, and legally compliant approach to chemicals management. This approach guides procurement and the proper handling, storage, use, and disposal of chemicals to mitigate chemical risk to people and planet.

Download Nike's Code and CLS, available in multiple languages.

- [Nike Code of Conduct](#)
- [Nike Code Leadership Standards](#)



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OVERVIEW

The Chemicals Are Managed Properly CLS outlines the specific features of a consistent, effective, and legally compliant chemicals management program:

- Assigning a team/staff member with the authority to implement and maintain the chemical management system.
- Robust chemical procurement policy.
- Accurate, up-to-date electronic chemical inventory.
- Definition and documentation of storage, handling, use, and disposal requirements for chemicals.
- Identification of restricted substances and a strategy to manage them.
- Training for all employees who work with chemicals.
- Proper access, use, and maintenance of safety data sheets (SDSs).
- Proper use of personal protective equipment (PPE).
- RSL compliance for all materials and products.
- MRSL conformity for all chemical formulations used in production.
- Connecting with Nike using the Zero Discharge of Hazardous Chemicals (ZDHC) Gateway.

The Nike Chemistry Playbook goes far beyond the Code and CLS to fully explain Nike's chemistry requirements, along with an overview of the tools, guidelines, and trainings facilities must use to meet Code requirements.



APPROACH

Nike continues to implement ZDHC's sustainable chemicals management (SCM) approach by scaling Chemical Management System (CMS) and Technical Industry Guidance (TIG) trainings as well as the ZDHC Supplier to Zero (StZ) program as core elements of establishing and maintaining a best-in-class chemicals management program.

The ZDHC SCM framework aligns with Nike's Code and CLS requirements while further strengthening alignment across global supply chains, which is critical in facilities manufacturing products for multiple brands.

We aim to help build chemicals management capability in Nike's supply chain, enhancing resilience to enable rapid evolution within an evolving regulatory environment.

MEASURING COMPLIANCE

We actively measure the effectiveness of facilities' chemicals management programs. Examples of how we measure conformity to our chemistry standards are described below and may vary by production process, scale of production, and the intensity of the chemical processing in use.

- Review of RSL test results.
- Review of ZDHC manufacturing restricted substances list (MRSL) conformity and chemical inventory information.
- ZDHC Wastewater testing results.
- Facility assessment results from third-party tools such as the Higg Facility Environment Module (Higg FEM) and the Social & Labor Convergence Program (SLCP).
- Review of ZDHC StZ completion.
- Chemical assessment information for new chemicals when applicable.

Issues identified in these programs and measurement systems are resolved through corrective action and remediation programs, and can directly impact the overall facility compliance rating.

ACCELERATING THE PACE OF CHANGE USING A COLLABORATIVE APPROACH TO CHEMICALS MANAGEMENT

Nike believes an industry approach is a critical lever to drive a positive impact for people and the planet. We will continue to deepen our relationships with organizations that enable facility ownership and scale industry change. Nike currently uses the Higg Facility Environment Module (Higg FEM) to help assess and verify information from facilities and in-scope material suppliers for foundational environmental performance practices. As the Higg FEM evolves over the coming years we intend to scale even further.

We encourage all facilities — even those with facilities not currently in scope — to engage in the Higg FEM and utilize the assessment outcome to catalyze improvement in environmental operations and environmental sustainability strategy.



EXPECTATIONS

We have five expectations for facilities, as described below:

1. Compliance with Nike's Code & CLS

Our Code requires all facilities working with Nike to manage chemicals properly, safely, and transparently. Nike currently uses the Higg FEM, the SLCP, and ZDHC Wastewater guidelines to help assess facilities on chemical compliance and other CLS impact areas. These requirements are covered in Nike facility agreements.

2. Compliance with the ZDHC MRSL

Nike is committed to using ZDHC MRSL-compliant chemical formulations throughout our supply chain and expects facilities to comply with the most up-to-date version of the MRSL. Facilities are expected to:

- Select and purchase chemicals that meet ZDHC MRSL Level 1 at a minimum, conformity requirements, with a preference for ZDHC Level 3 MRSL conformity whenever possible.
- Identify and segregate from use any chemical formulation or process chemical that does not comply with the ZDHC MRSL.

For more information about MRSL conformance, check out [ZDHC MRSL Conformance Guidance](#).

3. Compliance with the Nike RSL

All materials used to make our products must meet Nike's RSL requirements. Facilities that underperform against the Nike RSL will see an impact to their Manufacturing Index (MI) rating, a factory rating system devised to help Nike more effectively select and evaluate manufacturing facilities. Facilities are expected to:

- Perform routine and random testing as described in the Nike RSL.
- Comply with the Nike RSL and all local and global regulatory requirements on chemical substances in materials and finished goods.

USING THE HIGG FEM

As a founding member of the Sustainable Apparel Coalition (SAC), now known as Cascale, Nike was actively engaged in creating the Higg FEM. As new versions are released, Nike continues to advocate for greater industry-wide adoption.

Similar to other components of The Higg Index, the FEM is a self-assessment tool that measures and guides sustainability performance in a structured way, with a focus on chemicals management, energy, water, and waste.

ZDHC SUPPLIER TO ZERO PROGRAM

We encourage facilities to take advantage of the ZDHC StZ program to strengthen chemical management capabilities. To engage in the StZ program, please follow these steps using the embedded links:

- Register your facility on [The ZDHC Gateway](#).
- Once registered, [send a connection request](#) to Nike from the ZDHC Gateway.
- Use the ZDHC Gateway login credentials to [access the StZ program](#).

If you need assistance from Nike to make a connection or to request a ZDHC token for the foundational level StZ program, please contact ChemManagement@nike.com.

SOCIAL & LABOR CONVERGENCE PROGRAM

Nike adopted the Social & Labor Convergence Program (SLCP) assessment process to observe compliance with foundational expectations.

Like the Higg FEM, SLCP is a self-assessment tool that uses a third-party verifier to confirm onsite conditions at a facility. The SLCP assessment includes a section dedicated to chemical management practices that are mapped to Nike CLS requirements.



- Identify and segregate any material, component, or product that does not meet Nike RSL requirements.
- Complete the RSL failure resolution process within the Nike RSL Testing Application for all RSL failures, including detailed documentation of the root case and corrective actions taken.

See the Nike Restricted Substances List section of the Playbook for more information.

4. Compliance with the ZDHC CMS & TIG

Guidance in the 2025 Chemistry Playbook regarding ZDHC CMS and TIG supercedes all previous chemicals management instructions. ZDHC guidelines such as the CMS and TIG are aligned with Nike and Higg FEM assessment requirements and offer advanced training options in many regions to support capability improvements globally. All facilities must use the CMS and TIG as the basis for a robust chemicals management program.

5. Completed chemical assessments for all new innovation processes and chemistries

Every chemistry decision comes with an opportunity to innovate. Nike uses our chemical assessment process to accelerate innovation and reduce risks for human health and the environment by working with project teams and engaging with chemistry, health, safety, and environmental experts at early phases in a project's life cycle. Introducing new materials, new manufacturing processes or new chemistries requires a Nike chemical assessment. The assessment compares and ranks the proposed chemistries to benchmark chemistries currently in use. If a chemical is flagged as being of concern during the process, the Nike Chemistry Team works with Nike teams and chemical manufacturers to find better chemistry alternatives.

This assessment also applies to materials when the processing chemistry changes. For example, if a new material uses RSL-compliant yarns and existing knitting machines, but has a different construction, no chemical assessment is needed.

However, if a facility uses a new catalyst for polyester, the material must go through the chemical assessment process.

Performing chemical assessments early in the innovation cycle enables us to collaborate with our supply chain and internal teams to find better chemistries that support our sustainability and safety goals.

Facilities, Nike teams, and Nike affiliates can request a chemical assessment, which is performed in one of two ways:

- **DISCLOSURE TO NIKE (PREFERRED)**
Under the protection of a non-disclosure agreement (NDA), facilities can provide all CAS numbers and concentrations of chemicals in their products and materials to the Nike Chemistry Team so they may perform the chemical assessment. Once the Nike Chemistry Team receives the required results, the team meets with the facility to review them and discuss any red flags as well as next steps.
- **DISCLOSURE TO AN INDEPENDENT CONSULTANT**
The facility may choose to work directly with a Nike-approved third-party toxicology consultant. With this approach, Nike receives a redacted report indicating any areas of concern and works directly with the facility to address any identified issues.

QUESTIONS?

For more information on the chemical assessment process or to request a chemical assessment, reach out to the [Nike Chemistry Team](#).



ZDHC FOUNDATION ROADMAP TO ZERO

A key element in the journey for our supply chain is understanding the ZDHC Roadmap to Zero (RtZ) Program. The CMS, the TIG, the MRSL, and the ZDHC Wastewater guideline are all part of this program.

ZDHC was founded by Nike and a small number of other brands in 2011. Today, ZDHC has evolved into a center of excellence for chemicals management and works directly with many stakeholders including brands, facilities, chemical suppliers, NGOs, and academia. ZDHC provides a wealth of information, and all facilities should take advantage of these resources. Access to everything that ZDHC offers begins by simply connecting your facility to ZDHC (How-to is detailed later in this Playbook). Examples of the guidelines, tools, and trainings available through ZDHC include:

- MRSL Guideline — chemical limits in input formulations
- ZDHC CMS framework
- ZDHC TIG on how to manage chemicals
- ZDHC StZ platform/program
- Wastewater Quality Guideline
- Air Emissions Guideline

- ZDHC Academy training opportunities: in-region, in-person, and online/on-demand
- In-region trainings and webinars in local languages
- Inventory verifications
- Wastewater effluent treatment plant operator training

APPROACH FOR ACCESSING ZDHC PROGRAMS

There are many ways to learn about ZDHC guidelines and access the programs; a basic approach is outlined below. Another approach of connecting to ZDHC and engaging in the StZ program will take a user through all ZDHC programs and give recommendations on how to complete the items below.

1. Connect Your Facility to ZDHC and Nike

OPTION 1

Access ZDHC information on the facility platform [ZDHC Gateway](#).

OPTION 2

Reach out to the [Nike Chemistry Team](#) to request an invitation to join. The Nike invitation will contain instructions on how to register with the ZDHC Chemical Gateway platform.

2. Review, Understand, and Implement the Requirements of the ZDHC CMS & ZDHC TIG

Facilities will not be able to meet all Nike chemical management requirements without implementing these two guidelines.

- [ZDHC CMS](#)
- [ZDHC TIG](#)

3. Review, Understand, and Implement the Requirements for MRSL Conformity and ZDHC InCheck Reports

- [MRSL Guidelines](#)
- [ZDHC InCheck \(MRSL Conformity\) Guidance](#)

Facilities in scope for Nike's 2025 Chemical Visibility goals are required to sign up with a ZDHC-approved solution provider and track inventory use monthly. Facilities within scope also must share their chemical inventories with Nike in the Gateway tool and review ZDHC InCheck reports for MRSL conformity.

Facilities not yet in scope for Nike's 2025 Chemical Visibility goals are strongly recommended to follow the path outlined above to simplify inventory MRSL conformity reviews and tracking.



At a minimum, facilities are required to meet MRSL conformity — whether through the use of these tools and InCheck reports or by requesting a ZDHC ChemCheck report from each of your chemical suppliers for chemicals in use.

All facilities must ensure all MRSL requirements are met and proactively substitute any formulations that do not have an MRSL conformity score available.

See “Signing Up with a ZDHC-approved Solution Provider” to get started.

4. Review, Understand, and Implement the Requirements of the ZDHC Wastewater Guideline

Please refer to the Output Management section of this Playbook for more details on Nike’s wastewater program.

- [ZDHC Wastewater Guideline](#)

TAKING ADVANTAGE OF ADDITIONAL CHEMICAL MANAGEMENT OPPORTUNITIES

ZDHC SUPPLIER TO ZERO

While not required, all facilities should consider completing the ZDHC StZ program. This program serves as a great entry point to all ZDHC programs by explaining guidelines and tools, providing recommendations for improvement, and serving as a capability-building platform for facilities that have already demonstrated maturity in chemicals management.

HIGG FEM ASSESSMENT

While most of our production comes from facilities that are required to complete the [Higg FEM](#) assessment, we encourage all facilities — even those not currently in scope for Nike compliance programs — to engage with the Higg FEM and use the assessment outcome to catalyze improvement in environmental operations and environmental sustainability strategy.



SIGNING UP WITH A ZDHC-APPROVED SOLUTION PROVIDER FOR INVENTORY MANAGEMENT

A significant number of facilities are already required to use an inventory management tool to enable MRSL conformity and inventory visibility. Nike strongly recommends this approach for all facilities, as these inventory tools make MRSL conformity assessment simple and fast, plus most options will offer advanced chemical screening and management capabilities to support other production and compliance needs.

Facilities can choose from several ZDHC-approved chemical inventory (CI) management providers. Each provider offers slightly different options to custom tailor a fit specific to facility needs. These tools allow a facility to upload inventory data and screen for any MRSL issue, to identify formulations that do not have an MRSL conformity rating, and to receive an overall score for inventory quality. In addition, the inventory formulation data can be shared securely with Nike within the ZDHC Gateway with a single click, making the requirement to share this inventory information very simple.

How to Sign Up

Sign up with an approved ZDHC Solution provider (inventory management software) and start uploading chemical inventory information on a monthly basis. This is required for all facilities in-scope for Nike compliance programs and strongly suggested for facilities not currently in scope in preparation for expansion of these programs.

After connecting your facility to ZDHC, the next step is to connect to Nike through the ZDHC Gateway:

- Go to the ZDHC Implementation Hub and select one of the ZDHC-approved Solution Providers.
- Register and create an account with your selected Solution Provider.
- Upload your facility's CI information and continue to update it on a monthly basis.
- Routinely engage with the Solution Provider to create a ZDHC InCheck report, review MRSL conformity findings, and create a holistic approach to improve your facility's MRSL conformity rating.
- With one click, share inventory information with Nike in the gateway (select "Share CI").

NIKE CHEMICAL VISIBILITY PROGRAM

To enhance chemical visibility in our supply chain, Nike requires in-scope facilities to upload chemical inventory information on a monthly basis.

To verify your facility is in-scope for this program, reach out to ChemManagement@nike.com.

VERIFIED INCHECK

To establish further trust and credibility in chemical inventory reporting, Nike suggests facilities perform a Level 1 Verified InCheck. Verified InCheck is an onsite verification and spot check of a facility's chemical inventory by an approved third-party verifier.

Figure 2.

HOW TO ONBOARD WITH ZDHC TO IMPROVE MRSL CONFORMITY RATINGS

1. Review ZDHC MRSL, CMS, and TIG
2. Register with ZDHC's Chemical Gateway
3. Go to ZDHC Implementation Hub
4. Register with Solution Provider
5. Upload chemical inventory information
6. Create InCheck report
7. Verify Nike and ZDHC Gateway connection
8. Sign up with StZ program

WHY IS IT IMPORTANT TO FOLLOW THESE STEPS?

- Solution Provider delivers InCheck reports to the ZDHC Gateway.
- InCheck reports (.pdf and .xls) are stored in facilities' ZDHC Gateway accounts.
- The availability of InCheck reports is flagged on facilities' accounts and is visible to brands.



INDUSTRIAL HYGIENE & WORKER PROTECTION

One critical component of an effective chemicals management program is to protect the health and safety of people in the workplace. Certain materials can produce undesirable effects under certain conditions and if not properly controlled. See the [Nike Industrial Hygiene Playbook](#) to review the framework of a sustainable Industrial Hygiene program.

To protect workers from undesirable exposure to hazardous chemicals, Nike developed a CLS and the Nike Industrial Hygiene Playbook, which outlines the principles and practices of an effective Industrial Hygiene (IH) program. Facilities are required to follow best practices to address occupational health and hygiene hazards in the workplace.

Where local requirements do not exist, facilities must comply with the most restrictive recognized regulation or consensus standards, for example:

- Threshold limit values (TLVs) from the American Conference of Governmental Industrial Hygienists (ACGIH).
- Permissible exposure limits (PELs) from the U.S. Occupational Safety and Health Administration (OSHA).
- Recommended exposure limits (RELs) from the National Institute of Occupational Safety and Health (NIOSH).

Standards selected must provide the greatest level of protection to employees in the work environment. Facilities are responsible for implementing occupational exposure limits (OELs) for their

respective facilities that meet local law or Nike CLS requirements, whichever is more conservative.

The purpose of an Industrial Hygiene program is to help ensure that employee exposures to hazards are evaluated, and exposures are mitigated, through the application of appropriate controls — such as elimination, substitution, engineering (e.g., ventilation, isolation), administrative (e.g., work practices) or use of PPE. See Figure 3, Hierarchy of Controls.

The fundamentals of Industrial Hygiene are to Anticipate, Recognize, Evaluate and Control (AREC) chemical, physical and biological hazards that may arise in the workplace.

ANTICIPATE

Anticipation involves identifying potential hazards before they are introduced into manufacturing processes or the workplace and assessing related risks for employees. Generally, this means knowing that hazards may exist within processes and using basic knowledge of chemistry, biology and physics to anticipate which types of hazards are likely to generate risks. Hazards are primarily expected to occur due to materials (e.g., chemistries, raw materials) or machines — or a combination of the two.

RECOGNIZE

Recognizing involves identifying the potential hazard that chemical, physical or biological agents or an adverse ergonomic situation pose to health. This means evaluating Industrial Hygiene risks and determining if a hazard is likely to exist.

EVALUATE

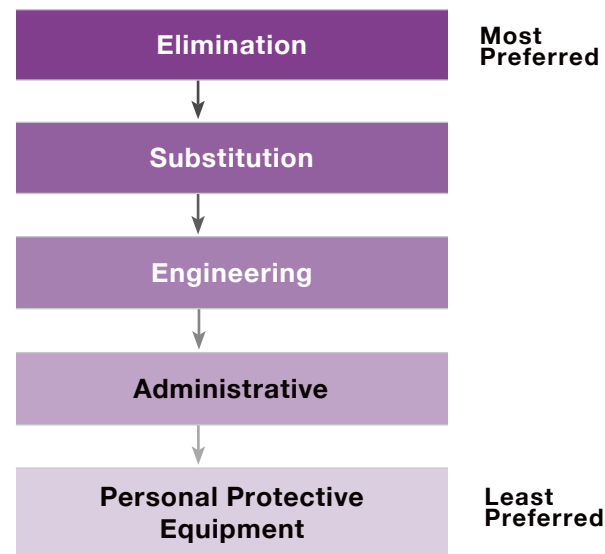
Evaluating risks essentially means measuring or estimating actual exposures and comparing to an acceptable exposure level such as an OEL. Exposures that exceed this limit will require controls be implemented to prevent such exposure.

CONTROL

Controls are the measures employed to mitigate unacceptable exposures. Health hazard controls include elimination of the hazard, material substitution, engineering controls, work-practice controls, administrative controls, and use of PPE.

Figure 3.
HIERARCHY OF CONTROLS

Moving down the hierarchy, the effectiveness and reliability of health hazard controls decrease.





RESOURCES FOR CHEMICAL MANAGEMENT & INDUSTRIAL HYGIENE

The foundation of robust chemical management and industrial hygiene programs is knowledge. Understanding world-class approaches — and putting them into practice — requires ongoing work from factory leadership and staff.

There are many resources available for learning and developing teams in local languages and in many regions. In addition to resources covered in the previous section, we provide links to more options below. The right choice of training/education should be made on an individual basis per facility or production needs.

ZDHC SUPPLIER TO ZERO PROGRAM

One of the key elements of the ZDHC RtZ program is the StZ platform and assessment. StZ is a good starting point for any facility new to Nike or ZDHC, as it will provide information on the relevant tools, give suggestions for meeting RtZ requirements, and allows for capability advancements over time. This program is also useful for mature facilities, as there are multiple levels of achievement based on facility maturity in managing chemicals.

To take part in the ZDHC StZ program, go to the ZDHC website and follow these steps:

1. Register your facility on the ZDHC Gateway (free)
2. Once registered, send a connection request to Nike from the ZDHC Gateway.
3. Use your ZDHC Gateway login credentials to access the StZ program.

If you need assistance from Nike to make a connection or to request a ZDHC token for the foundational level StZ program, please contact ChemManagement@nike.com.

ZDHC ACADEMY

ZDHC offers a wealth of training opportunities, many already highlighted herein. Facilities can find an array of courses in many languages in the [ZDHC Academy](#) portal — offered on-demand or live and in-person depending on topic.

ZDHC GUIDELINES, TOOLS & TRAININGS

- [ZDHC RtZ general information](#)
- [All ZDHC guidelines](#)
- [ZDHC StZ Program](#)
- [ZDHC Training Academy](#)

Nike has a number of ZDHC tokens available each year that allow facilities to complete the StZ program and receive a certificate of completion for free.

Please connect with our team to request a token.

- [ZDHC inventory management tools and approved service providers](#)
- [Information on connecting to ZDHC and Nike](#)
- [ZDHC Responsible Solvents Guidance](#)
- [ZDHC man-made cellulosic fibres \(MMCF\) Guidelines](#)
- [ZDHC Knowledge Base](#) (start here for all other questions)



AFIRM CHEMISTRY TOOLKIT

Apparel and Footwear International RSL Management (AFIRM) Group publishes a [Chemistry Toolkit](#) to support facilities in their journeys toward strong chemicals management and RSL testing compliance. This toolkit highlights the significance of RSL testing for the supply chain, how to implement RSL testing, failure resolution, chemicals management, SDS interpretation, and many other online educational resources. The toolkit is available in multiple languages.

AFIRM Group also publishes additional resources that support RSL testing and education:

- [Restricted Substances List](#)
- [Packaging Restricted Substances List](#)
- [Chemical Information Sheets](#)
- [PFAS Phaseout Guidance and Webinars](#)
- [Sampling Guidance](#)
- [Training Videos](#)

OCCUPATIONAL HEALTH AND HYGIENE

Phylmar

[Fundamentals of Industrial Hygiene](#), offered by Phylmar Academy, is an introductory-level course on the basics of IH. As noted in the Nike Industrial Hygiene Playbook, this course represents Level 1 training.

Occupational Hygiene Training Association

The [Occupational Hygiene Training Association](#) (OHTA), a registered UK charity, promotes better standards of occupational hygiene practices globally. They have developed training materials and make them freely available for use by students and trainers.

Based on the needs of facilities, OHTA-approved training providers organize basic courses on occupational health and hygiene as well as advanced courses covering management, control, and the effects of chemicals. The Nike Industrial Hygiene Playbook has a Skills Maturity Matrix, which provides a framework to help facilities develop capabilities to assess Industrial Hygiene hazards in the workplace. Many resources exist beyond this scope, so consultation may be required to assess experience and help ensure responsibility for the health and safety of workers.

[Nike Industrial Hygiene Playbook with Skills Maturity Matrix](#)





OUTPUT MANAGEMENT

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OVERVIEW

A manufacturing facility is not a closed system. Chemical, energy, and material inputs are converted into products. Optimizing manufacturing processes allows for products to be designed from the start through a lens of safety, waste reduction, and circularity.

