

BENEFITS OF USING RECYCLED PLASTICS

Recycled vs Virgin Plastics

SUMMARY

This bulletin highlights Brava's commitment to quality and sustainability, demonstrated through rigorous testing and quality assurance processes for recycled plastics. Included are details of our stringent quality checks and third-party testing processes, which ensure our recycled materials meet or exceed performance standards while positively impacting the environment.

At Brava, we believe the extra effort required to use recycled plastics in our production process is essential not only to the health of our business but also to the health of our planet. These materials match the performance of virgin plastics and offer significant environmental benefits, making Brava products a superior choice for eco-conscious consumers.

ENVIRONMENTAL BENEFITS

VIRGIN VS RECYCLED PLASTICS:

Virgin plastics may allow less stringent quality assurance programs but increase the extraction and processing of fossil fuels. **Recycled plastics** reduce the need for raw material extraction, lowering pollution levels, conserving natural habitats, reducing landfill waste, and encouraging sustainable practices.

Brava's composite formulation and quality assurance process allows the use of recycled plastics while exceeding the performance and longevity of products made using exclusively virgin plastics.

REDUCED ENVIRONMENTAL IMPACT:

By utilizing recycled plastics, Brava significantly reduces the environmental footprint associated with roofing materials. Brava is diverting plastic waste from landfills, waterways, and oceans and making durable roofing products to last a lifetime.

SUSTAINABILITY COMMITMENT:

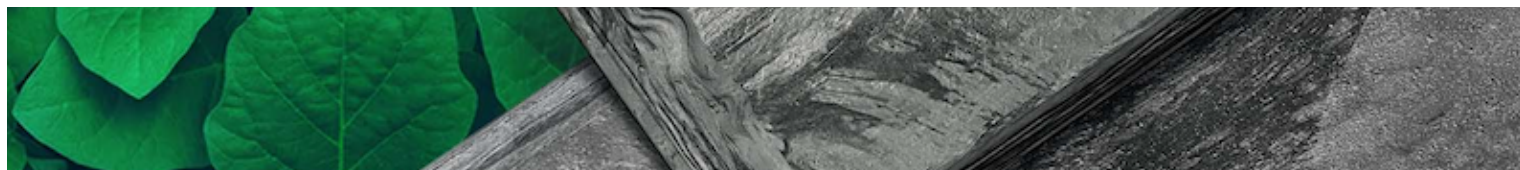
Brava's use of recycled materials aligns with global sustainability goals, promoting environmental stewardship. This commitment provides customers with eco-friendly roofing solutions without compromising quality or performance.

RAW MATERIALS TO REMARKABLE ROOFS

At Brava, we ensure beautiful, high-quality roofing products through careful raw material selection, rigorous testing, precise formulation, innovative processing, and thorough post-production verification. We use specific recycled plastics inspected by our Technicians and Engineers. During manufacturing, tests such as infrared spectroscopy and mechanical testing ensure material integrity. Our composite formulation includes mineral pigments, UV stabilizers, mineral fillers, and durable plastics for resilience and aesthetics. Each tile is processed consistently and undergoes rigorous post-production tests to meet and exceed performance standards, ensuring durability and customer satisfaction. Watch our virtual plant tour to see how Brava Roof Tiles are made. [!\[\]\(56549452e01ca28bdf2500ced9653143_img.jpg\) **From Raw Materials to Remarkable Roofs: A Journey Inside the Brava Manufacturing Facility**](#)

CONTENTS

- Environmental Benefits
- Raw Materials to Remarkable Roofs
- Quality Assurance Process
- Third-Party Testing & Performance
- Resources
- Questions



QUALITY ASSURANCE PROCESS

RAW MATERIALS SELECTION:

Sourcing appropriate post-industrial and post-consumer recycled plastics is key to Brava performance. Specific properties are required to ensure a product that lives up to the Brava brand promise. Specifications of these plastics are proprietary, but every load of recycled plastics used in the manufacturing process of Brava Roof Tiles is inspected by Technicians and Engineers to ensure the Brava standards are met.

QUALITY LAB TESTING:

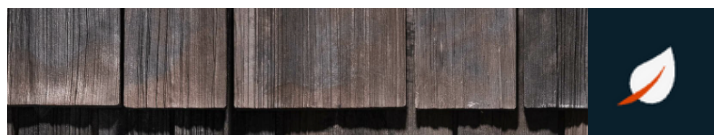
Brava monitors and tests materials during manufacturing to ensure consistent quality and performance throughout the production process. These checks help adjust processing parameters in real time to maintain product standards. Some of these tests include the following:

- **Fourier Transform Infrared Spectroscopy:** confirms plastic purity and detects contaminants.
- **Mechanical Testing:** determines the strength and stiffness of each plastic and guides proper formulation of the final product.
- **Impact Testing:** ensures plastics have the appropriate properties to withstand impact from hail and wind-borne debris.
- **Melt Flow Testing:** verifies that plastics are fit for processing into a Brava Roof Tile.
- **Colorimeter:** checks the color of the formulated product for consistency and desired aesthetics.

FORMULATION:

Designing a product using mineral pigments, UV stabilizers, mineral fillers, and plastics allows Brava to create a unique and durable product. Special consideration is given to the ratios of each ingredient, as each will provide key properties to the final roofing product.

- **Mineral Pigments:** impart natural color that will withstand the test of time.
- **UV Stabilizers:** ensure protection from the harsh sun and higher altitudes.
- **Mineral Fillers:** provide stiffness, fire resistance to protect your home, and a natural finish.
- **Plastics:** allow for processing into desired shape (Shake, Slate, Spanish) and flexibility while being durable enough to withstand the elements.



PROCESSING:

Each roof tile that is manufactured at Brava is unique in its aesthetic. This does not mean that the process to produce each tile is different. Brava ensures quality in its products using innovative and proven methods of producing quality products where each piece is handled and inspected to ensure customer satisfaction. The process ensures the Brava formula is consistent throughout each tile.

POST-PRODUCTION QUALITY VERIFICATION:

After production, each batch of Brava composite roof systems undergoes rigorous testing to confirm that all products maintain uniform quality and functionality. This ensures they match or exceed the performance and function of those made from virgin plastics.

THIRD-PARTY TESTING & PERFORMANCE

INDEPENDENT VALIDATION:

Brava products undergo extensive third-party testing to validate their performance under various environmental conditions. These performance standards include durability and resiliency against wind uplift, wind driven rain, hail impact, fire, and UV.

CERTIFICATIONS AND STANDARDS COMPLIANCE:

All Brava roofing systems are tested to meet or exceed industry standards. These include International, State, and Municipal Building and Residential Code, and independent verification of Weather Resistance, Wind Resistance, Roof Fire-Classification, and Hail-Impact Resistance.

Certifications and Code Evaluation Reports from IAS accredited laboratories are available at bravarooftile.com/resources certifying the durability and performance of our products.

RESOURCES

Check for updates to this and other [Technical Bulletins](#) on our [Resources Page](#).

Complete Installation Training, View Resources, and Contact Technical Support by visiting our [Technical Support Portal](#).

QUESTIONS

If you have any questions regarding Brava Roof Tile products and accessories, call 844-290-4196 and ask for Technical Support.

Or contact us through the [Technical Support Portal](#).