APPROACH

Over the last several years, the apparel and footwear industry has transformed the practice of chemicals management. This work — aligning on an MRSL and RSL, and developing a chemicals management assessment framework — signals maturity within the field of chemical compliance.

Robust industry-wide collaboration is a highly effective means of improving the management of chemical outputs.

A clear example is the success of the ZDHC Wastewater Guidelines for facilities supplying textiles and leather. This multi-brand effort sets a single, unified expectation across the textile and footwear industries for wastewater discharge quality, which goes beyond legal compliance.



OUR REQUIREMENTS

Nike is committed to supply chain compliance and environmental protection through our CLS and our public targets.

WASTEWATER

Wastewater is water that is considered no longer usable for a given purpose. This includes:

- Domestic wastewater used for showers, toilets, kitchens, and dormitories.
- Industrial wastewater discharged from a manufacturing process such as dyeing, finishing, laundries, washing, rinsing, etc.

The Nike CLS for wastewater stipulates that all wastewater be properly managed and treated prior to discharge.

NIKE WATER MINIMUM PROGRAM

The Nike Water Minimum Program helps facilities identify opportunities for greater water efficiency and to adequately prepare for closed-loop water through recycling. This applies in addition to or in the absence of legal and regulatory requirements in the jurisdiction where each facility is located.

- Sets foundational expectations for facility's commitment to water stewardship including policy, key performance indicators, water balance, and maintenance.

- Establishes expectations for water and wastewater treatment system data collection to assist with troubleshooting and optimizing wastewater treatment systems to comply with the ZDHC Wastewater Guidelines.
- Encourages facilities to understand their water scarcity and flooding risks by using the [World Resources Institute's Aqueduct platform](#).
- Provides a structured approach to the operation and maintenance of water and wastewater treatment equipment.

NIKE WASTEWATER QUALITY REQUIREMENTS

Nike CLS for wastewater requires that facilities comply with Nike's wastewater quality requirements. At a minimum, every facility must be legally compliant with the permit issued to them by the authority having jurisdiction. This authority may vary by location; it might be the operator of an industrial park wastewater treatment system or a local, state or national government.

At no time shall untreated wastewater be released into the environment. This includes both domestic and industrial wastewater. Discharges to unlined ponds or lagoons are considered releases to the environment.

All facilities need to meet legal compliance requirements; depending on a facility's particular situation, it may also need to comply with the ZDHC Wastewater Guidelines.

ZDHC WASTEWATER GUIDELINES REQUIREMENTS

Facilities that are required to meet the expectations of the ZDHC Wastewater Guidelines must have a ZDHC Gateway account with an active connection to Nike. They then sample, test, and report results to the ZDHC Gateway by April 30 and October 31 of each year.

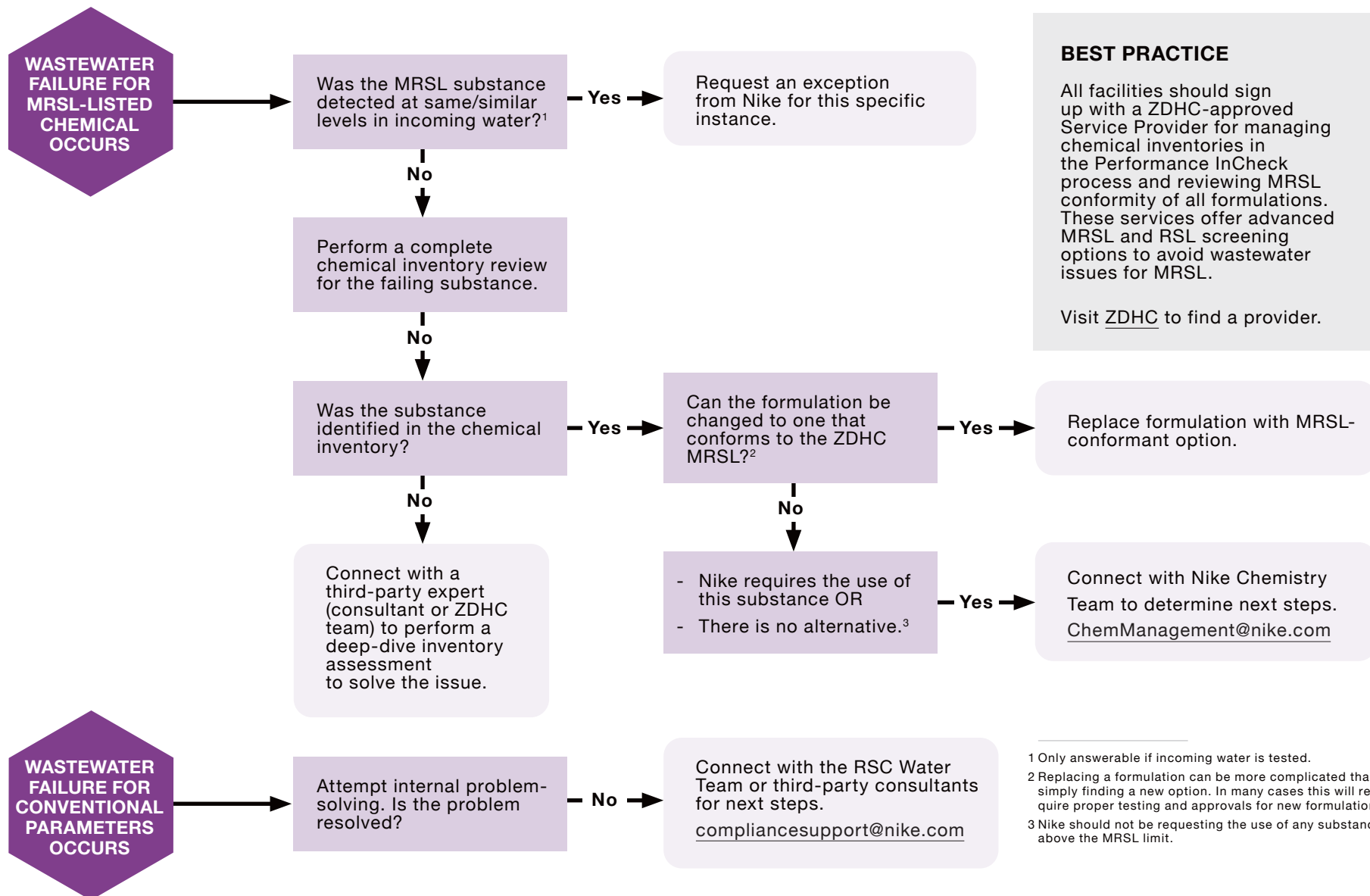
Facilities that discharge treated wastewater directly to the environment are expected to demonstrate they meet at least the foundational limits for conventional, anion and metal parameters in the ZDHC Wastewater Guidelines.

All facilities testing per the ZDHC Wastewater Guidelines must demonstrate they are free from MRSL chemistries. In the event an MRSL chemistry is detected in the wastewater, the facility is expected to identify the root cause for the detection, address the root cause, and re-test the wastewater to demonstrate the root cause has been addressed. In the event the issue has not been resolved, the facility is expected to continue pursuing the root cause until a laboratory test result demonstrates it has been resolved.

By adopting the ZDHC Wastewater Guidelines and coupling this approach with closed-loop water, we envision a supply chain with minimal industrial wastewater discharge.



Figure 4.
REMEDIATION PATHWAY FOR WASTEWATER FAILURES FOR MRSL-LISTED
SUBSTANCES





NIKE WASTEWATER GUIDANCE

The Nike Global Water Team has guidance documents to assist with troubleshooting wastewater parameters, including but not limited to:

- Antimony
- Coliform
- Chemical oxygen demand
- Color
- Ammonia/Nitrogen

In the event a facility or enterprise requires technical support to address a specific wastewater issue, the Nike Global Water Team can provide a list of consultants with wastewater expertise.

LINKS

- [Nike Global Water Team](#)
- [ZDHC RtZ Program](#)
- [World Resources Institute](#)
- [Higg Index and FEM](#)

HAZARDOUS WASTE MANAGEMENT

Determining if waste is hazardous is the first step in dealing with these potential manufacturing outputs. In many jurisdictions, waste that contains hazardous chemistries would qualify as hazardous waste. If hazardous waste is generated on site, facilities must safely manage it within hazardous waste collection areas, taking necessary precautions — such as ventilation, secondary containment, fire prevention, and spill response.

Key personnel within the facility should receive training to understand how to identify and safely handle hazardous waste, manage its disposal in line with the applicable legal requirements using licensed waste contractors, and comply with both local and Nike waste requirements.

AIR EMISSIONS

Nike creates footwear products that allow athletes to “walk on AIR.” From Nike AIR products to the air we breathe, Nike knows air is important for our athletes to perform at their peak. That’s why our Code clearly states that air emissions and climate impacts must be minimized. Proactive characterization and routine monitoring and reporting are required for pollutants including greenhouse gases (GHGs), VOCs, hazardous air pollutants, particulates, ammonia, ozone-depleting chemicals, and combustion by-products.

All facilities must comply with any local regulations, including permitting, operational requirements, and monitoring. Similar to wastewater, the responsible authority may vary by location and across local, state, national, and regional boundaries.

INDUSTRY LEADERSHIP IN AIR EMISSIONS

In 2019, brands, factories, laboratories, certifying bodies, and consultants formed a multifaceted task team within ZDHC to complete a global assessment of air emissions regulations and best practices. ZDHC published the [Air Emissions Guideline](#), and it is a compliance requirement for facilities.



FACILITY EMISSIONS

Energy production and use may result in air emissions, including GHG emissions. Nike supports the global Science Based Targets initiative (SBTi), which aims to reduce GHG emissions in line with what is needed collectively to avoid the worst impacts of climate change.

Combustion by-products such as NO_x, SO_x, and CO can be minimized by closely tracking and monitoring equipment and fuel sources.

Therefore, in line with the UN Fashion Industry Charter for Climate Action, no new coal is allowed as of January 1, 2023, with a complete phaseout by 2030.

Nike's CLS states that facilities must not use heavy fuel oil nor chlorofluorocarbons (CFCs) and must comply with legislation that applies to industry air emissions. Purchase of equipment that uses hydrofluorocarbons (HFCs) is discouraged, and use of hydrochlorofluorocarbons (HCFCs) will be prohibited starting in 2030. Per Nike's CLS, facilities must maintain an accurate inventory of all Scope 1 and Scope 2 GHG emissions. Nike adheres to the GHG Protocol's standards and recommends that facilities do the same.

Please reach out to your Climate & Energy contact or e-mail Climate@nike.com with questions.

PROCESS EMISSIONS

Changes to chemicals within facility processes may impact air emissions. Therefore, it's important to calculate the potential to emit (PTE) and/or calculate expected emissions when chemicals are characterized as air pollutants. Inventory management is also essential, as location and type of chemicals can help facilities to assess if air pollution control equipment is needed.

Indoor air quality must be maintained to protect against occupational exposure. We recommend following global best practices and the Nike Industrial Hygiene Playbook.

These improvements help the industry to better understand our air emissions impact. Nike will continue to help the industry move forward by supporting the forthcoming Air Emissions Guideline. Over time, we anticipate helping the industry to embed air emissions capabilities across the global supply chain.

NON-GHG & GHG KEY POINTS

1. Energy production and use may result in air emissions, including non-GHGs and GHGs.
2. GHGs are addressed through Nike's science-based climate targets.
3. Non-GHG impacts include NO_x, SO_x, CO.
4. The UN Fashion Industry Charter for Climate Action coal phaseout supports both air quality and GHG reduction.
5. In support of both non-GHG and GHG targets, Nike's CLS states:
 - Coal shall be phased out.
 - Heavy fuel oil is prohibited.
 - CFCs are prohibited.
 - Equipment that uses HFCs is discouraged.
 - HCFCs will be prohibited starting in 2030.
 - GHG inventory is required.



HAZARDOUS MATERIALS

Finished goods factories and material production facilities are designed to efficiently manufacture products such as ours (footwear, apparel, and accessories).

Output from these facilities is based on the production and utilization of materials. From a Nike standpoint, our products and the materials used to make them must comply with Nike RSL requirements. Our approach to material compliance can be found in the Rules of the Game: The Nike RSL section of this Playbook.

In addition to the material testing requirements outlined in the Nike RSL, finished goods factories must demonstrate the necessary leadership behaviors — outlined in our Code and the Restricted Substance Management CLS — to successfully comply with Nike's RSL requirements.





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OVERVIEW

To contribute to the protection of human health and the environment, we routinely update the Nike RSL to help keep facilities informed about new global regulatory requirements as well as Nike’s voluntary restrictions on chemicals.

NIKE RSL GOALS

1. Enable product compliance with what we identified (based on our best knowledge and reasonable due diligence) as the strictest global legislation.
2. Confirm targeted substances are limited or eliminated.
3. Encourage sustainable product innovation.

ADDITIONAL MATERIAL GUIDANCE

In addition to restrictions on chemical substances, the Nike RSL also provides guidance regarding:

- Nanomaterials.
- Odor management: antimicrobials and scented items.
- PVC (prohibited from use).
- Recycled materials.

Nike RSL Version 1 Effective Date

MAY 31, 2025

Date All Materials, Products, Packaging & Items Must Comply with this RSL

SEPTEMBER 1, 2025



COMPLIANCE

Nike's intent is to give facilities sufficient transition time to understand changes and take steps to remain RSL compliant. However, there may be special circumstances — such as new or forthcoming legislation — that result in short notice. Upon publication of this Playbook (the Nike RSL Effective Date), facilities have 90 days to comply; at that time, all policies and test limits outlined herein are in effect.

To help facilities transition to new requirements, the product integrity team will review all test failures that occur between the effective date and the deadline to comply. If a failure would have met the previous RSL limit(s), the team may grant a one-off exception. The exception will require immediate corrective action to enable future compliance. Nike may revoke or modify the extent of its authorization at any time.

SUPPLIER AGREEMENTS

Nike supplier agreements reflect the expectation of compliance with RSL requirements. This compliance is in addition to the Nike Code, quality standards and other health and safety standards. Follow this link to the [official Nike RSL website](#), as may be referenced in supplier agreements.

KEY POINTS

- Specific information on how and what to test is included in this Playbook.
- RSL test results are valid for one year from the test date unless otherwise stated.

- Nike reserves the right to request (additional) testing of any material or product at any time.
- Facilities cannot change process or chemicals once they receive an RSL PASS for a material. Any change requires retesting to confirm RSL compliance.
- Subcontractors, auxiliary persons, agents, etc. must also comply with all RSL testing requirements.

UPDATES IN THIS VERSION

All end users should read the Nike Chemistry Playbook in its entirety to make certain they take note of and understand all updates to policies, procedures and test limits.

RSL & CHEMICAL MANAGEMENT TRAINING

NIKE RSL TESTING APPLICATION

All facilities must use the [Nike RSL Testing Application](#) to create a Test Request Form (TRF) and submit RSL test reports. Training and translations are available within the Nike RSL Testing Application itself. For assistance in gaining access to the Nike RSL Testing Application or the "How To Guide," please contact RSLSupport@nike.com.

RSL TRAINING

This mandatory training for all materials and finished goods facilities focuses on understanding and implementing the Nike RSL, selecting and submitting test samples, reviewing test results, and the failure-resolution process.

- Facilities must repeat RSL training every two years. As a best practice, we suggest reviewing training materials with the release of each Playbook update.
- This training is available on demand as a refresher course and is mandatory for new employees.

To access training, visit the [Nike Chemistry](#) website.

CHEMICAL MANAGEMENT TRAINING

The 2025 Chemicals Are Managed Properly CLS requires CMS and TIG training for the responsible party designated to oversee chemicals management at a facility. ZDHC has resources such as the [TIG for Chemical Management Systems](#) (CMSs) that can provide guidance for implementing industry best practices for chemicals management.

Nike does not require materials that have passed RSL testing within the last 365 days be retested upon release of a revised RSL policy.



THE AFIRM GROUP RSL

Apparel and Footwear International RSL Management (AFIRM) Group is an apparel and footwear industry body focused on chemistry. Nike, one of six founding member brands, has worked with the group for more than 15 years to improve the management of hazardous and restricted substances in the global supply chain.

INDUSTRY-WIDE APPROACH TO RSL COMPLIANCE

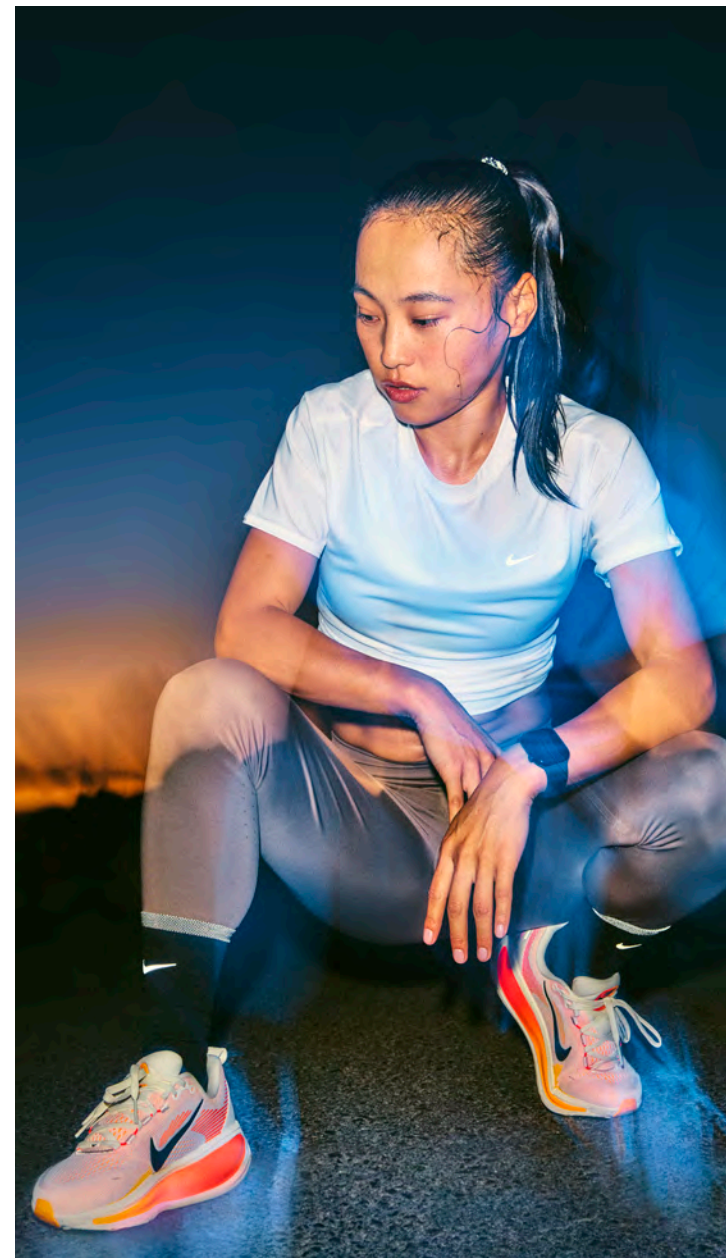
AFIRM released the first version of its industry-wide RSL in 2015 and publishes updates annually. Based on the collaborative effort of more than 40 brands, the AFIRM RSL provides a simplified and aligned approach to managing restricted substances across the largely shared global supply chain. We use the AFIRM RSL to inform Nike's RSL chemistry requirements.

NIKE-SPECIFIC RESTRICTIONS & ADDITIONAL CHEMICAL LIMITS

The substances listed in the AFIRM and Nike RSLs represent chemistries identified through historical chemical testing and the expertise and know-how of the global footwear and apparel industries — all inspired by brands' ambition to help protect human health and the environment by limiting exposure to hazardous chemicals.

Nike is continually innovating new materials, which requires us to consider new chemistries — some of which are not typically used in the manufacture of apparel and footwear. A separate list of Nike-specific chemical and material restrictions follows the Nike RSL.

Because of this, it is imperative that facilities comply with the current Nike RSL, in addition to any legally binding limits that may apply in the jurisdiction where they operate — such as applicable prohibitions and restrictions pursuant to the EU REACH, including the Substances of Very High Concern (SVHC), the California Proposition 65 List, K-REACH, etc.





DEFINITION OF “COMPONENT” IN DETERMINING RSL TEST LIMITS

Please note the following when using the “Nike Limits” column in the Nike RSL.

Unless otherwise specified, the component subject to each specified concentration limit is:

- A material of uniform composition throughout, or
- A material consisting of a combination of materials that cannot be disjoined or separated into different materials by mechanical actions such as abrasive, crushing, cutting, grinding, and unscrewing processes.

When several components are used to form a complex material, they should be assessed individually. Reach out to RSLSupport@nike.com for specific guidance.

AGE RANGES FOR INTERPRETING RSL TEST LIMITS

Various countries define the terms “babies,” “infants,” “toddlers,” “children” and “adults” differently. To the best of our knowledge, the age ranges listed in Table 3 satisfy the most restrictive global requirements.

Table 3.
SIZING BY AGE RANGE

Note: Any person older than 14 years of age is considered an adult for the purpose of RSL testing.

	INFANTS & TODDLERS	CHILDREN	
	0 – 36 months	LITTLE KIDS 3 – 7 years	BIG KIDS 7 – 14 years
Apparel Size — United States	0 – 4T	4 – 7 boys 4 – 6x girls	8 – 20 boys 7 – 14 girls
Apparel Size — Europe	68 – 98 cm	104 – 128 cm	128 – 182 cm boys 128 – 176 cm girls
Apparel Size — Asia	< 85 cm	85 – 120 cm	120 – 170 cm
Footwear	< 17 cm	17 – 21.5 cm	22 – 25 cm
Equipment	Pee Wee	Youth	Kid



NIKE CHEMISTRY PLAYBOOK » RULES OF THE GAME
NIKE RESTRICTED SUBSTANCES LIST — PRODUCT

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
ACETOPHENONE & 2-PHENYL-2-PROPANOL 					
98-86-2	Acetophenone	50 ppm each	25 ppm each	Potential breakdown products in EVA foam when using certain cross-linking agents, including Dicumyl Peroxide.	Extraction in acetone or methanol GC/MS, sonication for 30 minutes at 60°C
617-94-7	2-Phenyl-2-Propanol				
ACIDIC & ALKALINE SUBSTANCES: pH					
Various	pH-value	Textiles: 4.0 – 7.5 Leather: Chrome-tanned: 3.2 – 5.5 Other: 3.5 – 7.5	Not applicable	The pH-value is a characteristic number, ranging from pH 0 to pH 14.0, indirectly showing the content of acidic or alkaline substances in a product. pH-values below 7.0 indicate sources of acidic substances and values above 7.0 indicate sources of alkaline substances. To avoid irritation or chemical burns to skin, the pH-value of products shall be in the range of human skin with about pH 5.5. Limits cited comply with global regulations for all products. For chrome-tanned leather, the final fixing bath of the re-tanning process should always have a pH below 4.0 to guard the formation of Chromium VI. These limits also minimize the chance of Chromium VI formation during the tanning and processing of leather. Important: Egypt, Morocco, and the Gulf Cooperation Council (GCC) require pH for leather not lower than 3.5.	Textiles and synthetic coated fabrics: EN ISO 3071:2020 Leather: EN ISO 4045:2018



NIKE CHEMISTRY PLAYBOOK » RULES OF THE GAME
NIKE RESTRICTED SUBSTANCES LIST — PRODUCT

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
ALKYLPHENOLS (APs)  & ALKYLPHENOL ETHOXYLATES (APEOs)  INCLUDING ALL ISOMERS					
Various	Nonylphenol (NP), mixed isomers	Total APs: 10 ppm Total APs + APEOs: 100 ppm	Total NP + OP: 3 ppm	APEOs can be used as or found in detergents, scouring agents, spinning oils, wetting agents, softeners, emulsifying/ dispersing agents for dyes and prints, impregnating agents, de-gumming for silk production, dyes and pigment preparations, polyester padding and down/feather fillings. APs may be used as intermediaries in the manufacture of APEOs and antioxidants used to protect or stabilize polymers. Biodegradation of APEOs into APs is the main source of APs in the environment. APEOs and formulations containing APEOs are prohibited from use throughout supply chain and manufacturing processes. We acknowledge that residual or trace concentrations of APEOs may still be found at levels exceeding 100 ppm and that more time is necessary for the supply chain to phase them out completely.	Textiles and leather: EN ISO 21084:2019 Down: GB/T 23322-2018 for compliance with GB/T 14272-2021 Polymers and all other materials: 1 g sample / 20 mL THF, sonication for 60 minutes at 70°C, analysis according to EN ISO 21084:2019
Various	Octylphenol (OP), mixed isomers				All materials except down garments and leather: EN ISO 18254-1:2016 with determination of APEO using LC/MS or LC/MS/MS
Various	Nonylphenol Ethoxylates (NPEOs)		Total NPEOs + OPEOs: 20 ppm		
Various	Octylphenol Ethoxylates (OPEOs)				



NIKE CHEMISTRY PLAYBOOK » RULES OF THE GAME
NIKE RESTRICTED SUBSTANCES LIST — PRODUCT

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
AZO-AMINES & ARYLAMINE SALTS 					
92-67-1	4-Aminobiphenyl	20 ppm each	5 ppm each	Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted. Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles.	All materials except leather: EN ISO 14362-1:2017 Leather: EN ISO 17234-1:2024 p-Aminoazobenzene: All materials except leather: EN ISO 14362-3:2017 Leather: EN ISO 17234-2:2011
92-87-5	Benzidine				
95-69-2	4-Chlor-o-toluidine				
91-59-8	2-Naphthylamine				
97-56-3	o-Aminoazotoluene				
99-55-8	2-Amino-4-nitrotoluene				
106-47-8	p-Chloraniline				
615-05-4	2,4-Diaminoanisole				
101-77-9	4,4'-Diaminodiphenylmethane				
91-94-1	3,3'-Dichlorobenzidine				
119-90-4	3,3'-Dimethoxybenzidine				
119-93-7	3,3'-Dimethylbenzidine				
838-88-0	3,3'-Dimethyl-4,4'-diaminodiphenylmethane				
120-71-8	p-Cresidine				
101-14-4	4,4'-Methylen-bis(2-chloraniline)				
101-80-4	4,4'-Oxydianiline				
139-65-1	4,4'-Thiodianiline				



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AZO-AMINES & ARYLAMINE SALTS 					
95-53-4	o-Toluidine	20 ppm each	5 ppm each	Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted. Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles.	All materials except leather: EN ISO 14362-1:2017 Leather: EN ISO 17234-1:2024 p-Aminoazobenzene: All materials except leather: EN ISO 14362-3:2017 Leather: EN ISO 17234-2:2011
95-80-7	2,4-Toluyldiamine				
137-17-7	2,4,5-Trimethylaniline				
95-68-1	2,4-Xylidine				
87-62-7	2,6-Xylidine				
90-04-0	2-Methoxyaniline (= o-Anisidine)				
60-09-3	p-Aminoazobenzene				
3165-93-3	4-Chloro-o-toluidinium chloride				
553-00-4	2-Naphthylammoniumacetate				
39156-41-7	4-Methoxy-m-phenylene diammonium sulphate				
21436-97-5	2,4,5-Trimethylaniline hydrochloride				



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BISPHENOLS 					
80-05-7	Bisphenol-A (BPA)	Textiles & Leather: 10 ppm Items intended to come in contact with the mouth: 1 ppm Other Materials: > 300 ppm = Warning > 1000 ppm = Do not ship	Leather: 10 ppm each All other materials: Individual samples: 0.1 ppm Composite samples: 1 ppm	Prohibited from use in food and drink containers, and items intended to come into contact with the mouth. BPA may be used in the production of epoxy resins, polycarbonate plastics, flame retardants, and PVC. BPS may be used as a substitute for BPA such as in thermal receipt paper.	Leather: EN ISO 11936:2023 All other materials: Extraction: 1g sample/20 ml THF, sonication for 60 minutes at 60° C, then add methanol or acetonitrile for precipitation prior to analysis with LC/ MS
80-09-1	Bisphenol-S (BPS)	Textiles: Up to 1 ppm = Pass > 1 to 200 ppm = Warning > 200 ppm = Do not ship		BPS and BPF can be found in polyamide dye-fixing agents and in sulfone- and phenol- based leather synthetic tanning agents.	Note for textiles: For precipitation, draw the extract to another container and add methanol or acetonitrile. Inaccurate higher results will be obtained if the textile sample contacts the precipitation solvent.
77-40-7	Bisphenol-B (BPB)	Leather: Up to 800 ppm = Pass > 800 to 1000 ppm = Warning > 1000 ppm = Do not ship		BPA and BPS can be found in recycled polymeric and paper materials due to polycarbonate plastic and thermal receipt paper made with bisphenols entering waste streams.	
620-92-8	Bisphenol-F (BPF)	Other materials: Up to 300 ppm = Pass > 300 to 1000 ppm = Warning > 1000 ppm = Do not ship		BPA, BPS, and BPB are included on the REACH SVHC list and may need to be notified to ECHA if found in leather goods above 0.1%. Facilities supplying leather goods containing BPA, BPS, or BPB in excess of 0.1% to provide customers or consumers (the latter upon request) with sufficient information to allow a safe use.	



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BROMINATED & ORGANOPHOSPHORUS SUBSTANCES (Formerly Flame Retardants) 					
84852-53-9	Decabromodiphenyl ethane (DBDPE)	10 ppm each	5 ppm each	Flame-retardant substances, including the entire class of organohalogen flame retardants, should no longer be applied to materials during production. Listed here are examples of flame-retardant substances used historically across the apparel and footwear industry. It is not intended to be a complete list. Other flame retardants not applicable to this industry are regulated worldwide by the Stockholm Convention and the Aarhus Protocol, which have been implemented in the European Union under the POPs Regulation. The 10 ppm limit is established to account for incidental impurities, byproducts, and contaminants. Flame retardants should not be used for any other purpose, e.g., as softeners or plasticizers.	All materials: EN ISO 17881-1:2016
32534-81-9	Pentabromodiphenyl ether (PentaBDE)				
32536-52-0	Octabromodiphenyl ether (OctaBDE)				
1163-19-5	Decabromodiphenyl ether (DecaBDE)				
Various	All other Polybrominated diphenyl ethers (PBDEs)				
79-94-7	Tetrabromobisphenol A (TBBP A)				
59536-65-1	Polybromobiphenyls (PBB)				
3194-55-6	Hexabromocyclododecane (HBCDD)				All materials: EN ISO 17881-2:2016
3296-90-0	2,2-bis(bromomethyl)-1,3-propanediol (BBMP)				
13674-87-8	Tris(1,3-dichloro-isopropyl) phosphate (TDCPP)				
25155-23-1	Trixylyl phosphate (TXP)				
126-72-7	Tris(2,3-dibromopropyl) phosphate (TRIS)				
545-55-1	Tris(1-aziridinyl) phosphine oxide) (TEPA)				
115-96-8	Tris(2-chloroethyl) phosphate (TCEP)				
5412-25-9	Bis(2,3-dibromopropyl) phosphate (BDBPP)				
115-86-6	Triphenyl phosphate (TPP)	500 ppm	50 ppm	May be used as a flame retardant, an antioxidant for PU materials, or as an alternative plasticizer to orthophthalates. Now included on the REACH SVHC list.	



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CHLORINATED BENZENES & TOLUENES (CHLORORGANIC CARRIERS) 					
95-49-8	2-Chlorotoluene	Total: 1 ppm	0.2 ppm each	Chlorobenzenes and Chlorotoluenes (Chlorinated Aromatic Hydrocarbons) can be used as carriers in the dyeing process of polyester or wool / polyester fibers. They can also be used as solvents. Cross-contamination from anti-moth agents and poly shipping bags may cause failures. Important: The Gulf Cooperation Council (GCC) maintains a limit of 1 ppm for 1,2-Dichlorobenzene in textiles.	All materials: EN 17137:2024
108-41-8	3-Chlorotoluene				
106-43-4	4-Chlorotoluene				
32768-54-0	2,3-Dichlorotoluene				
95-73-8	2,4-Dichlorotoluene				
19398-61-9	2,5-Dichlorotoluene				
118-69-4	2,6-Dichlorotoluene				
95-75-0	3,4-Dichlorotoluene				
2077-46-5	2,3,6-Trichlorotoluene				
6639-30-1	2,4,5-Trichlorotoluene				
76057-12-0	2,3,4,5-Tetrachlorotoluene				
875-40-1	2,3,4,6-Tetrachlorotoluene				
1006-31-1	2,3,5,6-Tetrachlorotoluene				
877-11-2	Pentachlorotoluene				
541-73-1	1,3-Dichlorobenzene				
106-46-7	1,4-Dichlorobenzene				
87-61-6	1,2,3-Trichlorobenzene				



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CHLORINATED BENZENES & TOLUENES (CHLORORGANIC CARRIERS) 					
120-82-1	1,2,4-Trichlorobenzene	Total: 1 ppm	0.2 ppm each	Chlorobenzenes and Chlorotoluenes (Chlorinated Aromatic Hydrocarbons) can be used as carriers in the dyeing process of polyester or wool / polyester fibers. They can also be used as solvents. Cross-contamination from anti-moth agents and poly shipping bags may cause failures. Important: The Gulf Cooperation Council (GCC) maintains a limit of 1 ppm for 1,2-Dichlorobenzene in textiles.	All materials: EN 17137:2024
108-70-3	1,3,5-Trichlorobenzene				
634-66-2	1,2,3,4-Tetrachlorobenzene				
634-90-2	1,2,3,5-Tetrachlorobenzene				
95-94-3	1,2,4,5-Tetrachlorobenzene				
608-93-5	Pentachlorobenzene				
118-74-1	Hexachlorobenzene				
5216-25-1	p-Chlorobenzotrichloride				
98-07-7	Benzotrichloride				
100-44-7	Benzyl chloride	10 ppm	1 ppm		
95-50-1	1,2-Dichlorobenzene				
CHLORINATED PARAFFINS 					
85535-84-8	Short-chain Chlorinated Paraffins (SCCPs) (C10-C13)	1000 ppm	100 ppm	May be used as softeners, flame retardants or fat-liquoring agents in leather production. Also used as a plasticizer in polymer production.	Leather: SCCP: ISO 18219-1:2021 MCCP: ISO 18219-2:2021
85535-85-9	Medium-chain Chlorinated Paraffins (MCCPs) (C14-C17)	1000 ppm	100 ppm		Textiles and all other materials: ISO 22818:2021 (SCCP + MCCP)



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CHLOROPHENOLS 					
15950-66-0	2,3,4-Trichlorophenol (TriCP)	0.5 ppm each	0.5 ppm each	Chlorophenols are polychlorinated compounds used as preservatives or pesticides. Pentachlorophenol (PCP), tetrachlorophenol (TeCP), and trichlorophenols (TriCP) are sometimes used to prevent mold and kill insects when growing cotton and when storing / transporting fabrics. PCP, TeCP and TriCP can also be used as in-can preservatives in print pastes and other chemical mixtures.	All materials: EN 17134-2:2023
933-78-8	2,3,5-Trichlorophenol (TriCP)				
933-75-5	2,3,6-Trichlorophenol (TriCP)				
95-95-4	2,4,5-Trichlorophenol (TriCP)				
88-06-2	2,4,6-Trichlorophenol (TriCP)				
609-19-8	3,4,5-Trichlorophenol (TriCP)				
4901-51-3	2,3,4,5-Tetrachlorophenol (TeCP)				
58-90-2	2,3,4,6-Tetrachlorophenol (TeCP)				
935-95-5	2,3,5,6-Tetrachlorophenol (TeCP)				
87-86-5	Pentachlorophenol (PCP) and its salts and esters				
CYCLOSILOXANES					
556-67-2	Octamethylcyclotetrasiloxane (D4)	1000 ppm each	50 ppm	May be present in silicone pads and as contaminants in formulations that contain silicone, like silicone softeners and those used for prints. They are SVHCs and will be restricted from use in solvents used for dry cleaning of textiles, leather, and fur in the EU beginning 06 June 2026 with derogations.	All materials: Ultrasonic extraction with nonchlorinated organic solvent for 30 min at 40°C then GC/MS
541-02-6	Decamethylcyclopentasiloxane (D5)				
540-97-6	Dodecamethylcyclohexasiloxane (D6)				



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DIMETHYLFUMARATE 					
624-49-7	Dimethylfumarate (DMFu)	0.1 ppm	0.05 ppm	DMFu is an anti-mold agent used in sachets in packaging to prevent the buildup of mold, especially during shipping.	All materials: ISO 16186:2021
DYES: DISPERSE 					
2475-45-8	C.I. Disperse Blue 1	30 ppm each	15 ppm each	Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fiber (e.g., polyester, acetate, polyamide). Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles.	All materials: DIN 54231:2022
2475-46-9	C.I. Disperse Blue 3				
3179-90-6	C.I. Disperse Blue 7				
3860-63-7	C.I. Disperse Blue 26				
56524-77-7	C.I. Disperse Blue 35A				
56524-76-6	C.I. Disperse Blue 35B				
12222-97-8	C.I. Disperse Blue 102				
12223-01-7	C.I. Disperse Blue 106				
61951-51-7	C.I. Disperse Blue 124				
23355-64-8	C.I. Disperse Brown 1				
2581-69-3	C.I. Disperse Orange 1				
730-40-5	C.I. Disperse Orange 3				
82-28-0	C.I. Disperse Orange 11				



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DYES: DISPERSE 					
12223-33-5	C.I. Disperse Orange 37/76/59	30 ppm each	15 ppm each	Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fiber (e.g., polyester, acetate, polyamide). Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles.	All materials: DIN 54231:2022
13301-61-6					
51811-42-8					
85136-74-9	C.I. Disperse Orange 149				
2872-52-8	C.I. Disperse Red 1				
2872-48-2	C.I. Disperse Red 11				
3179-89-3	C.I. Disperse Red 17				
61968-47-6	C.I. Disperse Red 151				
119-15-3	C.I. Disperse Yellow 1				
2832-40-8	C.I. Disperse Yellow 3				
6300-37-4	C.I. Disperse Yellow 7				
6373-73-5	C.I. Disperse Yellow 9				
6250-23-3	C.I. Disperse Yellow 23				
12236-29-2	C.I. Disperse Yellow 39				
54824-37-2	C.I. Disperse Yellow 49				
6858-49-7					
54077-16-6	C.I. Disperse Yellow 56				



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DYES: ACID, BASIC, DIRECT, OTHER 					
3761-53-3	C.I. Acid Red 26	30 ppm each	15 ppm each	Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fiber (e.g., polyester, acetate, polyamide). Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles	All materials: DIN 54231:2022
569-61-9	C.I. Basic Red 9				
569-64-2	C.I. Basic Green 4				
2437-29-8					
10309-95-2					
548-62-9	C.I. Basic Violet 3				
632-99-5	C.I. Basic Violet 14				
2580-56-5	C.I. Basic Blue 26				
1937-37-7	C.I. Direct Black 38				
2602-46-2	C.I. Direct Blue 6				
573-58-0	C.I. Direct Red 28				
16071-86-6	C.I. Direct Brown 95				
60-11-7	4-Dimethylaminoazobenzene (Solvent Yellow 2)				
6786-83-0	C.I. Solvent Blue 4				
561-41-1	4,4'-bis(dimethylamino)-4''-(methylamino) trityl alcohol)				
DYES: NAVY BLUE 					
118685-33-9	Component 1: C39H23ClCrN7O12S·2Na	30 ppm each	15 ppm each	Navy blue colorants are regulated and prohibited from use for dyeing of textiles. Index 611-070-00-2	All materials: DIN 54231:2022
Not allocated	Component 2: C46H30CrN10O20S2·3Na				



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FLUORINATED GREENHOUSE GASES 					
Various	See Regulation (EU) 2024/573 for a complete list.	0.1 ppm each	0.1 ppm each	Prohibited from use. May be used as foam-blowing agents, solvents, fire retardants and aerosol propellants.	Sample preparation: Purge and trap – thermal desorption or SPME Measurement: GC/MS
FORMALDEHYDE 					
50-00-0	Formaldehyde	Adults & Children: 75 ppm Infants & Toddlers: 16 ppm	16 ppm	Used in textiles as an anti-creasing and anti-shrinking agent. It is also often used in polymeric resins. Although very rare in Apparel and Footwear, composite wood materials (such as particle board and plywood) must comply with existing California and forthcoming U.S. Formaldehyde emission requirements (40 CFR 770). Important: United Arab Emirates Cabinet Resolution No. (54) restricts Formaldehyde in children's textiles to 20 ppm. Indonesia Ministerial Regulation No. 18 limits Formaldehyde to “not detected” (16 ppm) in towels, bedding and handkerchiefs.	All materials except leather: JIS L 1041-2011 A (Japan Law 112) or EN ISO 14184-1:2011 Leather: EN ISO 17226-2:2019 with EN ISO 17226-1:2021 confirmation method in case of interferences Alternatively, EN ISO 17226-1:2021 can be used on its own.



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HEAVY METALS: NON-JEWELRY • EXTRACTABLE  & TOTAL CONTENT 					
7440-36-0	Antimony (Sb)	Extractable: 30 ppm	Extractable: 3 ppm	Found in or used as a catalyst in polymerization of polyester, flame retardants, fixing agents, pigments and alloys.	All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019
7440-38-2	Arsenic (As)	Extractable: 0.2 ppm Total: 100 ppm	Extractable: 0.1 ppm Total: 10 ppm	Arsenic and its compounds can be used in preservatives, pesticides and defoliants for cotton, synthetic fibers, paints, inks, trims and plastics. South Korea KC Mark Soluble Heavy Metal Arsenic limit is 25 ppm.	Extractable: All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 Total: All materials except leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019
7440-39-3	Barium (Ba)	Extractable: 1000 ppm	Extractable: 100 ppm	Barium and its compounds can be used in pigments for inks, plastics, surface coatings, as well as in dyeing, mordant, filler in plastics, textile finish, and leather tanning.	All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019
7440-43-9	Cadmium (Cd)	Extractable: 0.1 ppm Total: 40 ppm	Extractable: 0.05 ppm Total: 5 ppm	Cadmium compounds are used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides and paints.	Extractable: All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 Total: All materials except leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019



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HEAVY METALS: NON-JEWELRY • EXTRACTABLE  & TOTAL CONTENT 					
7440-47-3	Chromium (Cr)	Extractable: Textiles: Adults & Children: 2 ppm Infants & Toddlers: 1 ppm Leather: Info only	Extractable: 0.5 ppm	Chromium compounds can be used as dyeing additives, dye-fixing agents, color fastness after-treatments, dyes for wool, silk and polyamide (especially dark shades) and leather tanning. Important: Egypt restricts extractable Chromium to 2 ppm in leather products for babies and 200 ppm in leather products for other ages.	Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019
18540-29-9	Chromium VI 	Extractable: Leather: 3 ppm Textiles: 1 ppm	Extractable: Leather: 3 ppm Textiles: 0.5 ppm	Though typically associated with leather tanning, Chromium VI also may be used in the “after-chroming” process for wool dyeing (Chrome salts applied to acid-dyed wool to improve fastness).	Textiles: DIN EN 16711-2:2016 with EN ISO 17075-1:2017 if Cr is detected. Leather: EN ISO 17075-1:2017 and EN ISO 17075-2:2017 for confirmation in case the extract causes interference. Alternatively, EN ISO 17075-2:2017 may be used on its own. Aging test: ISO 10195:2018 Method A2 is used at Nike’s discretion.



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HEAVY METALS: NON-JEWELRY • EXTRACTABLE  & TOTAL CONTENT 					
7440-48-4	Cobalt (Co)	Extractable: Adults: 4 ppm Infants, Toddlers & Children: 1 ppm	Extractable: 0.5 ppm	Cobalt and its compounds can be used in alloys, pigments, dyestuff and the production of plastic buttons.	All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019
7440-50-8	Copper (Cu)	Extractable: Adults: 50 ppm Infants, Toddlers & Children: 25 ppm	Extractable: 5 ppm	Copper and its compounds can be found in alloys and pigments, and in textiles as an antimicrobial agent. Copper is exempt from restriction limits in metal parts. Indonesia Ministerial Regulation No. 18 limits copper to 25 ppm in towels, bedding and handkerchiefs.	All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019
7439-92-1	Lead (Pb)	Extractable: Adults: 1 ppm Infants, Toddlers & Children: 0.2 ppm Total: 90 ppm	Extractable: 0.2 ppm Total: 10 ppm	May be associated with alloys, plastics, paints, inks, pigments and surface coatings. Crystal or “lead glass” is exempt from total Lead restrictions. Indonesia Ministerial Regulation No. 18 limits extractable Lead to 0.2 ppm in towels, bedding and handkerchiefs.	Extractable: All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 Total: Non-metal: CPSC- CH-E1002-08.3 Metal: CPSC- CH-E1001-08.3 Lead in paint and surface coatings: CPSC- CH-E1003-09.1



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HEAVY METALS: NON-JEWELRY • EXTRACTABLE  & TOTAL CONTENT 					
7439-97-6	Mercury (Hg)	Extractable: 0.02 ppm Total: 0.5 ppm	Extractable: 0.02 ppm Total: 0.1 ppm	Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints and as catalysts in the manufacturing of PU and vinyl chloride for use in PVC.	Extractable: All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 Total: All materials except leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019
7440-02-0	Nickel (Ni) 	Extractable: 1 ppm Release (metal parts): Prolonged skin contact: 0.5 µg/cm ² /week Eyewear frames: 0.5 µg/cm ² /week	Extractable: 0.1 ppm Release: 0.5 µg/cm ² /week	Nickel and its compounds can be used for plating alloys and improving corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys.	Extractable: All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 Release: EN 12472:2020 and EN 1811:2023 Release (eyewear frames): EN 16128:2015
7782-49-2	Selenium (Se)	Extractable: 500 ppm	Extractable: 50 ppm	May be found in synthetic fibers, paints, inks, plastics and metal trims.	All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019



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HEAVY METALS: JEWELRY • EXTRACTABLE  & TOTAL CONTENT 					
7440-36-0	Antimony (Sb)	Paints & Coatings: Extractable: 60 ppm	Extractable: 5 ppm	Antimony and its compounds can be found as a flame retardant in paints, as well as a colorant in pigments.	ASTM F963-23 as referenced in ASTM F2923:2020 Sample preparation for jewelry and wearables: Wax areas not intended for skin contact: EN 1811: 2023
7440-38-2	Arsenic (As)	Paints & Coatings: Extractable: 25 ppm	Extractable: 5 ppm	Arsenic and its compounds can be found in paints and inks.	
7440-39-3	Barium (Ba)	Paints & Coatings: Extractable: 1000 ppm	Extractable: 100 ppm	Barium and its compounds can be found in pigments for inks.	
7440-43-9	Cadmium (Cd)	Substrates, Paints & Coatings: Total: Adults: 75 ppm Children: 40 ppm	Total: 5 ppm	Cadmium and its compounds are typically used as pigments (especially in red, orange, yellow, and green). It can also be used in alloys to improve hardness or be found as a contaminant.	
7440-47-3	Chromium (Cr)	Paints & Coatings: Extractable: 60 ppm	Extractable: 5 ppm	Chromium and its compounds can be used as pigments in paints. It can also be used as part of alloys such as stainless steel.	
7439-92-1	Lead (Pb)	Substrates, Paints & Coatings: Total: 90 ppm	Total: 10 ppm	Lead and its compounds may be associated with plastics, paints, inks, pigments, and surface coatings. It can also be found in metals as a contaminant. Crystal or “lead glass” is exempt from total Lead restrictions.	



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HEAVY METALS: JEWELRY • EXTRACTABLE  & TOTAL CONTENT 					
7439-97-6	Mercury (Hg)	Paints & Coatings: Extractable: 60 ppm	Extractable: 5 ppm	Mercury and its compounds may be used in paints and can be found as a contaminant in alloys and in gold due to its use during the extraction process.	ASTM F963-23 as referenced in ASTM F2923:2020
7440-02-0	Nickel (Ni) 	Release (metal parts): Prolonged skin contact: 0.5 µg/cm ² /week Pierced part: 0.2 µg/cm ² /week	Release: Prolonged skin contact: 0.5 µg/cm ² /week Pierced part: 0.2 µg/cm ² /week	Nickel and its compounds can be used for plating alloys and improving the corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys.	EN 12472:2020 and EN 1811:2023
7782-49-2	Selenium (Se)	Paints & Coatings: Extractable: 500 ppm	Extractable: 50 ppm	Selenium and its compounds may be found in paints and inks.	ASTM F963-23 as referenced in ASTM F2923:2020



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MONOMERS 					
100-42-5	Styrene, Free	500 ppm	50 ppm	Styrene is a precursor for polymerization and may be present in various styrene-copolymers like plastic buttons. Free styrene is restricted, not total styrene.	Extraction in Methanol GC/MS, sonication at 60°C for 60 minutes
75-01-4	Vinyl Chloride	Nike prohibits the use of PVC in all materials and products.	1 ppm	Vinyl chloride is a precursor for polymerization and may be present in various PVC materials like prints, coatings, flip flops and synthetic leather.	EN ISO 6401:2022
N-NITROSAMINES 					
62-75-9	N-nitrosodimethylamine (NDMA)	0.5 ppm each	0.5 ppm each	Can be formed as a by-product in the production of rubber.	EN ISO 19577:2019 with LC/MS/MS verification if positive
55-18-5	N-nitrosodiethylamine (NDEA)				
621-64-7	N-nitrosodipropylamine (NDPA)				
924-16-3	N-nitrosodibutylamine (NDBA)				
100-75-4	N-nitrosopiperidine (NPIP)				
930-55-2	N-nitrosopyrrolidine (NPYR)				
59-89-2	N-nitrosomorpholine (NMOR)				
614-00-6	N-nitroso N-methyl N-phenylamine (NMPPhA)				
612-64-6	N-nitroso N-ethyl N-phenylamine (NEPhA)				



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ORGANOTIN COMPOUNDS 								
Various	Tributyltin (TBT)	0.5 ppm each	0.1 ppm each	Class of chemicals combining Tin and Organics such as butyl and phenyl groups. Organotins are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g., antibacterials), catalysts in plastic and glue production, and heat stabilizers in plastics/rubber. In textiles and apparel, organotins are associated with plastics / rubber, inks, paints, metallic glitter, polyurethane products and heat-transfer material.	All materials: CEN ISO/TS 16179:2012 or EN ISO 22744-1: 2020			
Various	Triphenyltin (TPhT)							
Various	Dibutyltin (DBT)							
Various	Diocetyltn (DOT)	Adults: 20 ppm each 1-20 ppm = warning range; follow up required						
Various	Monobutyltin (MBT)							
Various	Monooctyltin (MOT)							
Various	Tricyclohexyltin (TCyHT)							
Various	Trimethyltin (TMT)							
Various	Triocetyltn (TOT)							
Various	Tripropyltin (TPT)							
Various	Dimethyltin (DMT)							
Various	Diphenyltin (DPhT)							
Various	Dipropyltin (DPT)							
Various	Monomethyltin (MMT)	Infants/Toddlers: 1 ppm each						
Various	Monophenyltin (MPhT)							
1461-25-2	Tetrabutyltin (TeBT)							
597-64-8	Tetraethyltin (TeET)							
3590-84-9	Tetraoctyltin (TeOT)							



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ORTHO-PHENYLPHENOL 					
90-43-7	Ortho-phenylphenol (OPP)	1000 ppm	100 ppm	OPP can be used for its preservative properties in leather or as a carrier in dyeing processes.	All materials: EN 17134-2:2023
OZONE-DEPLETING SUBSTANCES 					
Various	See Regulation (EU) 2024/590 for a complete list.	5 ppm	5 ppm	Prohibited from use. Ozone-depleting substances have been used as a foaming agent in PU foams as well as a dry-cleaning agent.	All materials: GC/MS headspace 120°C for 45 minutes (EU) 2024/590



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PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	All PFAS as measured by total organic fluorine			Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions.	
Various	All PFAS	50 ppm	50 ppm total		EN 14582:2016 or ASTM D7359:2023 or EN 17813:2023 Methods quantify total fluorine (inorganic + organic). See AFIRM PFAS Phaseout Guidance for additional information about total versus total organic fluorine.
	Perfluorooctane Sulfonate (PFOS) & its salts			See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	
251099-16-8	Didecyldimethyl ammonium perfluorooctane sulfonate (PFOS-N(C10H21)2(CH3)2)	25 ppb total	25 ppb total		Textiles and other materials (excluding polymers): EN 17681-1:2025 Leather: EN ISO 23702-1:2023 Polymers (synthetic coated fabrics & polymers, plastics, foams, natural & synthetic rubber): EN ISO 23702-1:2023 using THF extraction followed by methanol precipitation (1:1).
1763-23-1	Perfluorooctanesulfonic acid (PFOS)				
2795-39-3	Perfluorooctanesulfonic acid, potassium salt (PFOS-K)				
29457-72-5	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)				
29081-56-9	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH4)				
70225-14-8	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH)2)				
56773-42-3	Perfluorooctanesulfonic acid, tetraethyl-ammonium salt (PFOS-N(C2H5)4)				



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PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	PFOS-related substances	1000 ppb total	1000 ppb total	Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	Textiles and other materials (excluding polymers): EN 17681-1:2025 Leather: EN ISO 23702-1:2023 Polymers (synthetic coated fabrics & polymers, plastics, foams, natural & synthetic rubber): EN ISO 23702-1:2023 using THF extraction followed by methanol precipitation (1:1).
4151-50-2	N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)				
31506-32-8	N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA)				
1691-99-2	2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)				
24448-09-7	2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE)				
307-35-7	Perfluoro-1-octanesulfonyl fluoride (POSF)				
754-91-6	Perfluorooctane sulfonamide (PFOSA)				



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PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	Perfluorooctanoic Acid (PFOA) and its salts			Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	Textiles and other materials (excluding polymers): EN 17681-1:2025 Leather: EN ISO 23702-1:2023 Polymers (synthetic coated fabrics & polymers, plastics, foams, natural & synthetic rubber): EN ISO 23702-1:2023 using THF extraction followed by methanol precipitation (1:1).
335-67-1	Perfluorooctanoic acid (PFOA)	25 ppb total	25 ppb total		
335-95-5	Sodium perfluorooctanoate (PFOA-Na)				
2395-00-8	Potassium perfluorooctanoate (PFOA-K)				
335-93-3	Silver perfluorooctanoate (PFOA-Ag)				
335-66-0	Perfluorooctanoyl fluoride (PFOA-F)				
3825-26-1	Ammonium pentadecafluorooctanoate (APFO)				
	PFOA-related Substances				
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	1000 ppb total	1000 ppb total		
376-27-2	Methyl perfluorooctanoate (Me-PFOA)				
3108-24-5	Ethyl perfluorooctanoate (Et-PFOA)				
678-39-7	Perfluorocylethanol 8:2 (8:2 FTOH)				
27905-45-9	1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)				
1996-88-9	1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)				
27854-31-5	2H,2H-Perfluorodecanoic acid (H2PFDA)				



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PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	Perfluorohexane-1-sulphonic acid (PFHxS) and its salts			Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	Textiles and other materials (excluding polymers): EN 17681-1:2025 Leather: EN ISO 23702-1:2023 Polymers (synthetic coated fabrics & polymers, plastics, foams, natural & synthetic rubber): EN ISO 23702-1:2023 using THF extraction followed by methanol precipitation (1:1).
355-46-4	Perfluorohexane Sulfonic acid (PFHxS)	25 ppb total	25 ppb total		
3871-99-6	Perfluorohexane Sulfonic acid, potassium salt (PFHxS-K)				
55120-77-9	Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)				
68259-08-5	Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)				
82382-12-5	Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)				
	PFHxS-related substances				
68259-15-4	N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	1000 ppb total	1000 ppb total		
41997-13-1	Perfluorohexane sulfonamide (PFHxSA)				



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PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	C9-C14 Perfluorocarboxylic acids (PFCAs) and their salts			Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	Textiles and other materials (excluding polymers): EN 17681-1:2025 Leather: EN ISO 23702-1:2023 Polymers (synthetic coated fabrics & polymers, plastics, foams, natural & synthetic rubber): EN ISO 23702-1:2023 using THF extraction followed by methanol precipitation (1:1).
375-95-1	Perfluorononanoic Acid (PFNA, C9-PFCA)	25 ppb total	25 ppb total		
335-76-2	Perfluorodecanoic Acid (PFDA, C10-PFCA)				
2058-94-8	Perfluoroundecanoic Acid (PFUnA, C11-PFCA)				
307-55-1	Perfluorododecanoic Acid (PFDoA, C12-PFCA)				
72629-94-8	Perfluorotridecanoic Acid (PFTrDA, C13-PFCA)				
376-06-7	Perfluorotetradecanoic Acid (PFTeDA, C14-PFCA)				
172155-07-6	Perfluoro-3-7-dimethyloctanecarboxylate (PF-3,7-DMOA)				



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PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	C9-C14 PFCA-related substances				
17741-60-5	1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA)	260 ppb total	260 ppb total	Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	Textiles and other materials (excluding polymers): EN 17681-1:2025 Leather: EN ISO 23702-1:2023 Polymers (synthetic coated fabrics & polymers, plastics, foams, natural & synthetic rubber): EN ISO 23702-1:2023 using THF extraction followed by methanol precipitation (1:1).
2144-54-9	1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)				
865-86-1	1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH)				
34598-33-9	2H,2H,3H,3H-Perufloroundecanoic acid (H4PFUnA)				
678-39-7	Perfluorocylethanol 8:2 (8:2 FTOH)				
39239-77-5	1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)				
120226-60-0	1H,1H,2H,2H-Perfluorododecanesulphonic acid (10:2 FTS)				
2043-54-1	1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI)				
30046-31-2	1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI)				



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PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	PFHxA and its salts			Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	Textiles and other materials (excluding polymers): EN 17681-1:2025 Leather: EN ISO 23702-1:2023 Polymers (synthetic coated fabrics & polymers, plastics, foams, natural & synthetic rubber): EN ISO 23702-1:2023 using THF extraction followed by methanol precipitation (1:1).
307-24-4	Perfluorohexanoic Acid (PFHxA, C6-PFCA)	25 ppb total	25 ppb total		
	PFHxA-related substances				
17527-29-6	1H,1H,2H,2H-Perfluorooctyl acrylate (6:2 FTA)	1000 ppb total	1000 ppb total		
2144-53-8	1H,1H,2H,2H-Perfluorooctyl methacrylate (6:2 FTMA)				
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2 FTS)				
647-42-7	1H,1H,2H,2H-Perfluorooctanol (6:2 FTOH)				



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PESTICIDES: AGRICULTURAL & RESIDUAL 					
Various	Refer to list of pesticides in Appendix C of the current AFIRM RSL. www.afirm-group.com/afirm-rsl	0.5 ppm each	0.5 ppm each	May be found in natural fibers, primarily cotton.	All materials: ISO 15913 or EPA 8081/EPA 8151A or BVL L 00.00-34:2010-09
PHthalATES 					
28553-12-0	Di-isononylphthalate (DINP)	500 ppm each Total: 1000 ppm	50 ppm each	Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility. They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature. Phthalates can be found in: - Flexible plastic components (e.g., PVC) - Print pastes - Adhesives - Plastic buttons - Plastic sleeveings - Polymeric coatings Listed here are all legally restricted Phthalates as well as those included on the REACH SVHC candidate list at the time of publication.	Sample preparation: CPSC-CH-C1001-09.4 Measurement: Textiles: GC/MS, EN ISO 14389:2022 8.1 calculation based on weight of print only; 8.2 Calculation based on weight of print and textile if print cannot be removed All materials except textiles: GC/MS
117-84-0	Di-n-octylphthalate (DNOP)				
117-81-7	Di(2-ethylhexyl)-phthalate (DEHP)				
26761-40-0	Diisodecylphthalate (DIDP)				
85-68-7	Butylbenzylphthalate (BBP)				
84-74-2	Dibutylphthalate (DBP)				
84-69-5	Diisobutylphthalate (DIBP)				
84-75-3	Di-n-hexylphthalate (DnHP)				
84-66-2	Diethylphthalate (DEP)				
131-11-3	Dimethylphthalate (DMP)				
131-18-0	Di-n-pentyl phthalate (DPENP)				
26040-51-7	Bis(2-ethylhexyl) tetrabromophthalate				
84-61-7	Dicyclohexyl phthalate (DCHP)				



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	PHTHALATES 				
71888-89-6	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	500 ppm each Total: 1000 ppm	50 ppm each	Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility. They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature. Phthalates can be found in: - Flexible plastic components (e.g., PVC) - Print pastes - Adhesives - Plastic buttons - Plastic sleeveings - Polymeric coatings Listed here are all legally restricted Phthalates as well as those included on the REACH SVHC candidate list at the time of publication.	Sample preparation: CPSC-CH-C1001-09.4 Measurement: Textiles: GC/MS, EN ISO 14389:2022 8.1 calculation based on weight of print only; 8.2 Calculation based on weight of print and textile if print cannot be removed All materials except textiles: GC/MS
117-82-8	Bis(2-methoxyethyl) phthalate				
605-50-5	Diisopentyl phthalate (DIPP)				
131-16-8	Dipropyl phthalate (DPRP)				
27554-26-3	Diisooctyl phthalate (DIOP)				
68515-50-4	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear				
71850-09-4	Diisohexyl phthalate (DIHxP)				
68515-42-4	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)				
84777-06-0	1,2-Benzenedicarboxylic acid Dipentyl ester, branched and linear				
68648-93-1	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters; 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters				
68515-51-5					
776297-69-9	n-Pentyl-isopentylphthalate (nPIPP)				
53306-54-0	Bis(2-propylheptyl) phthalate (DPHP)	For informational purposes only; testing is recommended to assess content levels.			



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POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) 						
83-32-9	Acenaphthene	No individual restriction	Total: 10 ppm	0.2 ppm each	PAHs are natural components of crude oil and are common residues from oil refining. PAHs have a characteristic smell similar to that of car tires or asphalt. Oil residues containing PAHs are added to rubber and plastics as a softener or extender and may be found in rubber, plastics, lacquers and coatings. PAHs are often found in the outsoles of footwear and in printing pastes for screen prints. PAHs can be present as impurities in Carbon Black. They also may be formed from thermal decomposition of recycled materials during reprocessing. * Naphthalene Dispersing agents for textile dyes may contain high residual Naphthalene concentrations due to the use of low-quality Naphthalene derivatives (e.g., poor-quality Naphthalene Sulphonate Formaldehyde condensation products).	All materials: AFPS GS 2019 or EN 17132:2019 or ISO 16190:2021
208-96-8	Acenaphthylene					
120-12-7	Anthracene					
191-24-2	Benzo(g,h,i)perylene					
86-73-7	Fluorene					
206-44-0	Fluoranthene					
193-39-5	Indeno(1,2,3-cd) pyrene					
91-20-3	Naphthalene*					
85-01-8	Phenanthrene					
129-00-0	Pyrene					
56-55-3	Benzo(a)anthracene	1 ppm each				
50-32-8	Benzo(a)pyrene					
205-99-2	Benzo(b)fluoranthene					
192-97-2	Benzo[e]pyrene					
205-82-3	Benzo[j]fluoranthene					
207-08-9	Benzo(k)fluoranthene					
218-01-9	Chrysene	Child care articles: 0.5 ppm each				
53-70-3	Dibenzo(a,h)anthracene					



NIKE CHEMISTRY PLAYBOOK
NIKE RESTRICTED SUBSTANCES LIST — PRODUCT

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
QUINOLINE 					
91-22-5	Quinoline	50 ppm	10 ppm	Found as an impurity in polyester and some dyestuffs. Quinoline can be included with disperse dye testing, as the same method is used for both.	All materials: DIN 54231:2022 with methanol extraction at 70°C
SOLVENTS & RESIDUALS 					
68-12-2	Dimethylformamide (DMFa) Nike continues to phase out DMFa in all materials; we will reduce the current limit year on year in future updates.	500 ppm	50 ppm each	DMFa is a solvent used in plastics, rubber and polyurethane (PU) coating. Water-based PU does not contain DMFa and is therefore preferable.	Textiles: EN 17131:2019 All other materials: ISO 16189:2021
75-12-7	Formamide	1000 ppm each	50 ppm each	Potential byproduct in the production of some EVA foams. Taiwan CNS 15493: BSMI may enforce a limit of 200 ppm in yoga mats under authority of the Consumer Protection Act.	
127-19-5	Dimethylacetamide (DMAC)			DMAC is a solvent used in the production of elastane fibers and sometimes as a substitute for DMFa.	
872-50-4	N-Methyl-2-pyrrolidone (NMP)			Industrial solvent used in the production of water-based PUs and other polymeric materials. May also be used for surface treatment of textiles, resins and metal coated plastics, or as a paint stripper.	



NIKE CHEMISTRY PLAYBOOK
NIKE RESTRICTED SUBSTANCES LIST — PRODUCT

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
UV ABSORBERS & STABILIZERS 					
3846-71-7	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV 320)	1000 ppm each	100 ppm each	PU foam materials such as open-cell foams for padding. Potential uses as UV-absorbers for plastics (PET, PC, PA, ABS and other polymers), rubber and polyurethane.	ISO 24040:2022 with extraction in THF, analysis by GC/MS
3896-11-5	2-(2'-Hydroxy-3'-t-butyl-5'-methylphenyl)-5-chlorobenzotriazole (UV 326)				
3864-99-1	2,4-Di-tert-butyl-6-(5 chloro benzotriazole-2-yl) phenol (UV 327)				
3147-75-9	2-(benzotriazol-2-yl)-4-(2,4,4-trimethylpentan-2-yl)phenol (UV 329)				
36437-37-3	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV 350)				
25973-55-1	2-(2H-benzotriazol-2-yl)-4,6 ditertpentylphenol (UV 328)	100 ppm	50 ppm		
2440-22-4	Drometrizole	For informational purposes only.		Used as UV absorbers for plastics (PVC, PET, PC, PA, ABS, and other polymers), rubber and polyurethane.	



NIKE CHEMISTRY PLAYBOOK
NIKE RESTRICTED SUBSTANCES LIST — PRODUCT

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
VOLATILE ORGANIC COMPOUNDS (VOCs) 					
71-43-2	Benzene	5 ppm	5 ppm	These VOCs should not be used in textile auxiliary chemical preparations. They are also associated with solvent-based processes such as solvent-based Polyurethane coatings and glues / adhesives. They should not be used for any kind of facility cleaning or spot cleaning. See AFIRM VOC Testing Guidance for additional information.	For general VOC screening: GC/MS headspace 120°C, 45 minutes.
75-15-0	Carbon Disulfide	Total: 500 ppm	20 ppm each		
56-23-5	Carbon tetrachloride				
67-66-3	Chloroform				
108-94-1	Cyclohexanone				
107-06-2	1,2-Dichloroethane				
75-35-4	1,1-Dichloroethylene				
76-01-7	Pentachloroethane				
100-41-4	Ethylbenzene				
630-20-6	1,1,1,2- Tetrachloroethane				
79-34-5	1,1,2,2- Tetrachloroethane				
127-18-4	Tetrachloroethylene (PERC)				
108-88-3	Toluene				
71-55-6	1,1,1- Trichloroethane				
79-00-5	1,1,2- Trichloroethane				
79-01-6	Trichloroethylene				
1330-20-7	Xylenes (meta-, ortho-, para-)				
108-38-3					
95-47-6					
106-42-3					



NIKE CHEMISTRY PLAYBOOK
NIKE RESTRICTED SUBSTANCES LIST — PRODUCT

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
VOLATILE ORGANIC COMPOUNDS (VOCs) 					
96-18-4	1,2,3-trichloropropane	Total: 500 ppm	20 ppm each	These VOCs should not be used in textile auxiliary chemical preparations. They are also associated with solvent-based processes such as solvent-based Polyurethane coatings and glues / adhesives. They should not be used for any kind of facility cleaning or spot cleaning. See AFIRM VOC Testing Guidance for additional information.	For general VOC screening: GC/MS headspace 120°C, 45 minutes.
78-87-5	1,2-Dichloropropane				
111-15-9	2-Ethoxyethyl acetate				
149-57-5	2-Ethylhexane acid				
62-53-3	Aniline				
111-96-6	Bis(2-methoxyethyl)ether				
78-59-1	Isophorone				
108-95-2	Phenol				
109-99-9	THF				
106-94-5	1-bromopropane				
70657-70-4	1-PG2MEA 1-Propanol,2-methoxy-, acetate				
111-77-3	2-(2-Methoxyethoxy)ethanol				
110-80-5	2-ethoxyethanol				
109-86-4	2-Methoxyethanol EGME (ethylene glycol monomethyl ether)				
1589-47-5	2-Methoxypropan-1-ol				
110-71-4	EGDME (Ethylene glycol dimethyl ether)				
110-49-6	EGMEA (Ethylene glycol monomethyl ether acetate)				
67-72-1	Hexachloroethane				
75-09-2	Merhylene chloride (dichloromethane)				
110-54-3	n-hexane				
112-49-2	TEGDME (Triethylene glycol dimethyl ether)				



NIKE-SPECIFIC CHEMICAL & MATERIAL RESTRICTIONS

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
ASBESTOS					
77536-66-4	Actinolite	Not detected	Not applicable Presence/ absence only	No intentional uses	Microscopic examination; minimum magnification 1-250, polarized light filter attached; ratio of fiber length to diameter is at least 3:1.
12172-73-5	Amosite				
77536-67-5	Anthrophyllite				
12001-29-5	Chrysotile				
12001-28-4	Crocidolite				
77536-68-6	Tremolite				



NIKE CHEMISTRY PLAYBOOK » RULES OF THE GAME
NIKE RESTRICTED SUBSTANCES LIST — PRODUCT

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
DIOXINS & FURANS					
40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	Group 1 Sum of Group 1: 1 µg/kg	0.1 µg/kg per congener (Dioxin or Furan)	No intentional use in Apparel or Footwear manufacturing.	USEPA 8290
57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran				
51207-31-9	2,3,7,8-Tetrachlorodibenzofuran				
1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin				
70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran				
39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin				
57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran				
57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin				
72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran				
19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin				
57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran				
60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran				
39001-02-0	1,2,3,4,6,7,8,9-Octachlorodibenzofuran				
3268-87-9	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin				
67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran				
35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin				
55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran				
109333-34-8	1,2,3,7,8-Pentabromodibenzo-p-dioxin				
131166-92-2	2,3,4,7,8-Pentabromdibenzofuran				
67733-57-7	2,3,7,8-Tetrabromodibenzofuran				
50585-41-6	2,3,7,8-Tetrabromodibenzo-p-dioxin				
110999-44-5	1,2,3,4,7,8-Hexabromodibenzo-p-dioxin				
110999-45-6	1,2,3,6,7,8-Hexabromodibenzo-p-dioxin				
110999-46-7	1,2,3,7,8,9-Hexabromodibenzo-p-dioxin				
107555-93-1	1,2,3,7,8-Pentabromodibenzofuran				



NIKE CHEMISTRY PLAYBOOK
NIKE RESTRICTED SUBSTANCES LIST — PRODUCT

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
POLYVINYL CHLORIDE (PVC)					
9002-86-2	Polyvinyl Chloride (PVC)	Prohibited from use in all products and all materials.	Due to complexity of analysis, Nike defines detection limit as 10%.	Plastic items, flexible plastics, screen-printing inks.	Infrared (IR) spectroscopy with or without solvent extraction.

OTHER LIMITS & RESTRICTIONS

CAS NO.	LIST	NIKE COMPLIANCE REQUIREMENTS
Various	<u>REACH SVHC listed chemistries</u> <u>California Proposition 65 listed chemistries</u>	Facilities must notify Nike immediately if substances found on either of these lists are identified in materials or products.



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OVERVIEW

All materials, finished products, packaging, and items manufactured for or supplied to Nike and its Licensees must comply with the requirements in the Nike Chemistry Playbook as well as applicable legal limits and regulatory requirements.

This Playbook is subject to updates. If requirements change, we will issue an RSL Effective Date that allows facilities sufficient time to comply, unless new or forthcoming legislation must result in shorter notice. The most up-to-date version of this document can be found at [the Nike Chemistry website](#).

ONLINE RSL TESTING APPLICATION

All facilities must log in to the [Nike RSL Testing Application](#) to create, submit, and print a Test Request Form (TRF).

To request access to the RSL Testing Application, visit the Nike Chemistry website to download the Nike-RSL Application Login Assistance Guide. For further assistance, contact RSLsupport@nike.com.

NIKE-APPROVED LABORATORIES

Nike only accepts data from approved laboratories as proof of compliance. A list of Nike-Approved Laboratories can be found in the Contacts section of this Playbook. Each material, finished product, packaging, and item must be tested against the designated Nike RSL Test Matrix and Packages.

TYPES OF TESTING

Nike employs two testing approaches:

- **Standard Testing.** Facilities use the implementation guidance on the following pages and send samples for testing as described.
- **Directive Testing.** Nike may choose to implement a directive testing approach for a particular facility. Rather than using the standard implementation guidance, Nike RSL Teams work directly with the facility to test specific materials in a given season. Directive testing is in addition to tests the facility undertakes to enable RSL compliance, as well as to any testing that a finished goods factory may request.

SELECTING TEST SAMPLES

The Materials Testing Matrix for Products (see pages 83 – 85) outlines required test packages for products, electronics, jewelry and accessories by material type.

Material-specific guidance detailing how to select samples for testing follows. For example, facilities choose natural leather and coated leather test samples based on production volumes, but chemical testing is distinct for the two materials because of differing base chemistries and processing steps.

The Materials Testing Matrix for Packaging is found on page 123.

We request that facilities package samples appropriately based on the sample type. Paper envelopes, plastic bags, bubble wrap, etc. are all valid choices for packaging as long as the sample reaches the lab undamaged and unaltered.

TEST SAMPLE DESIGNATIONS

When filling out a TRF on the RSL Testing Application, facilities must select between two types of samples:

- **Production-ready material test samples.** These samples are representative of materials used in the production of finished goods and must use the same input chemicals and process steps as in production. To receive a PASS result, facilities must submit production-ready material test samples without changes to starting materials or processing steps.
- **Research and Development (R&D) material test samples.** When developing new materials or processes, material facilities may submit R&D samples at any time for any subset of chemistries as required by the finished goods factory. R&D test samples are for informational purposes only and cannot achieve a PASS result.



FINISHED GOODS FACTORY TESTING

The Nike Code requires finished goods factories to maintain a program that enables compliance with the Nike RSL. The Nike RSL team strongly recommends that finished goods factories test materials received from external facilities as well as those produced in-house. This testing helps protect finished goods factories from inadvertent RSL violations by identifying issues prior to production.

We encourage finished goods factories to work directly with the Nike RSL team to identify which materials to test on a recurring basis. Please contact RSLSupport@nike.com for assistance.

COMPONENTS & COMPLEX MATERIALS

The Nike RSL program classifies materials by category, as outlined in the Materials Test Matrix. However, there are components and complex materials not easily categorized, such as zippers (which can have metal, plastic, and fabric components), painted items (which can have paint or lacquer applied on a metal or plastic base), combinations of materials that cannot be disjoined

or separated by mechanical action, and more. If facilities have concerns or questions regarding how to classify a material or item on the TRF, please reach out to RSLSupport@nike.com for specific guidance.

MATERIALS TESTING PROGRAM

The testing implementation programs outlined in the Materials Testing Matrix for Product (pages 83 – 85) and the Materials Testing Matrix for Packaging (page 123) are the minimum requirements for testing.

New facilities are required to provide RSL test results for all materials used in Nike products. All facilities are required to provide test reports when requested by factories or Nike teams.

Nike strongly encourages facilities to test more than the minimum number of materials listed herein against Nike RSL limits and also confirm compliance with any applicable prohibitions and restrictions pursuant to the EU REACH, including the SVHC List; the California Proposition 65 List; etc.

If facilities have specific concerns about the chemistry of a material or product, such as compliance with any applicable prohibitions and restrictions, please reach out to RSLSupport@nike.com.

TEST PACKAGE 1

Test Package 1 (TP1) tests a material in a given category for a defined set of chemical substances – substances that have been historically present in the material and place it at risk for RSL test failure.

TEST PACKAGE 2

Test Package 2 (TP2) includes all the substances in TP1, with additional specified substances.

NOTE: The Nike RSL Testing Application automatically selects TP2 for every fifth sample submission:

- Samples 1-4 TP1
- Sample 5 TP1 + TP2
- Samples 6-9 TP1
- Sample 10 TP1 + TP2

TESTS FOR SUBSTANCES NOT LISTED AS TEST PACKAGES 1 OR 2

The blank cells in the Materials Testing Matrix indicate a lower risk of finding these substances because they have been successfully phased out of the supply chain or have not been identified as a chemistry in use for the specified material. Facilities using best practices for chemicals management are unlikely to find these substances; however, they are still responsible for ensuring materials and finished products meet applicable limits. Facilities may request tests on these substances by selecting the Individual Test required in the RSL Testing Application.

All finished goods must meet all Nike RSL requirements as well as applicable legal limits and regulatory requirements. The minimum testing frequency is based solely on historical information and may not represent a specific facility's production.



TEST ADMINISTRATION

RSL testing must be performed on research and development (R&D) material seeking product approval, and on production-ready material. Production-ready material must be identical to that used in actual product. When materials or products are undergoing RSL testing, they cannot be used in production until Nike receives a passing RSL test report.

If a material or component fails RSL testing, all materials affected must be quarantined immediately. After product quarantine, facilities must complete a failure resolution process with Nike.

Only materials that pass RSL testing requirements for Infants, Toddlers, and/or Children can be used for products intended for the targeted age groups, including any “take down” product.

- Prior to production, material suppliers must provide factories with test results proving compliance with the Nike RSL.

- All RSL Tests Requests must be submitted using the online [Nike RSL Testing Application](#).
- All RSL Tests must be performed at a Nike-Approved Laboratory.
- Facilities create a TRF in the Nike RSL Testing Application and print a copy to accompany each test sample.
- Test results are valid for one year from the RSL Test Report date unless stated otherwise.
- Nike reserves the right to request testing documentation and/or additional or complementary RSL Testing at any time.

HANDLING RSL DATA

As shown in Figure 5, Nike-Approved Laboratories conduct testing and upload test results to the Nike RSL Testing Application. The Nike RSL Testing Application stores test reports and allows facilities to export data files.

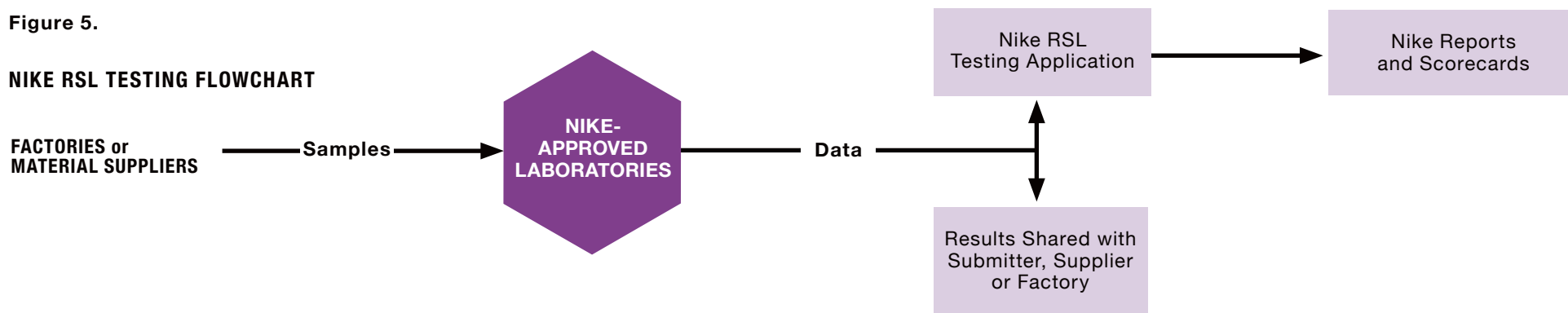
All finished goods must meet all Nike RSL requirements as well as the applicable legal limits and regulatory requirements — no matter which testing package is listed within the Materials Testing Matrix.

The Nike Code requires facilities to maintain test reports for a minimum of 10 years. Unless otherwise agreed with Nike, this information may be transmitted electronically.

Only test reports uploaded to the Nike RSL Testing Application by Nike-Approved Laboratories can be used to satisfy Nike requirements. Test results from non-approved laboratories are not accepted as proof of compliance.

Figure 5.

NIKE RSL TESTING FLOWCHART





FAILURE RESOLUTION

Facilities must perform due diligence so that all shipped materials and components used on finished goods meet Nike RSL requirements. In the event of a FAIL or KID FAIL rating, facilities must take immediate action. See the flowchart in Figure 6.

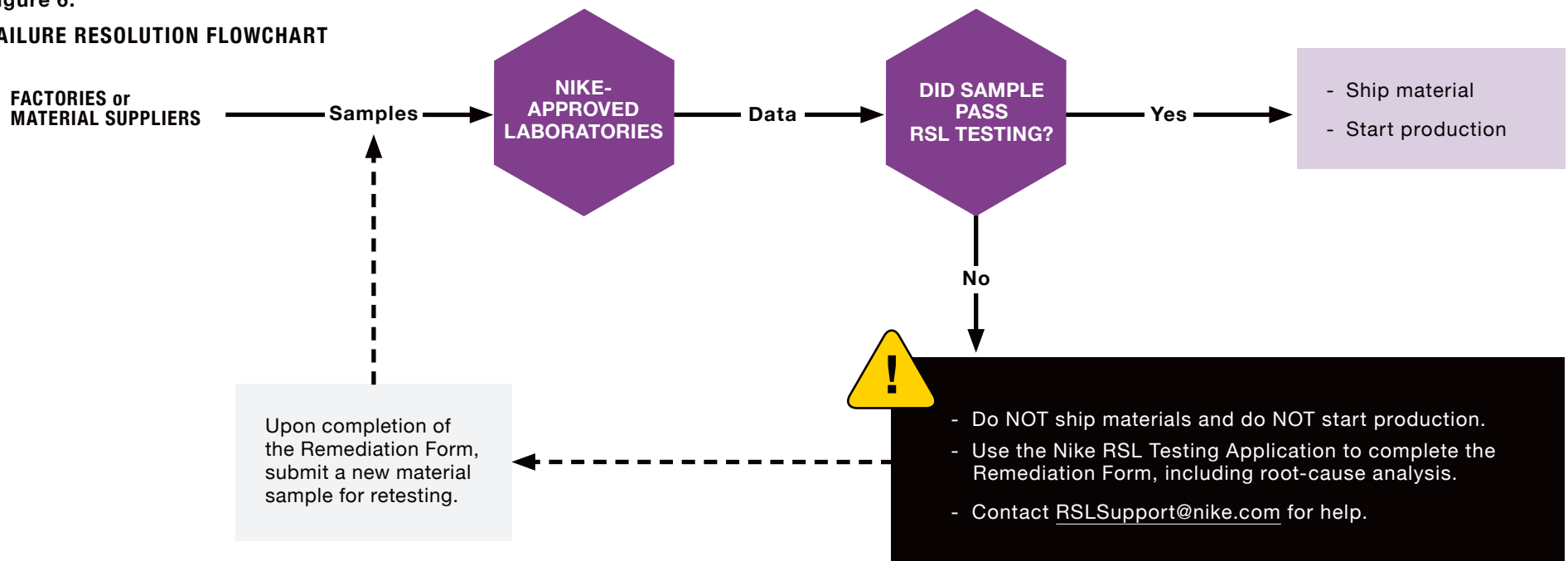
- Failed materials must be quarantined and isolated immediately; all production and shipping of failed materials must be put on hold.

- The RSL Testing Application guides factories and material suppliers through each step of the failure-resolution process.
- After the facility has found the root cause of the failure and fixed the issue, the material must be retested.
- Facilities should not retest materials until the failure-resolution process is completed.

Failure or omission to correctly address the root cause of the failure could result in significant consequences.

- If a facility is deemed unreliable due to multiple material RSL failures, Nike, at its sole discretion, as provided for in applicable contractual agreements with that facility, may place that facility on probationary status. This may result in increased testing requirements.
- If a facility on probation continues to supply non-compliant material, Nike may initiate further measures at its sole discretion. Measures may include termination of all business dealings with the facility.

Figure 6.
FAILURE RESOLUTION FLOWCHART





MATERIALS TESTING MATRIX

Restricted Substance	NATURAL FIBERS	SYNTHETIC FIBERS Nylon, PET, Etc.	NATURAL & SYNTHETIC FIBER BLENDS	PLASTICS, THERMOPLASTICS & POLYMERS								SYNTHETIC LEATHER	NATURAL LEATHER	COATED LEATHER	INKS & PAINTS	SUBLIMATION & DIGITAL PRINTS	SCREENPRINT STRIKE-OFFS	ADHESIVES	METAL ITEMS
				EVA Materials	PU Foams	PU & TPU Other than Foams & Synthetic Leather	Rubber Materials	Polycarbonate & Epoxied Materials	ABS Plastic Materials	Silicone Polymers	All Other Foams, Plastics & Polymers								
Acetophenone & 2-Phenyl-2-Propanol				TP2															
Acidic & Alkaline Substances (pH)	TP2												TP2						
Alkylphenols (NP, OP)																			
Alkylphenol Ethoxylates (NPEO, OPEO)	TP1	TP1	TP1	TP1	TP2	TP2	TP1	TP2	TP1		TP1	TP2	TP2	TP1	TP1	TP1	TP1	TP1	
Asbestos	PROHIBITED																		
Azo-amines	TP1 (1)	TP1 (1)	TP1 (1)									TP1	TP2	TP2	TP1 (1, 2)	TP2			
Bisphenols (BPA, BPS, BPB, BPF)		TP1	TP2					TP1					TP2						
Brominated & Organo- phosphorus Substances	PROHIBITED																		
Chlorinated Benzenes & Toluenes	TP2	TP1	TP2																
Chlorinated Paraffins						TP2	TP2												
Chlorophenols		TP2	TP2																
Cyclosiloxanes										TP1									
Dimethylfumarate (DMFu)	PROHIBITED												TP2 (3)	TP2 (3)					



MATERIALS TESTING MATRIX

Restricted Substance	NATURAL FIBERS	SYNTHETIC FIBERS Nylon, PET, Etc.	NATURAL & SYNTHETIC FIBER BLENDS	PLASTICS, THERMOPLASTICS & POLYMERS								SYNTHETIC LEATHER	NATURAL LEATHER	COATED LEATHER	INKS & PAINTS	SUBLIMATION & DIGITAL PRINTS	SCREENPRINT STRIKE-OFFS	ADHESIVES	METAL ITEMS
				EVA Materials	PU Foams	PU & TPU Other than Foams & Synthetic Leather	Rubber Materials	Polycarbonate & Epoxied Materials	ABS Plastic Materials	Silicone Polymers	All Other Foams, Plastics & Polymers								
Dioxins & Furans	PROHIBITED																		
Dyes (Acid, Basic, Direct, Other)	TP2 (1)	TP2 (1)											TP2			TP2			
Dyes (Disperse)		TP2 (1)	TP2 (1)													TP2 (1)			
Dyes (Navy Blue)																			
Fluorinated Greenhouse Gases	PROHIBITED																		
Formaldehyde	TP1	TP1	TP1		TP2	TP2					TP2		TP2	TP2	TP1	TP1	TP1	TP1	
Metals (Chromium VI)													TP1	TP1					
Metals (Extractable)	TP2	TP2	TP1									TP2	TP1	TP2					TP1 (4)
Metals (Nickel Release)																			TP1 (5)
Metals (Total)	TP2		TP2	TP1	TP1	TP1	TP1	TP1	TP1		TP1	TP2	TP1	TP2	TP2	TP2	TP2	TP1	TP1
Monomers									TP2										
N-Nitrosamines							TP2												
Organotin Compounds					TP1	TP1	TP1	TP1			TP1	TP1		TP1	TP1	TP1	TP1	TP1	TP1 (6)
Ortho-phenylphenol																			



MATERIALS TESTING MATRIX

Restricted Substance	NATURAL FIBERS	SYNTHETIC FIBERS Nylon, PET, Etc.	NATURAL & SYNTHETIC FIBER BLENDS	PLASTICS, THERMOPLASTICS & POLYMERS								SYNTHETIC LEATHER	NATURAL LEATHER	COATED LEATHER	INKS & PAINTS	SUBLIMATION & DIGITAL PRINTS	SCREENPRINT STRIKE-OFFS	ADHESIVES	METAL ITEMS
				EVA Materials	PU Foams	PU & TPU Other than Foams & Synthetic Leather	Rubber Materials	Polycarbonate & Epoxied Materials	ABS Plastic Materials	Silicone Polymers	All Other Foams, Plastics & Polymers								
Ozone-depleting Substances	PROHIBITED																		
PFAS Chemicals	PROHIBITED																		
Pesticides, Agricultural																			
Phthalates				TP2	TP1	TP2	TP2	TP1	TP2		TP1				TP1		TP1	TP2	
Polycyclic Aromatic Hydrocarbons (PAHs)							TP1												
Polyvinyl Chloride (PVC)	PROHIBITED																		
Quinoline																			
Solvents & Residuals (DMFa, DMAC, NMP, Formamide)				TP1		TP2 (7)						TP1		TP1				TP2	
UV Absorbers/Stabilizers					TP2														
Volatile Organic Compounds (VOCs)				TP2	TP2	TP2					TP2	TP2						TP2	

TP1 = Test Package 1

The online RSL Testing Application automatically selects this required set of tests for 4 of 5 samples.

TP2 = Test Package 2

The online RSL Testing Application automatically selects this required set of tests for 1 of 5 samples.

- 1 Testing for Dyes is not required for white materials.
- 2 Screenprint Ink only.
- 3 DMFu prohibited; mandatory testing required for Natural Leather and Coated Leather.
- 4 Jewelry Metal items
- 5 Metal items coming into skin contact.
- 6 Testing of coated/painted Metal items only.
- 7 For PU or TPU skins/films, testing must be done after application to base material (ex: fuse or new sew package).



TEXTILES: NATURAL, SYNTHETIC & BLENDED FIBERS

The Nike RSL defines a unique material for textiles as any combination of:

- Material composition
- Color
- Applied chemistries or finishes
- Material facility location

In addition, each textile type (natural, synthetic or blend compositions) in combination with a chemical finish is considered a unique material.

A difference or change in any of these properties indicates the textile has changed and may be subject to further testing.

For example, 100% cotton, 100% polyester, 60-40% cotton / polyester, 50-50% cotton / polyester, etc. are all unique and subject to routine and/or random testing.

Each season, facilities must test 5% of all natural, synthetic and blended fibers, or materials composed of these fibers, on the basis of unique material/color combinations, choosing materials with the highest production volumes.

EXAMPLE: A facility producing 100 unique material/color combinations in a season must test their

top five unique material/color combinations by production volumes. This testing guidance is summarized in Figure 7 and Table 4.

NOTE: For any calculated value, the result must be rounded up to the highest whole number; for example, 45 material/color combinations x 5% = 2.25, which would require three total tests (not two).

When ranking by current-season production volume isn't possible:

1. Calculate the previous season's number of materials to use as a basis for the current season.
2. Focus testing on higher-volume materials that haven't already passed RSL testing within the previous calendar year.

For guidance on items produced from yarn to finished good without a material phase, contact: RSLSupport@nike.com

Figure 7.

TESTING GUIDANCE FOR TEXTILES: NATURAL, SYNTHETIC & BLENDED FIBERS

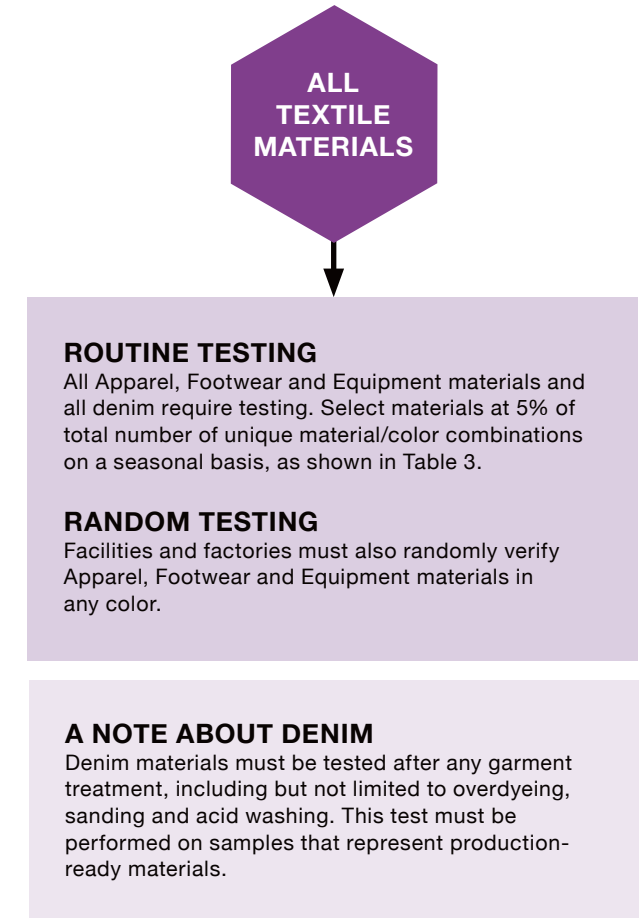




Table 4.
CALCULATING THE NUMBER OF TEST SAMPLES FOR TEXTILES

MATERIAL IDENTIFICATION	LINEAR YARDS PRODUCED	TOTAL NUMBER OF TESTS REQUIRED	TEST THIS MATERIAL?
Unique material/color combination 1	50,000	- Facility produces 100 unique material/color combinations, as shown in Material Identification column - 5% Testing Requirement = Five (5) Total Tests - Choose top five materials by production volume, as shown in Linear Yards Produced column	Yes
Unique material/color combination 2	25,000		Yes
Unique material/color combination 3	40,000		Yes
Unique material/color combination 4	15,000		Yes
Unique material/color combination 5	60,000		Yes
Unique material/color combination 6	2,200		No
Unique material/color combination 7	1,000		No
Materials 8–100	20,000 combined		No





NATURAL LEATHER, COATED LEATHER & SYNTHETIC LEATHER

Facilities supplying Leather, Coated Leather, and Synthetic Leather are required to test materials based on order volumes. These volumes are for production orders only but not sample orders.

MATERIAL DEFINITIONS & REQUIRED TESTING FREQUENCY

Facilities are required to submit a minimum number of materials for RSL testing based on the total volume of materials supplied, as outlined below. The specific test-per-volume ratio is the “minimum testing frequency.”

Nike suggests testing each season; however, an annual frequency may be acceptable if it aligns with business practices. For the benefit of this Playbook, Nike defines these material and testing frequency requirements as follows:

- **Natural Leather.** Animal hide without a plastic or polymer coating: minimum of one test per 150,000 square feet of material.
- **Coated Leather.** Animal hide with any plastic or polymer coating or composite leather made of natural leather and a polymer additive: minimum of one test per 500,000 square feet of material.
- **Synthetic Leather.** Any base material except animal hide with a coating is considered Synthetic Leather: minimum of one test per 200,000 square meters of material.

- **Direct Skin Contact Materials.** Facilities must test all materials that come in direct contact with the skin on an annual basis.

In addition to these minimum testing frequency requirements, facilities should proactively test materials such as:

- R&D materials that involve new input chemistries or substantially different processing steps that the facility has not used in manufacturing this material in the past.
- High-volume materials.
- Fluorescent colors.
- Metallic finishes or specialized performance coatings.

Table 5 shows the minimum number of passing RSL tests required, based on order volumes for Natural Leather, Coated Leather and Synthetic Leather. Note that these are minimum requirements only.

SELECTING MATERIAL TEST SAMPLES

RSL test samples can be of any color, thickness or finish.

- Nike considers Composite Leathers or any Leather with polymer present to be a Coated Leather for the purposes of RSL testing.
- Nike encourages facilities to submit their highest-volume production-ready materials as well as new, innovative R&D materials.

Table 5.

MINIMUM NUMBER OF PASSING RSL TESTS REQUIRED FOR LEATHER MATERIALS

Based on order volumes for Natural Leather, Coated/Composite Leather and Synthetic Leather

ORDER VOLUME Square Feet Leather and Coated Leather Only OR Square Meters Other Materials	NATURAL LEATHER	COATED LEATHER	SYNTHETIC LEATHER
1 – 100	1	1	1
100,000	1	1	1
150,000	1	1	1
200,000	2	1	1
250,000	2	1	2
250,000	2	1	2
350,000	3	1	2
550,000	4	2	3
750,000	5	2	4
1,050,000	7	3	6
3,550,000	24	8	18
9,550,000	64	20	48
10,005,000	67	21	51



PLASTICS, THERMOPLASTICS, RUBBER & POLYMERS

This guidance includes EVA, PU, Rigid Plastics, Laminates, etc. Please review this information carefully, as it impacts facilities providing any type of polymer.

Please refer to the next subsection, “PU & TPU Skins or Films,” for guidance specific to those materials.

APPAREL, FOOTWEAR, AND EQUIPMENT

Nike identifies unique plastics, thermo-plastics, rubber, and other polymers etc. as a combination of:

- Material chemistry
- Thickness
- Material facility location

A change to any of these properties identifies a material for routine or random testing. See Table 6 for guidance on how to determine a unique material.

Table 6.

GUIDANCE FOR DETERMINING UNIQUE PLASTIC, THERMOPLASTIC, RUBBER & POLYMER MATERIALS

POLYMER 1	POLYMER 2	ADDITIVES	COLOR	UNIQUE MATERIAL?
50% Butadiene Rubber	50% Natural Rubber	A, B	White	Yes
60% Butadiene Rubber	40% Natural Rubber	A, B	White	Yes
60% Butadiene Rubber	40% Natural Rubber	A, B	Black	No
60% Butadiene Rubber	40% Natural Rubber	A, C	White	Yes
60% EVA	40% Natural Rubber	A, C	White	Yes
60% EVA	40% Natural Rubber	A, C	Black	No



TESTING FREQUENCY

The testing frequency for Plastics, Thermoplastics, Rubber, and other Polymers depends on the intended end use of the materials. Please see Figure 8 for guidance.

Please refer to the subsection “PU & TPU Skins or Films” for guidance specific to those materials.

SPECIFIC GUIDANCE FOR FOOTWEAR FACTORIES

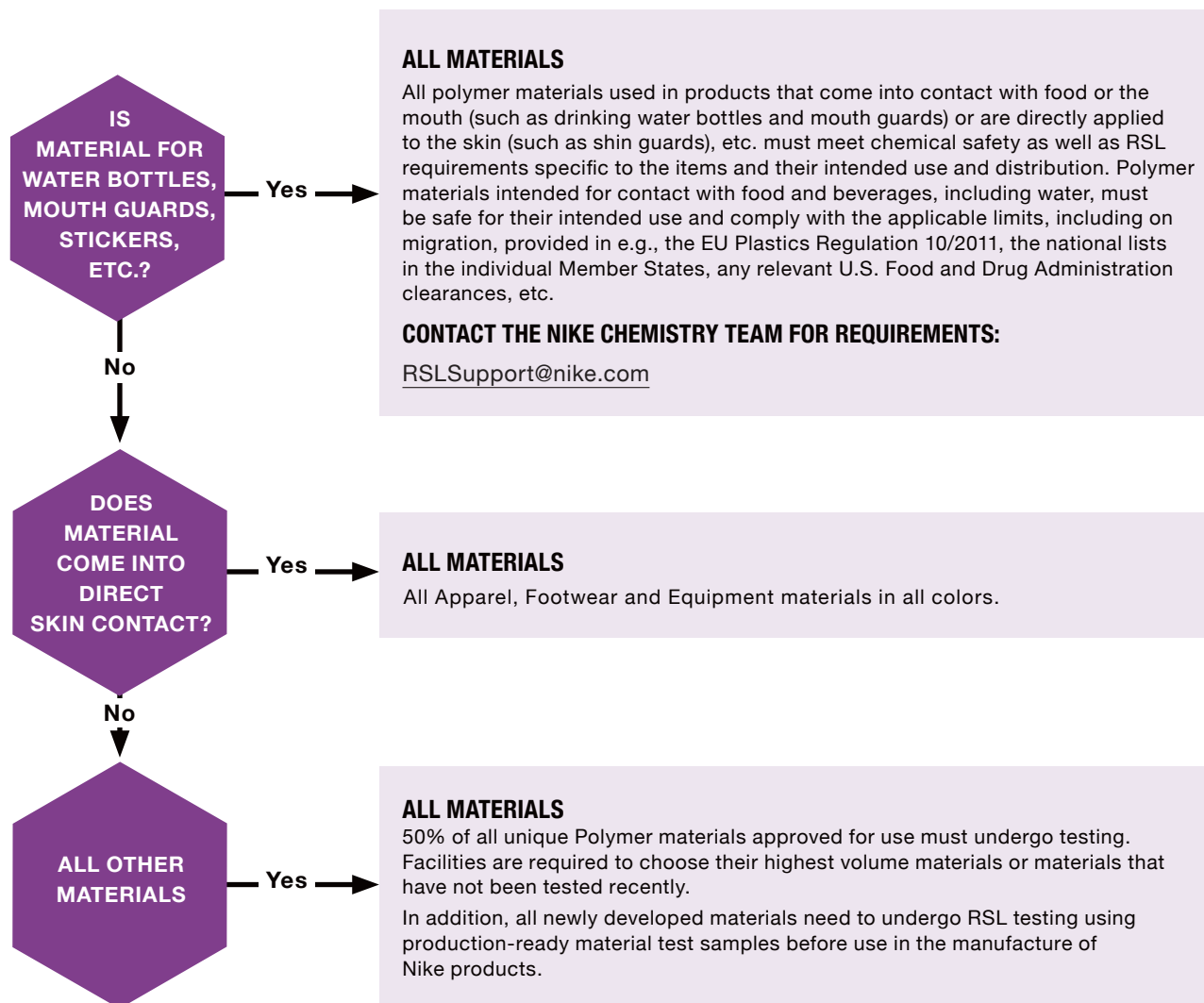
Factories must test 50% of all MCS numbers produced annually. This 50% should represent the highest volume MCS numbers. When selecting samples, please choose a variety of colors (for example: MCS 1 in black, MCS 2 in white, MCS 3 in red, etc.).

Example: A factory creates 20 different MCS materials in one year. The factory must submit 10 samples for testing. Note that this approach does not include color as a unique identifier.

1. Rank production volume for all MCS numbers from high to low.
2. Select the top 10 materials in the list for maximum coverage of production.
3. Select a different color for each MCS if possible.

Figure 8.

TESTING FREQUENCY GUIDANCE FOR PLASTICS, THERMOPLASTICS, RUBBER & POLYMER MATERIALS





PU & TPU SKINS OR FILMS

PU and TPU Skins or Films are thin layers of plastic film applied to an underlying substrate by processes such as heat pressing or high-frequency welding. Nike considers thin PU or TPU Skins or Films a separate material from other plastic items in the supply chain.

Nike defines a unique material for PU and TPU Skins as any combination of:

- Thickness change greater than 0.5 mm
- Additives (metallic flecks, beads, etc.)
- Finishes (waterproofing, migration-free, metallic, reflective, etc.)
- Changing the color or release paper does not create a unique material unless it also changes one of the above attributes.

MINIMUM TESTING REQUIREMENTS

Facilities providing PU or TPU Skins or Films are required to have at least one test per unique item, defined above, tested annually.

Samples submitted for RSL testing can be of any color, release-paper, etc.

- New facilities are required to provide an RSL test for the first five materials supplied to Nike.

- Existing facilities are required to conduct, at a minimum, one RSL test per year regardless of the quantity of material supplied.

Note that Nike or finished goods factories can request additional testing on materials at their discretion. Testing costs and logistics should be discussed beforehand.

Please contact RSLSupport@nike.com with any questions or concerns.

ADDITIONAL TESTING

In addition to the minimum RSL testing requirements above, as well as direct requests for tests from factories and/or Nike teams, facilities are encouraged to proactively test materials such as:

- New development materials
- High volume materials
- Materials with fluorescent colors

SUBMITTING SAMPLES FOR TESTING

PU and TPU Skins and Films are tested in an as-applied state. Facilities submit samples to testing labs after applying materials to an RSL-compliant substrate following standard production practices.





INKS & PAINTS

Nike considers inks and paints to be at high risk for RSL non-compliance and impacts to human health and the environment. These materials must be tested prior to production in an as-applied state; for example, ink that has cured, paint that has dried, etc.

All inks and paints must be tested annually and receive an RSL PASS result prior to application to any product. They must be retested every time a change is made to the color system formulation or on an annual basis, whichever comes first.

SCREEN-PRINTING INKS

Component-based screen-printing inks consist of three main component types:

- Bases
- Pigments
- Additives

Each base, pigment, and additive in a component-based screen-printing ink system must be tested at least once per year.

Facilities must create multiple material test samples for a component-based printing system. Each printed sample should contain a single base, a single pigment, and as many additives as necessary.

When submitting base color samples, print at least 10 grams on a RSL-compliant base material representative of production material and cured according to the recommended curing instructions. When creating each base color sample, the pigment loading must be at the maximum recommended level per the ink manufacturer's recommendation.

Submit material test samples of ready-to-use (RTU) ink products with no changes to the formulation. All RTU products must be dried and cured on RSL-compliant base material representative of production material and consistent with the ink manufacturer's recommendations.

Note: Nike-Approved Laboratories do not accept composite ink samples (more than one pigment in a base color).

DIGITAL PRINTING INKS

Digital printing inks must be tested once per year. The sample should be prepared by printing each color individually on RSL-compliant base material representative of production material. The samples must be applied with production transfer paper and on production equipment. When creating a digital printing ink test sample, print one sample for each base color – at least 10 grams of ink on RSL-compliant material. For example, a CMYK digital printing ink system requires one sample for cyan, one sample for magenta, one sample for yellow, and one sample for black.

SUBLIMATION PRINTING DYES

Sublimation prints must be tested once per year. When submitting sublimation prints to the lab, print each base color independently on one A4-sized sheet of RSL-compliant material. Create samples for each base color. For example, if four base colors are used for sublimation printing (CMYK), print one A4-sized sheet for each color.

HEAT TRANSFER INKS

Heat transfer inks typically resemble a screen-printing ink system or a digital printing ink system. Refer to those sections for instructions.

UNCURED INKS

If a facility is unable to provide a cured ink sample to the RSL testing lab, please reach out to RSLSupport@nike.com. Labs will not cure wet ink samples, so it is important that the sample submitter — whether an ink manufacturer or a printing facility — ensures the printed sample is cured properly on RSL-compliant fabric representative of production material.



SCREEN PRINT STRIKE-OFF TESTING

Nike considers screen print inks, heat transfers, and similar embellishments to be at high risk for RSL non-compliance and impacts to human health and the environment. In addition to the RSL testing requirement for inks and paints, Nike requires strike-off testing of finished goods with such embellishments.

STRIKE-OFF TESTING REQUIREMENTS

For screen prints, heat transfers, and similar embellishments, facilities must test strike-offs at a rate of 2% by style (not color) per season. Selected samples should be dark-colored or fluorescent prints.

SAMPLE SELECTION

During a given season, facilities may not be able to predict which styles will be the top 2% by volume, as orders may still be coming in. When this is the case, facilities should use the previous season's order history to determine the number of strike-off tests required and then choose styles to test based on high-volume inks and base fabrics used in the style.

EXAMPLE: As shown in Table 7, a printing house produces 148 styles in a given season. Using the 2% minimum testing requirement, the printer must submit three styles for Nike RSL testing.

- Choose the top 2% of styles by production volume for strike-off testing, rotating colorways.
- Style numbers should not include the color code.
- In the table, production volumes are added together for each order of a specific style for a given season.
- As shown, the top 3 styles by volume are selected for RSL testing – “Style 1,” “Style 4,” and “Style 5.” Round up to the nearest whole number.

Table 7.

REQUIRED STRIKE-OFF TESTING OF TOP 2% OF STYLES BY PRODUCTION VOLUME

Choose the top 2% of styles by production volume for strike-off testing, rotating colorways. Style numbers should not include the color code.

STYLES	PRODUCTION VOLUME	STRIKE-OFF TEST REQUIRED FOR THIS STYLE?
Style 1	50,000	Yes
Style 2	500	No
Style 3	20,000	No
Style 4	30,000	Yes
Style 5	40,000	Yes
Styles 6 – 148	400	No

In this example, a factory produces 148 styles:

$$148 \text{ styles} \times 2\% = 2.96$$

Round up to the nearest whole number.

The top 3 styles by production volume must undergo RSL testing.



ADHESIVES

Nike considers adhesives (glue, bonding agents, etc.) to be at high risk for RSL non-compliance and impacts to human health and the environment. Testing is required once per year for each adhesive. RSL testing is also required prior to using any new adhesive in production.

All adhesive test samples must be in a form that is representative of the curing process that would be used in production, whenever applicable. Samples should be cured and dried on a material that allows the adhesive to be removed for testing laboratories. If this is not possible, application to an RSL-compliant material may be required.

If a sample cannot be fully dried before submitting it to a lab, testing on liquid samples may be possible. Contact your chosen lab to help ensure they have the capacity to test samples in the liquid state. This kind of testing may be applied to (for example) low solid-content emulsions, knitting oils, cleaners, etc.

EYEWEAR FRAMES

Eyewear frames may have specific chemistry limits for some components that differ from the RSL limits in this Playbook. Please contact RSLSupport@nike.com for questions regarding specific eyewear limits. Samples can be submitted following normal practice, as any limit adjustments are built into the RSL Testing application directly.

JEWELRY

Jewelry is considered high risk for RSL non-compliance and impacts to human health and the environment. Items classified as jewelry have specific limits and may require specialized testing. Each item should be reviewed by the Nike RSL Team to confirm the relevant testing is performed. Please contact RSLSupport@nike.com prior to testing jewelry items.

METAL PARTS

All metal items are considered high risk for RSL non-compliance and impacts to human health and the environment. Each component must be tested annually or when a base metal is changed.

OTHER: RHINESTONES, SEQUINS, ETC.

For any material that does not fit within established material categories, reach out to RSLSupport@nike.com.



PROMOTIONAL MERCHANDISE

All Promotional Merchandise bearing a Nike brand logo must meet the requirements listed in the Nike RSL and may be subject to further requirements.

Promotional Merchandise encompasses anything given away for free or included complimentary with a Nike purchase. Recipients of Promotional Merchandise may be external, such as customers or event attendees or internal Nike employees, employee resource groups, or interns. Promotional Merchandise typically:

- Bears Nike's name and/or marks such as the swoosh or jumpman.
- May be presented in a container that bears Nike marks such as a Nike shoe box.
- Is considered closely associated with Nike's name and/or marks — such as shoe cleaning kits, official league merchandise such as MLB Bobble Head figures with a Nike swoosh on the figure's uniform, or other products offered in a "seeding kit."
- Has been post-embellished through screen printing or embroidery with Nike's name and/or marks.

Promotional Merchandise should be tested according to the base material and intended use of the product. Most Promotional Merchandise falls into the categories described within this Playbook and should be tested accordingly.

If you have Promotional Merchandise that does not clearly fit into a category within the Nike RSL or need help getting the correct (local) requirements, please contact RSLSupport@nike.com for assistance with the verification process.

In addition to RSL Testing, Promotional Merchandise **MUST** be evaluated for general product compliance, including physical safety. To maintain both the integrity of the Nike brand and the safety of those who use the products purchased by Nike from Supplier, suppliers shall not make any product for Nike without first receiving written approval from the Nike Product Safety Team. Please reach out to the [Nike Product Safety Team](#) for this evaluation or directions on sourcing NIKE, Inc. branded Promotional Merchandise, including water bottles, notebooks, keychains, bracelets, and more.

TOYS, ELECTRICAL & ELECTRONIC EQUIPMENT, AND FOOD-CONTACT MATERIALS

The testing requirements for toys, Electrical & Electronic Equipment (EEE) and food-contact materials differ from the testing requirements for general Nike Apparel, Footwear, and Equipment products. Please reach out to the [Nike Product Safety Team](#) for further guidance on specific testing.

Because these products may also require technical files or additional labeling, please consult your Nike RSL and Product Safety contact when developing a product that has the characteristics of or foreseeable use as a toy, EEE, or food-contact material. Additionally, to maintain both the integrity of the Nike brand and the safety of those who use the products Nike purchases from Suppliers, suppliers shall not make any product for Nike without first receiving written approval from the Nike Product Safety and Nike RSL Teams.



ELECTRICAL & ELECTRONIC EQUIPMENT

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OVERVIEW

Electronics are defined as Electrical & Electronic Equipment (EEE) and/or individual components dependent on electric current or electromagnetic fields to function properly and fulfill at least one of their intended functions.

REGULATORY GUIDANCE

Each country has different legal and regulatory requirements, guidance and administrative practices for electronics that are imported and sold.

These requirements are applied depending on the type or types of electronics in the product, including but not limited to adapters, batteries, cables, and radio communication technologies (such as near field communication [NFC] tags, Bluetooth, Wi-Fi, etc.).

Facilities are required to provide Nike with documentation such as technical data sheets, safety reports, factory ISO certifications, and other relevant information upon request.

Electronics must comply with all applicable legal and regulatory requirements. When electronics are embedded in a product, both the electronics and the other product components must comply with applicable legal and regulatory requirements and the Nike RSL for Electronics. In addition, the non-electronic components of the product must meet Nike RSL requirements for the relevant product category.



LABELING GUIDANCE

EEE and/or individual embedded components must bear all legally required and otherwise appropriate labeling for the embedded technologies. They must be accompanied by legally required safety information, in the language required by the national legislation of the country where they are placed on the market. If there is no requirement to label in a specific language, required safety information includes, but is not limited to:

- Product safety — including suitable, clearly worded and easily comprehensible warnings and instructions for use and disposal, and any other indication or information regarding the safe use of the product.
- Product usage.
- Chemical notifications.
- Required technical information, such as output power or radiation.

TESTING GUIDANCE

Electronics must be assessed in accordance with applicable legal and regulatory requirements as well as internationally recognized principles of risk assessment. Nike only accepts RSL and product compliance Test Reports from Nike-Approved Laboratories. See Contacts for a complete list.

The following is general guidance on electronics compliance, which should not be considered exhaustive:

- Batteries in electronics must comply with applicable legal and regulatory requirements, such as, for example, the relevant provisions of EU Regulation (EU) 2023/1542.
- Electronics must comply with the applicable restrictions, specifications, limitations and declarations detailed in the EU Restriction of Hazardous Substances (RoHS) Directive, EU REACH, California Proposition 65, and any other relevant chemicals legislation in the country of marketing.

- The parts and components of an electrical item intended or reasonably expected to come into direct contact with the user's skin must comply with either the Nike RSL or the Nike RSL for Electronics — whichever has the lowest limit for a given chemistry.
- The parts and components of an electrical item not intended or expected to come into direct contact with the user's skin must comply with the Nike RSL for Electronics.
- In addition to chemical restrictions, the Nike Product Safety team must review the item prior to launch. Please contact the team at lst-product.safety.global@nike.com.

Testing documentation, data, and details must be kept for at least 10 years and should be made readily available upon request. Unless otherwise agreed with Nike, this information may be transmitted electronically. All Nike RSL Test Reports are valid for 12 months from the date of testing. For further testing guidance to enable compliance, please contact the [Nike Electronic Compliance Team](#).



NIKE CHEMISTRY PLAYBOOK
ELECTRICAL & ELECTRONIC EQUIPMENT

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	SUITABLE TEST METHOD Sample Preparation & Measurement
METALS IN BATTERIES OR BUTTON CELLS				
7440-43-9	Cadmium	5 mg/kg	0.5 mg/kg	Nike in-house method
7439-92-1	Lead	100 mg/kg	10 mg/kg	Aqua regia/hydrogen peroxide digestion, followed by ICP/ VGA-AAS analysis
7439-97-6	Mercury	Prohibited	0.5 mg/kg	
ELECTRICAL & ELECTRONIC EQUIPMENT				
	Applicable to equipment that is dependent on electric currents or electromagnetic fields to function properly; is designed for use with a voltage rating not exceeding 1000 volt AC or 1500 volt for DC; and falls under the categories set out in Annex II of Directive 2011/65/EU.			
85-68-7	Butyl benzyl phthalate (BBP)	1000 mg/kg The restriction of Phthalates DEHP, BBP, DBP and DiBP shall not apply to cables or spare parts for the repair, reuse, updating of functionalities or upgrading of capacity of EEE placed on the market before July 22, 2019.	50 mg/kg	IEC 62321-8:2017
84-74-2	Dibutyl phthalate (DBP)			
117-81-7	Di(ethylhexyl) phthalate (DEHP)			
84-69-5	Di-isobutyl phthalate (DiBP)			
7440-43-9	Cadmium	100 mg/kg	10 mg/kg	IEC 62321-5:2013
18540-29-9	Chromium (VI)	1000 mg/kg	100 mg/kg	IEC 62321-7-1:2015 IEC 62321-7-2:2017
7439-92-1	Lead	1000 mg/kg	100 mg/kg	IEC 62321-5:2013
7439-97-6	Mercury	1000 mg/kg	100 mg/kg	IEC 62321-4:2013
Various	PBDEs and PBBs	1000 mg/kg	100 mg/kg	IEC 62321-6:2015



TOYS

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OVERVIEW

A toy is defined as any product, component or material designed or intended — whether exclusively or not — for use in play by children younger than 14 years of age. This definition is broad and could possibly cover products that are not intentionally manufactured as toys, so long as they have playing value and children could reasonably be expected to use them in play.

Demarcation of a product as a toy can be made based on the products' advertising, target audience, place or mode of selling, price, presentation and marking, size, etc. In case of doubts, facilities must consider their products as toys and comply with the related specific legal, regulatory and testing requirements. These requirements for additional scrutiny on products that may be considered toys applies to items both sold and given away (see page 95, Promotional Merchandise), and to products that do not have Nike branding but can still be associated with Nike.

Toys, including the chemicals that they contain, must be safe for children and any third parties when they are used as intended or in a foreseeable way, bearing in mind the behavior of children.

All toys must pass RSL testing and comply with the strictest global regulatory requirements.



REGULATORY GUIDANCE

Toys are subject to specific legal requirements in some countries — for example, positive lists of permitted substances with mandatory specific migration limits (SMLs), and/or lists of restricted or prohibited substances. Toys must comply with both Nike RSL limits, as established in this Playbook, and any applicable (local) legal and regulatory requirements. In addition, toys comprised of chemicals or chemical mixtures, such as paint sets, must also comply with relevant chemical legislation.

If facilities have questions or concerns about the requirements that regulate the chemistry of a toy in a given country, please reach out to the [Nike Product Safety Team](#).

Toys supplied to Nike must not contain:

- Chemicals that are carcinogenic, mutagenic or toxic for reproduction (CMRs).
- Allergenic fragrances — unless they are inaccessible to children in any form when the toy is used as intended or in a foreseeable way.

Legislation is constantly changing; therefore, Nike considers it mandatory to abide by all legislation to remain compliant.

Beyond these chemical requirements, toys must also meet strict physical, mechanical, electrical, flammability, and hygiene requirements.

Always consult with your Nike Product Safety contact before conducting a conformity and safety assessment of the product, or contact the [Nike Product Safety Team](#).

TESTING GUIDANCE

Toys must be assessed in accordance with applicable legal and regulatory requirements as well as the internationally recognized principles of risk assessment. They should be tested by Nike-Approved Laboratories (find the list in Contacts), in line with applicable standards and the most current techniques.

Relevant standards include, but should not be considered exhaustive:

- EN 71 series of test methods
- F963-17:2023 safety specifications for toy safety
- AfPS GS 2019:01 PAK on PAHs
- US ASTM F963 — Standard Consumer Safety Specification for Toy Safety

Nike-Approved Laboratories can provide specific guidance.

Facilities must conduct testing that takes into account the main characteristic of each individual toy, including but not limited to:

- The nature of the material(s) — polymeric, wood, paper, textile, leather, liquid, etc. — and the chemicals in it.
- Whether the materials are accessible to children during play.

- The foreseeable ages and behaviors of children who might use the toy.
- The vulnerability of children less than 36 months of age.

Toys must be assessed and tested taking into consideration the “precautionary principle.” In the absence of sufficient information and data to satisfactorily establish compliance with the applicable legal and regulatory requirements, and/or to demonstrate the safety of a toy and/or the chemicals in it through appropriate testing, the toy should not be considered acceptable for distribution on behalf of Nike. Testing documentation, data, and details should always be kept for at least 10 years and should be made readily available upon request. Unless otherwise agreed with Nike, this information may be transmitted electronically.

LABELING GUIDANCE

Toys must bear all the legally required and/or otherwise appropriate labeling and/or must be accompanied by the legally required safety information in a language easily understood by consumers and other end-users with regard to the chemicals they contain. For example, the Lead Poisoning Prevention Act (LPPA) of the U.S. state of Illinois enforces warning label provisions if the Lead content of paint on toys exceeds 40 mg/kg but is still within the U.S. federal limit of 90 mg/kg (for surface coating in Consumer Product Safety Improvement Act [CPSIA]).



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INNOVATING SUSTAINABLE PACKAGING SOLUTIONS

The chemistry in Nike's packaging must reflect our values as a company and our mission to protect people, planet, and play.

To achieve cleaner chemistries in packaging materials, Nike's Global Packaging teams are finding new ways to reduce packaging weight by a minimum of 10 percent through improved design and operational efficiencies. We're also finding ways to reuse packaging wherever possible before sending it to recycling centers.

Nike's 2025 waste targets continue to emphasize using less packaging without compromising the performance or integrity of the product. By reducing weight of shipping cartons used for global transport, Nike reduced Footwear shipping carton weight by 3.15 million kilograms in 2022 and began a lightweight shipping pilot targeting Apparel facilities. We continued scaling this effort in 2023, exploring how to optimize the weight of Apparel and Accessory master outer cartons.

As a signatory to The Fashion Pact, Nike continues work to eliminate single-use plastics in packaging by 2030. The Nike Packaging Team continues to research comparable options, equitable in material integrity.



OVERVIEW

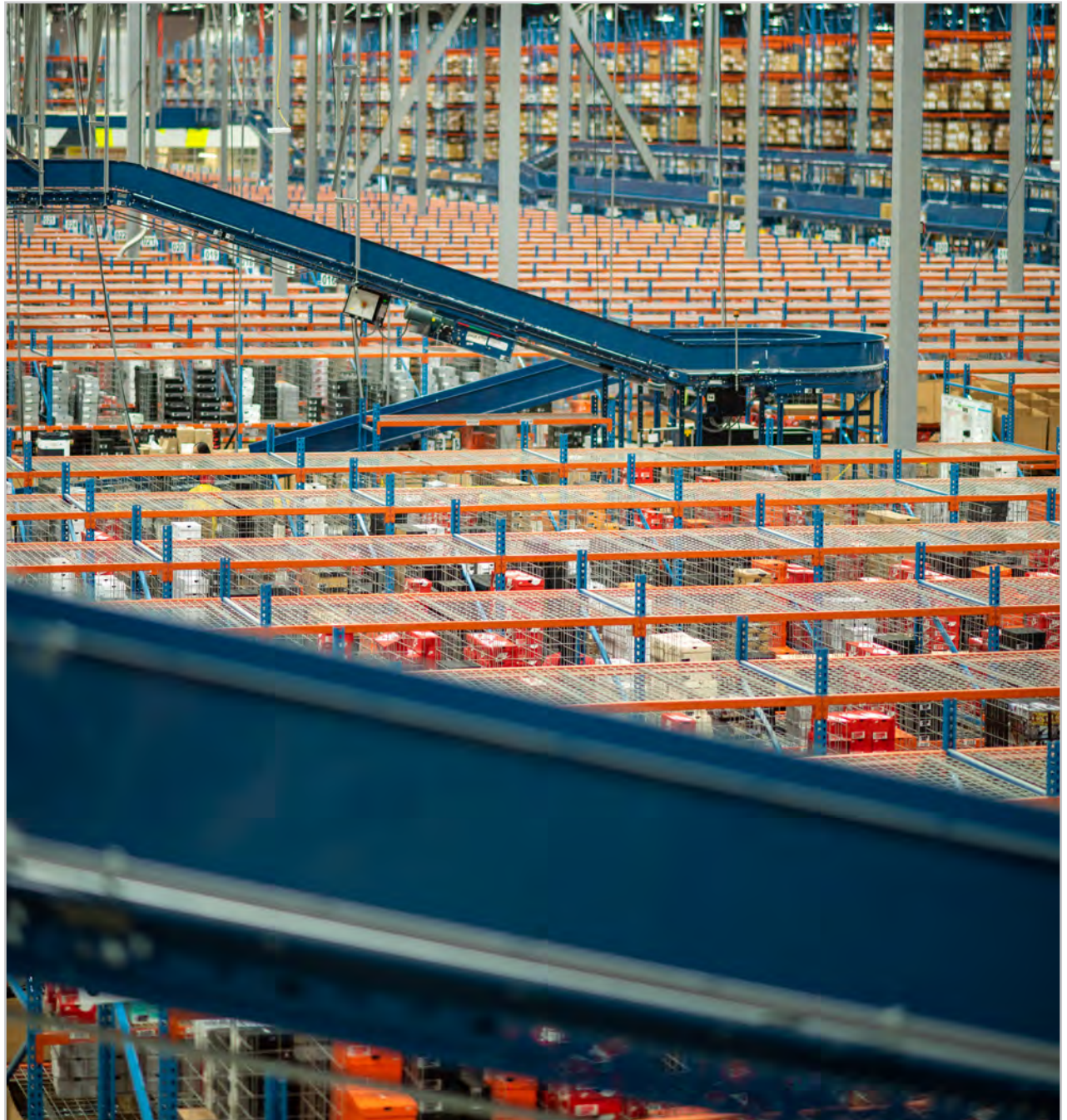
The Nike Packaging Restricted Substances List (Packaging RSL) outlines mandatory standards, test limits, and appropriate test methods for packaging materials. Nike Packaging RSL compliance helps confirm that:

- Nike packaging complies with legislative requirements.
- Nike packaging materials are not contaminated with hazardous chemistries.
- Standard test methods are used for testing packaging materials.
- Packaging is produced and designed with environmental protection in mind.

As regulatory requirements change, we will update the Nike Packaging RSL, giving facilities as much advance warning as possible regarding changes to test limits.

Packaging is an item of any nature or material, used for the containment, protection, handling, delivery or presentation of products, among economic operators or to the user or consumer.

European Union Packaging & Packaging Waste Directive 94/62/EC 2018/852.





TESTING GUIDANCE

The Materials Testing Matrix for Packaging (page 123) outlines Nike's minimum testing requirements for packaging materials. Facilities supplying packaging materials should read and understand the detailed information about the RSL testing process in the Nike Product Restricted Substances List section of this Playbook. All testing protocols and RSL test limits described there apply to packaging. Please note:

- All Packaging RSL testing must be conducted by a Nike-Approved Laboratory (see list in Contacts), using the online Nike RSL Testing Application (see pages 79 –82).
- Facilities are responsible for maintaining all test results, certificate information, and supporting documentation for materials they source to Nike.
- Facilities must retain all technical files and test results for a minimum of 10 years. Unless otherwise agreed with Nike, this information may be transmitted electronically.
- Nike Packaging RSL Test Reports are valid for 12 months from the date the material was tested.
- Nike may perform random audits to monitor and confirm compliance with these standards or request testing information from facilities at any time regarding any packaging material.
- Facilities must complete Nike RSL training every two years.

PACKAGING-SPECIFIC GUIDANCE

- During the development phase, new materials or processing may require additional testing to confirm innovation materials meet Nike's Packaging RSL requirements.
- New facilities are required to provide Packaging RSL Test Results for all materials used in Nike packaging products.
- All facilities are required to provide Packaging RSL Test Reports when requested by factories or Nike teams.
- Nike strongly encourages facilities to test more than the minimum number of materials listed herein against the Nike Packaging RSL limits and also confirm compliance with any applicable legal and regulatory prohibitions and restrictions.
- Nike requires all new finished packaging to undergo testing in its final state. Facilities may choose to test components before the final packaging system is submitted to address potential concerns.

Packaging RSL testing is required on an annual basis for materials used in Nike's packaging products.

RECYCLED MATERIALS

Recycled packaging material streams may require additional Packaging RSL testing guidance. Reach out to RSLSupport@nike.com for specific guidance on testing recycled material sources.

FAILURE RESOLUTION & REPORTING FOR FAILING PACKAGING TEST REPORTS

Failure resolution for packaging follows the same process as for products. (See the failure resolution flowchart in Figure 5 on page 81.) In the event of a FAIL rating, facilities must take immediate action and follow the steps outlined in Figure 5. For further assistance, contact RSLSupport@nike.com.



SCOPE OF THE NIKE PACKAGING RSL

All packaging materials and products must comply with the chemistry limits listed in the Nike Packaging RSL. Table 8 provides examples of packaging products that are in-scope.

Table 9, on the next page, lists examples of material types within scope to be tested against the Nike Packaging RSL. Note that these tables provide representative examples but should not be considered exhaustive. If you need further guidance on identifying whether your material falls within scope of Nike Packaging RSL testing, please reach out to RSLSupport@nike.com.

We require that all packaging materials comply with the Nike Packaging RSL limits listed in this Playbook.

Table 8.
EXAMPLES OF PRODUCTS WITHIN THE SCOPE OF THE NIKE PACKAGING RSL

HANG TAGS	STICKERS	PROTECTIVE COVERINGS	TRIMMINGS	SALES PACKAGING	TRANSPORT PACKAGING
- Cords - Foil stamps - Hot stamp prints - Paper hang tags - Plastic hang tags - Price tags - Spot UV hang tags - UPC tags	- Antimicrobial stickers - Labels, adhesive - Price tags - Tape - UPC stickers - RFID stickers	- Lamination, matte or gloss - Foam material - Suit bags - Plastic cases - Poly bags - Poly bags, zippered - Mesh bags	- Bead chain - Collar bands - Clips, metal - Clips, plastic - Eyelets & grommets - Magnets - Pins - Tissue paper - Zippers - J-hooks - Swift-tack fasteners	- Boxes & cartons - Gift boxes - Retail carry bags - Hangers (when sold with a clothing item) - Spot UV boxes - Suit bags - Thermal receipt paper - Tissue paper - UV coated boxes - Varnished coated boxes - Water-based (aqueous) lacquer-coated boxes	- Antimicrobial stickers - Boxes & cartons - Corrugated shipping boxes & cartons - J board - Silica gel & desiccant sachets - Stuffing materials, expanded foam materials - Water-based (aqueous) lacquer-coated boxes - Paper bags - Plastic bags - Stretch wrap - Molded forms



Table 9.
EXAMPLES OF MATERIALS WITHIN THE SCOPE OF THE NIKE PACKAGING RSL

FIBERS			COATINGS, DYES & PRINTS	NATURAL MATERIALS	POLYMERS, PLASTICS, FOAMS, NATURAL RUBBER & SYNTHETIC RUBBER	METAL	GLUE	NATURAL LEATHER	SYNTHETIC COATED FABRIC
Natural	Blended	Synthetic							
- Cotton - Linen - Silk - Wool - Lyocell (semi-synthetic) - Rayon (semi-synthetic) - Cellulose	- Cotton-Polyester - Ramie-Polyester - Wool-Nylon	- Acrylic - Nylon - Polyamide - Polyester	- Foil stamping - Hot-stamp printing - Spot UV - Soft-touch coatings	- Cork - Paper - Straw - Stone - Wood - Cardboard - Molded pulp	- Acrylonitrile butadiene styrene (ABS) - Ethylene vinyl acetate (EVA) - Polystyrene (PS) - Polyethylene (PE) - Polypropylene (PP) - Polycarbonate (PC) - Polyamide (PA) - Polyurethane (PU) - Polyvinyl chloride (PVC) - Thermoplastic polyurethane (TPU) - Thermoplastic elastomer (TPE) - Styrene ethylene butylene styrene (SEBS) - Silica	- Aluminum - Brass - Copper - Stainless Steel	- Contact adhesive - Epoxies - Powdered adhesive - Flock adhesive - Hot melt adhesive - Latex glue - Neoprene cement - Polyurethane glue - Silicone adhesive - UV-cured adhesive	- Leather - Fur & Hides	- Polyurethane (PU) - Polyvinyl Chloride (PVC)



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
ALKYLPHENOLS (APS)  & ALKYLPHENOL ETHOXYLATES (APEOs)  INCLUDING ALL ISOMERS					
Various	Nonylphenol (NP), mixed isomers	Total APs: 10 ppm Total APs + APEOs: 100 ppm	Total NP + OP: 3 ppm	APEOs can be used as or found in detergents, scouring agents, spinning oils, wetting agents, softeners, emulsifying/ dispersing agents for dyes and prints, impregnating agents, de-gumming for silk production, dyes and pigment preparations, polyester padding and down/feather fillings. APs may be used as intermediaries in the manufacture of APEOs and antioxidants used to protect or stabilize polymers. Biodegradation of APEOs into APs is the main source of APs in the environment.	Textiles and leather: EN ISO 21084:2019 Down garments: GB/T 14272:2021 Polymers and all other materials: 1 g sample / 20 mL THF, sonication for 60 minutes at 70°C, analysis according to EN ISO 21084:2019
Various	Octylphenol (OP), mixed isomers				
Various	Nonylphenol Ethoxylates (NPEOs)		Total NPEOs + OPEOs: 20 ppm	APEOs and formulations containing APEOs are prohibited from use throughout supply chain and manufacturing processes. We acknowledge that residual or trace concentrations of APEOs may still be found at levels exceeding 100 ppm and that more time is necessary for the supply chain to phase them out completely.	All materials except down garments and leather: EN ISO 18254-1:2016 with determination of APEO using LC/MS or LC/MS/MS Down garments: GB/T 14272:2021 Leather: Sample preparation and analysis using EN ISO 18218-1:2023 with quantification according to EN ISO 18254-1:2016
Various	Octylphenol Ethoxylates (OPEOs)				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
AZO-AMINES & ARYLAMINE SALTS 					
92-67-1	4-Aminobiphenyl	20 ppm each	5 ppm each	Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted. Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles.	All materials except leather: EN ISO 14362-1:2017 Leather: EN ISO 17234-1:2024 p-Aminoazobenzene: All materials except leather: EN ISO 14362-3:2017 Leather: EN ISO 17234-2:2011
92-87-5	Benzidine				
95-69-2	4-Chlor-o-toluidine				
91-59-8	2-Naphthylamine				
97-56-3	o-Aminoazotoluene				
99-55-8	2-Amino-4-nitrotoluene				
106-47-8	p-Chloraniline				
615-05-4	2,4-Diaminoanisole				
101-77-9	4,4'-Diaminodiphenylmethane				
91-94-1	3,3'-Dichlorobenzidine				
119-90-4	3,3'-Dimethoxybenzidine				
119-93-7	3,3'-Dimethylbenzidine				
838-88-0	3,3'-Dimethyl-4,4'-diaminodiphenylmethane				
120-71-8	p-Cresidine				
101-14-4	4,4'-Methylen-bis(2-chloraniline)				
101-80-4	4,4'-Oxydianiline				
139-65-1	4,4'-Thiodianiline				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
AZO-AMINES & ARYLAMINE SALTS 					
95-53-4	o-Toluidine	20 ppm each	5 ppm each	Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted. Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles.	All materials except leather: EN ISO 14362-1:2017 Leather: EN ISO 17234-1:2024 p-Aminoazobenzene: All materials except leather: EN ISO 14362-3:2017 Leather: EN ISO 17234-2:2011
95-80-7	2,4-Toluyldiamine				
137-17-7	2,4,5-Trimethylaniline				
95-68-1	2,4-Xylidine				
87-62-7	2,6-Xylidine				
90-04-0	2-Methoxyaniline (= o-Anisidine)				
60-09-3	p-Aminoazobenzene				
3165-93-3	4-Chloro-o-toluidinium chloride				
553-00-4	2-Naphthylammoniumacetate				
39156-41-7	4-Methoxy-m-phenylene diammonium sulphate				
21436-97-5	2,4,5-Trimethylaniline hydrochloride				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
BISPHENOLS 					
80-05-7	Bisphenol-A (BPA)	Food and mouth contact items: 1 ppm All other items: > 1 ppm = Warning	Leather: 10 ppm each All other materials: Individual samples: 0.1 ppm Composite samples: 1 ppm	Prohibited from use in food and drink containers, and items intended to come into contact with the mouth. BPA may be used in the production of epoxy resins, polycarbonate plastics, flame retardants, and PVC. BPS may be used as a substitute for BPA such as in thermal receipt paper. BPS and BPF can be found in polyamide dye-fixing agents and in sulfone- and phenol-based leather synthetic tanning agents. BPA and BPS can be found in recycled polymeric and paper materials due to polycarbonate plastic and thermal receipt paper made with bisphenols entering waste streams. BPA, BPS, and BPB are included on the REACH SVHC list and may need to be notified to ECHA if found in leather goods above 0.1%. Facilities supplying leather goods containing BPA, BPS, or BPB in excess of 0.1% to provide customers or consumers (the latter upon request) with sufficient information to allow a safe use.	Leather: EN ISO 11936:2023 All other materials: Extraction: 1g sample/20 ml THF, sonication for 60 minutes at 60° C, then add methanol or acetonitrile for precipitation prior to analysis with LC/MS
80-09-1	Bisphenol-S (BPS)	For informational purposes only.			
77-40-7	Bisphenol-B (BPB)				
620-92-8	Bisphenol-F (BPF)				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
BUTYLATED HYDROXYTOLUENE (BHT) 					
128-37-0	Dibutylhydroxytoluene (BHT)	25 ppm	5 ppm	Used as an additive in plastics as an antioxidant to prevent aging. Can cause phenolic yellowing of textiles.	All materials: ASTM D4275: 2017
DIMETHYLFUMARATE (DMFu) 					
624-49-7	Dimethylfumarate (DMFu)	0.1 ppm	0.05 ppm	DMFu is an anti-mold agent used in sachets in packaging to prevent mold buildup, especially during shipping.	All materials: ISO 16186:2021
FORMALDEHYDE 					
50-00-0	Formaldehyde	150 ppm	16 ppm	Formaldehyde can be found in polymeric resins, binders, and fixing agents for dyes and pigments, including those with fluorescent effects. It is also used as catalyst in certain printing, adhesives, and heat transfers. Formaldehyde can be used in antimicrobial applications for odor control. Formaldehyde found in packaging can off-gas directly onto product. Composite wood materials, e.g., particle board and plywood, must comply with existing California and forthcoming U.S. formaldehyde emission requirements (40 CFR 770).	Wood: EN 717-3: 1996 Paper: DIN EN 645:1994 and EN 1541:2001 Textiles, Finishings, Dyes, Inks & Coatings: JIS L 1041-2011 A (Japan Law 112) or EN ISO 14184-1:2011 Leather: EN ISO 17226-2:2019 with EN ISO 17226-1:2021 confirmation method in case of interferences. Alternatively, EN ISO 17226-1:2021 can be used on its own.



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
HEAVY METALS: TOTAL CONTENT 					
7440-43-9	Cadmium (Cd)	Total: 100 ppm	5 ppm	Cadmium compounds are used as pigments (especially in red, orange, yellow and green) and in paints. Also used as a stabilizer for PVC.	All materials: Total heavy metals (Cd, Cr, Pb & Hg): DIN EN 16711-1: 2016 If the total of four heavy metals exceeds 100 ppm and Cr contributes to the sum, test for Cr VI. This test method detects metal elements (Cd, Cr, Hg, Pb). When the final value is >100 ppm and Cr contributes to the sum, the Cr VI method described below should be used to exclude the presence of Cr VI.
7439-92-1	Lead (Pb)		10 ppm	May be associated with plastics, paints, inks, pigments and surface coatings.	
7439-97-6	Mercury (Hg)		5 ppm	Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints.	
18540-29-9	Chromium VI 		3 ppm	Though typically associated with leather tanning, Chromium VI also may be used in pigments, chrome plating of metals, and wood preservatives.	Metal: IEC 62321-7-1:2015 The testing lab will convert the test result into ppm. Natural leather and natural materials: EN ISO 17075-1:2017 and EN ISO 17075-2:2017 for confirmation in case the extract causes interference. Alternatively, EN ISO 17075-2:2017 may be used on its own. All other materials: IEC 62321-7-2:2017



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
ORGANOTIN COMPOUNDS 					
Various	Tributyltin (TBT)	0.5 ppm each	0.1 ppm each	Class of chemicals combining Tin and Organics such as butyl and phenyl groups. Organotins are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g., antibacterials), catalysts in plastic and glue production, and heat stabilizers in plastics/rubber. In textiles and apparel, organotins are associated with plastics / rubber, inks, paints, metallic glitter, polyurethane products and heat-transfer material.	All materials: CEN ISO/TS 16179:2012 or EN ISO 22744-1: 2020
Various	Triphenyltin (TPhT)				
Various	Dibutyltin (DBT)				
Various	Diocetyltn (DOT)	1 ppm each			
Various	Monobutyltin (MBT)				
Various	Monooctyltin (MOT)				
Various	Tricyclohexyltin (TCyHT)				
Various	Trimethyltin (TMT)				
Various	Triocetyltn (TOT)				
Various	Tripropyltin (TPT)				
Various	Dimethyltin (DMT)				
Various	Diphenyltin (DPhT)				
Various	Dipropyltin (DPT)				
Various	Monomethyltin (MMT)				
Various	Monophenyltin (MPhT)				
1461-25-2	Tetrabutyltin (TeBT)				
597-64-8	Tetraethyltin (TeET)				
3590-84-9	Tetraoctyltin (TeOT)				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	All PFAS as measured by total organic fluorine			Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	
Various	All PFAS	50 ppm	50 ppm total		EN 14582:2016 or ASTM D7359:2023
	Perfluorooctane Sulfonate (PFOS) & its salts				All materials: EN ISO 23702-1: 2023 or EN 17681-1:2022 & 17681-2:2022
251099-16-8	Didecyltrimethyl ammonium perfluorooctane sulfonate (PFOS-N(C10H21)2(CH3)2)	25 ppb total	25 ppb total		
1763-23-1	Perfluorooctanesulfonic acid (PFOS)				
2795-39-3	Perfluorooctanesulfonic acid, potassium salt (PFOS-K)				
29457-72-5	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)				
29081-56-9	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH4)				
70225-14-8	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH)2)				
56773-42-3	Perfluorooctanesulfonic acid, tetraethyl-ammonium salt (PFOS-N(C2H5)4)				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	PFOS-related substances	1000 ppb total	1000 ppb total	Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	All materials: EN ISO 23702-1: 2023 or EN 17681-1:2022 & 17681-2:2022
4151-50-2	N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)				
31506-32-8	N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA)				
1691-99-2	2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)				
24448-09-7	2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE)				
307-35-7	Perfluoro-1-octanesulfonyl fluoride (POSF)				
754-91-6	Perfluorooctane sulfonamide (PFOSA)				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	Perfluorooctanoic Acid (PFOA) and its salts			Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	All materials: EN ISO 23702-1: 2023 or EN 17681-1:2022 & 17681-2:2022
335-67-1	Perfluorooctanoic acid (PFOA)	25 ppb total	25 ppb total		
335-95-5	Sodium perfluorooctanoate (PFOA-Na)				
2395-00-8	Potassium perfluorooctanoate (PFOA-K)				
335-93-3	Silver perfluorooctanoate (PFOA-Ag)				
335-66-0	Perfluorooctanoyl fluoride (PFOA-F)				
3825-26-1	Ammonium pentadecafluorooctanoate (APFO)				
	PFOA-related substances				
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	1000 ppb total	1000 ppb total		
376-27-2	Methyl perfluorooctanoate (Me-PFOA)				
3108-24-5	Ethyl perfluorooctanoate (Et-PFOA)				
678-39-7	Perfluorocylethanol 8:2 (8:2 FTOH)				
27905-45-9	1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)				
1996-88-9	1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)				
27854-31-5	2H,2H-Perfluorodecanoic acid (H2PFDA)				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	Perfluorohexane-1-sulphonic acid (PFHxS) and its salts			Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	All materials: EN ISO 23702-1: 2023 or EN 17681-1:2022 & 17681-2:2022
355-46-4	Perfluorohexane Sulfonic acid (PFHxS)	25 ppb total	25 ppb total		
3871-99-6	Perfluorohexane Sulfonic acid, potassium salt (PFHxS-K)				
55120-77-9	Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)				
68259-08-5	Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)				
82382-12-5	Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)				
	PFHxS-related substances				
68259-15-4	N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	1000 ppb total	1000 ppb total		
41997-13-1	Perfluorohexane sulfonamide (PFHxSA)				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	C9-C14 Perfluorocarboxylic acids (PFCAs) and their salts			Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	All materials: EN ISO 23702-1: 2023 or EN 17681-1:2022 & 17681-2:2022
375-95-1	Perfluorononanoic Acid (PFNA, C9-PFCA)	25 ppb total	25 ppb total		
335-76-2	Perfluorodecanoic Acid (PFDA, C10-PFCA)				
2058-94-8	Perfluoroundecanoic Acid (PFUnA, C11-PFCA)				
307-55-1	Perfluorododecanoic Acid (PFDoA, C12-PFCA)				
72629-94-8	Perfluorotridecanoic Acid (PFTrDA, C13-PFCA)				
376-06-7	Perfluorotetradecanoic Acid (PFTeDA, C14-PFCA)				
172155-07-6	Perfluoro-3-7-dimethyloctane-carboxylate (PF-3,7-DMOA)				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	C9-C14 PFCA-related substances				
17741-60-5	1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA)	260 ppb total	260 ppb total	Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	All materials: EN ISO 23702-1: 2023 or EN 17681-1:2022 & 17681-2:2022
2144-54-9	1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)				
865-86-1	1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH)				
34598-33-9	2H,2H,3H,3H-Perufloroundecanoic acid (H4PFUnA)				
678-39-7	Perfluorocylethanol 8:2 (8:2 FTOH)				
39239-77-5	1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)				
120226-60-0	1H,1H,2H,2H-Perfluorododecanesulphonic acid (10:2 FTS)				
2043-54-1	1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI)				
30046-31-2	1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI)				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	PFHxA and its salts			Prohibited from use. Regulations around the world ban the use of PFAS in apparel and footwear. Exemptions (partial or full) may apply to personal protective equipment and outdoor apparel for severe wet conditions. See, e.g., California AB 1817. PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE. Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	All materials: EN ISO 23702-1: 2023 or EN 17681-1:2022 & 17681-2:2022
307-24-4	Perfluorohexanoic Acid (PFHxA, C6-PFCA)	25 ppb total	25 ppb total		
	PFHxA-related substances				
17527-29-6	1H,1H,2H,2H-Perfluorooctyl acrylate (6:2 FTA)	1000 ppb total	1000 ppb total		
2144-53-8	1H,1H,2H,2H-Perfluorooctyl methacrylate (6:2 FTMA)				
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2 FTS)				
647-42-7	1H,1H,2H,2H-Perfluorooctanol (6:2 FTOH)				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
PHthalATES 					
28553-12-0	Di-isononylphthalate (DINP)	500 ppm each Total: 1,000 ppm	50 ppm each	Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility. They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature. Phthalates can be found in: - Flexible plastic components (e.g., PVC) - Print pastes - Adhesives - Plastic buttons - Plastic sleeveings - Polymeric coatings The REACH substances of very high concern (SVHC) candidate list is updated frequently. Facilities should assume that the Nike Packaging RSL includes all Phthalates on the SVHC list—whether itemized here or not.	All materials: CPSC-CH-C1001-09.4, analysis by GC/MS
117-84-0	Di-n-octylphthalate (DNOP)				
117-81-7	Di(2-ethylhexyl)-phthalate (DEHP)				
26761-40-0	Diisodecylphthalate (DIDP)				
85-68-7	Butylbenzylphthalate (BBP)				
84-74-2	Dibutylphthalate (DBP)				
84-69-5	Diisobutylphthalate (DIBP)				
84-75-3	Di-n-hexylphthalate (DnHP)				
84-66-2	Diethylphthalate (DEP)				
131-11-3	Dimethylphthalate (DMP)				
131-18-0	Di-n-pentyl phthalate (DPENP)				
84-61-7	Dicyclohexyl phthalate (DCHP)				
71888-89-6	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich				
26040-51-7	Bis(2-ethylhexyl) tetrabromophthalate				



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
PHthalates 					
117-82-8	Bis(2-methoxyethyl) phthalate				
605-50-5	Diisopentyl phthalate (DIPP)				
131-16-8	Dipropyl phthalate (DPRP)				
27554-26-3	Diisooctyl phthalate (DIOP)				
68515-50-4	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear				
71850-09-4	Diisohexyl phthalate (DIHxP)				
68515-42-4	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)				
84777-06-0	1,2-Benzenedicarboxylic acid Dipentyl ester, branched and linear				
68648-93-1	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters; 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters				
68515-51-5					
776297-69-9	n-Pentyl-isopentylphthalate (nPIPP)				
53306-54-0	Bis(2-propylheptyl) phthalate (DPHP)	For informational purposes only; testing is recommended to assess content levels.			

ADDITIONAL NIKE REQUIREMENTS FOR ALL PACKAGING

This list of additional requirements should not be considered exhaustive.

ADDITIONAL REQUIREMENTS	RESOURCES
Active packaging, mold-prevention packaging	- Please contact the Nike Chemistry Team to conduct a chemical assessment on any new material, technology or process in the packaging space.
Chemicals management in packaging	- EU Packaging and Packaging Waste Directive - Sustainable Packaging Coalition (SPC) - Toxics in Packaging Clearinghouse (TPCH)
Odor management	- Not unpleasant (grade 2) under SNV 195651, App page 21
REACH Substances of Very High Concern (SVHCs)	- < 1000 mg/kg each www.echa.europa.eu/candidate-list-table
Polyvinyl chloride (PVC) in coated, printed or plastic materials	- Not allowed.
California Proposition 65 substances	- Every year, California publishes a list of chemicals known to the state to cause cancer or reproductive toxicity.
Oxo-degradable additives	- The EU Commission on Waste and the Ellen MacArthur Foundation consider oxodegradable and oxo-biodegradable plastics to be problematic in current recycling / circular systems.
Biocides, nanoparticles, sensitizers, endocrine disruptors, etc.	- Some brands may have specific requirements regarding the use of substances of concern such as biocides, nanoparticles, sensitizers, and endocrine disruptors.
Additional and upcoming packaging regulations	The packaging regulatory space is tightly controlled and evolving at a fast pace, with several jurisdictions working on new and/or updated requirements. This includes but is not limited to: - EU Packaging Directive 94/62/EC gives provisions to member states on the essential requirements for packaging material (e.g. material composition). - The EU will revise its Packaging Directive. - Loi AGECE, France's anti-waste law, bans the use of mineral oils in ink formulations for packaging prints.

MATERIALS TESTING MATRIX FOR PACKAGING

SUBSTANCE	FIBERS			COATINGS, DYES & PRINTS	NATURAL MATERIALS Including paper and cardboard	POLYMERS, PLASTICS, FOAMS, NATURAL RUBBER & SYNTHETIC RUBBER	METAL	GLUE	NATURAL LEATHER	SYNTHETIC COATED FABRIC
	Natural	Blended	Synthetic							
Alkylphenol (AP) & Alkylphenol Ethoxylates (APEOs), including all isomers	TP1	TP1	TP1	TP1	TP1	TP2		TP1	TP1	TP1
Azo-amines & Arylamine Salts	TP1	TP1	TP1		TP1				TP1	TP1
Bisphenols (BPA, BPS, BPB, BPF)						TP1			TP1	TP1
Butylhydroxytoluene (BHT)										
Dimethylfumarate (DMFu)						TP2				
Formaldehyde	TP1	TP1	TP1	TP1	TP1	TP2		TP1	TP2	TP2
Heavy Metals, Total Content (Cd, CrVI, Pb, Hg) ¹							TP1		TP2	TP2
Organotin Compounds				TP1		TP1	TP2	TP1	TP2	TP2
Per- & Polyfluoroalkyl Substances (PFAS)	PROHIBITED									
Phthalates				TP2		TP1		TP1		TP2

¹ Note that Chromium VI, Cadmium, Lead and Mercury are restricted to a sum total of 100 ppm in several jurisdictions. Cadmium, Lead and Mercury are analyzed using the same method even if the risk of finding them varies across different materials.

TP1 = TEST PACKAGE 1

The online RSL Testing Application automatically selects this required set of tests for 4 of 5 samples.

TP2 = TEST PACKAGE 2

The online RSL Testing Application automatically selects this required set of tests for 1 of 5 samples.



ADDITIONAL GUIDELINES

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ANIMAL HIDES & SKINS AND OTHER ANIMAL-DERIVED MATERIALS

See [Nike Raw Materials Standards](#).

NANOMATERIALS

In 2018, the Commission adopted [Commission Regulation \(EU\) 2018/1881](#) to modify REACH technical Annexes I, III, and VI-XII, introducing nano-specific clarifications and provisions. In 2020, the Commission also updated Annex II with [Commission Regulation \(EU\) 2020/878](#), introducing new provisions on Safety Data Sheets to complement the new [registration requirements for nanomaterials](#). Per Regulation 2018/1881, nanomaterials are a “form of a natural or manufactured substance containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the range of 1nm – 100 nm, including also by derogation fullerenes, graphene flakes and single wall carbon nanotubes with one or more external digressions below 1 nm.”

Nanomaterials can exhibit unique chemical and physical properties that improve the performance of products. While nanomaterials are currently used in a wide variety of products like pharmaceuticals, electronics, and cosmetics, they can also have applications in Apparel, Footwear, and Equipment.

Understanding potential impacts to human health and the environment associated with nanomaterials can be much more complicated than the processes used for conventional materials and chemicals. The toxicity, exposure mechanisms and movement in the environment make nanomaterials unique. Nike only allows the use of nanomaterials after an approval process in which stringent criteria must be met. These criteria apply to any substance, compound or application that includes nanomaterials intentionally used in the manufacture of a Nike material or are present in the finished product.



CRITERIA

The following criteria are designed to make sure impacts associated with the use of nanomaterials are minimized or eliminated.

For any nanomaterial to be approved for use it must:

- Pass a Nike chemical assessment.
- Not intentionally or unintentionally released from a product during wear or care.
- Be proven effective in the intended application.
- Comply with relevant global regulations and be appropriately registered according to EU requirements.
- Comply with the Nike RSL and related policies.

Nike evaluates the use of nanomaterials for products on a case-by-case basis using best practices to assess possible risks associated with specific nanomaterials for specific uses.

Nanomaterials may also be subject to additional restrictions under Nike's Odor Management policy as described in this Playbook.

Notes

A. The Nike chemical assessment for nanomaterials may include, but is not limited to, the following:

- Evaluation of toxicity and hazard benchmarking.
- Use of nanomaterial-specific assessment frameworks and tools.
- Review of existing scientific data on nanomaterial hazards and safety.
- Evaluation of potential occupational and environmental exposures.
- Consideration of mobility and accumulation in the environment.

B. See best practices for assessing hazard from the European Chemicals Agency (ECHA).





ODOR MANAGEMENT, ANTIMICROBIAL & SCENTED MATERIALS

Nike defines odor-management technologies as chemicals, ingredients, and materials that inhibit microbial growth, capture odors and / or mask odors with scents.

These include, but are not limited to, odor-management technologies identified as biocides, biostats, antibacterials, antimicrobials, odor capture, and scented items / ingredients.

Odor-management technologies can offer benefits for athletic apparel, footwear and equipment. However, these technologies need to be carefully assessed to understand the implications of their use. Nike only allows the use of odor-management technologies after an approval process in which very stringent legal criteria must be met. These criteria apply to any odor-management technologies that are applied to or are included with a product.

In addition to odor-management technologies, any substance added to infer a scent/smell in any material must be reviewed following this same approach.

Some jurisdictions require disclosures with the products when certain odor management, antimicrobial or scented materials are used. Consult your Product Safety contact or the [Nike Product Safety Team](#) for advice on appropriate disclosures.

CRITERIA

The following non-exhaustive criteria are designed to make sure that the chances of any impacts associated with the use of odor-management technologies are minimized, if not eliminated. For any odor-management technology to be considered, it must:

- Be proven effective for our product types.
- Pass a Nike chemical assessment.^A
- Comply with the Nike RSL and related policies.^B
- Not leach or release chemicals during wear or care to impart an antimicrobial effect.
- Meet all relevant global legislative requirements and applicable standards, including approval of any active substances or authorization of any biocidal products for use in treated articles in accordance with the EU Biocidal Products Regulation (BPR, Regulation [EU] 528/2012).
- Be listed on the bluesign® bluefinder when applicable.

RESTRICTIONS

Nike has previously identified specific odor-management technologies that do not comply with one or more of our restrictions. These include the following odor-management technologies that are known to intentionally release substances to be effective:

- Copper
- Silver
- Organotins

Odor-management technologies that contain restricted chemicals are prohibited for Nike products.

- Triclosan
- Pentachlorophenol
- Dimethylfumerate

Odor-management technologies may also be subject to additional restrictions under Nike's Nanomaterials policy.

NOTES

A. The Nike chemical assessment for odor-management technologies includes, but is not limited to

- Evaluation of toxicity and hazard benchmarking.
- Evaluation of potential occupational exposures and necessary controls.
- Evaluation of possible manufacturing impacts associated with environmental release.
- Consideration of release and accumulation in the environment.

B. To maintain both the integrity of the Nike brand and the safety of those who use the products purchased by Nike from Facility, facilities shall not make any scented items, perfumes and related cosmetic products for Nike without first receiving written approval from the [Nike Product Safety Team](#).



RECYCLED MATERIALS

Nike is on a journey to protect the future of sport. Our environmental footprint reduction targets have led to product creation principles of selecting better materials, using less of them and trying to create more sustainable products.

Recycled materials enable discarded materials to be diverted from waste streams and reduce our reliance on new virgin feedstocks — helping us both to select better materials and use less of them.

Subject to specific legal and regulatory requirements that may exist in some jurisdictions where recycled materials are used, Nike considers a recycled material to be a material that was diverted from a waste stream and reprocessed into a new material.

Nike constantly strives to incorporate recycled and upcycled materials into products (upcycled defined here as textile products manufactured from used and / or waste components of other textile products). Whether these materials are from post-consumer or post-industrial sources, Nike RSL requirements still apply to “recycled” content from any source.

Our vision is a circular future, where we try to eliminate waste at the origin, optimize manufacturing processes, and help reduce environmental impact. Maximizing the use of high-quality recycling materials throughout our supply chain helps close in on that vision.

RECYCLING CERTIFICATION

Nike requires facilities providing recycled content to be certified to the Textile Exchange Global Recycled Standard or the Recycled Claim Standard. Facilities providing recycled and/or organic textiles or yarn must have related up-to-date scope certificates, renewed annually. Upon request, facilities must provide Nike with certifications. To get certified, visit www.textileexchange.org or www.global-standard.org.

These certifications help Nike to trace chain of custody for certified materials, enable product authenticity, drive environmental and social improvements deeper in the supply chain, and provide transparency when requested by consumers, regulators, and marketplace partners.

NIKE RSL REQUIREMENTS FOR RECYCLED MATERIALS

All recycled materials must comply with RSL limits and any applicable legal and regulatory requirements. If facilities have any questions, please reach out to RSLSupport@nike.com.

Nike requires chemical assessments for all materials going into product, including recycled materials.

TEST PACKAGES

Nike's RSL Test Packages are derived from historical testing of specific material streams. Test Packages are updated routinely and are informed by internal testing results and industry collaboration.

Nike requires all new recycled materials to go through chemical assessment and RSL testing before being used in a finished product.

Material streams from new sources, such as recycling from other industries, presents the need for additional scrutiny around chemical compliance. For recycled, upcycled, and even new bio-based materials, specific RSL Test Packages need to be designed based on the specific input stream. Reach out to RSLSupport@nike.com for guidance on selecting an appropriate Test Package.

TESTING FREQUENCY

Recommended RSL testing frequencies for the multiple materials Nike uses are based on the assumption that the materials are uniform and homogeneous. When using recycled content, this is not necessarily the case. It is therefore important to reach out to RSLSupport@nike.com for guidance on how often to test these materials against the Nike RSL.



CONTACTS

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