

Prepared in accordance with Regulation EC 1907/2006 (REACH), Regulation (EC) 1272/2008 (CLP) as amended

## 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

Substance name: Calcium dihydroxide  
Synonyms: Calcium hydroxide, Hydrated lime, Slaked lime, Lime putty, Building lime, Fat lime, Chemical lime, liquid lime, Calcium hydrate, Lime, Lime water, Milk of lime, Lime slurry  
**(Please note that this list may not be exhaustive).**

Chemical name and formula: Calcium dihydroxide, suspension in water  $\text{Ca}(\text{OH})_2 + \text{H}_2\text{O}$   
Trade name: **Lime Putty**  
CAS No: 1305-62-0  
EINECS No: 215-137-3  
Molecular Weight: 74.09 g/mol  
REACH Registration No: 01-2119475151-45-0348

### 1.2 Use of the substance

The substance is intended for the following non-exhaustive list of uses:

Building material industry, Chemical Industry, Agriculture, Biocidal use, Environmental protection (e.g flue gas treatment, wastewater treatment, sludge treatment), Drinking water treatment, Feed, food and pharmaceutical industry, Civil engineering, Paper and paint industry

#### 1.2.1 Identified uses

All uses listed in Table 1 of the Appendix of this SDS are identified uses

#### 1.2.2 Identified uses

No use identified in Table 1 of the Appendix of this SDS is advised against

### 1.3 Company Identification

Name: Chalk Down Lime Limited  
Address: The Lime Yard  
Northiam Road  
Staplecross,  
East Sussex  
TN32 5RP  
Phone No: 01580 830 092

Email of competent person  
Responsible for SDS: [sales@chalkdownlime.com](mailto:sales@chalkdownlime.com)

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## 1.4 Emergency telephone

UK Emergency No: 999  
Refer to Hospital Accident and Emergency Department  
Available outside office hours: Yes

## 2 HAZARDS IDENTIFICATION

### 2.1 Classification of the substance

#### 2.1.1 Classification according to Regulation (EC) 1272/2008

STOT Single Exp. 3, H335 Route of exposure: Inhalation  
Skin Irritation 2, H315  
Eye Damage 1, H318  
Additional information  
*For full text of H-statements and R-phrases: see SECTION 16*

### 2.2 Label elements

#### 2.2.1 Labelling according to Regulation (EC) 1272/2008

Signal word: Danger

Hazard pictogram:



Hazard statements:

H315: Causes skin irritation  
H318: Causes serious eye damage  
H335: May cause respiratory irritation

Precautionary statements:

P102: Keep out of reach of children  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P302+P352: IF ON SKIN: Wash with plenty of water  
P310: Immediately call a POISON CENTRE or doctor/physician  
P261: Avoid breathing dust/spray  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

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## 2.3 Other hazards

No other hazards identified.

The substance does not meet the criteria for PBT or vPvB substance according to Regulation (EC) No 1907/2006, Annex XIII.

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Composition

Name:	Calcium dihydroxide suspension (Lime Putty) 65-70%
CAS No:	1305-62-0
EINECS:	215-137-3
REACH Registration No:	01-2119475151-45-0348
Classification according to Regulation (EC) No 1272/2008 [CLP]:	Eye Dam 1 H318 / Skin Irrit. 2 H315 / STOT SE3 (inhalation) H335

### Impurities

No impurities relevant for classification and labeling.

Small quantities of calcium carbonate, calcium oxide and impurities. Impurities in lime products will vary from source to source.

## 4 FIRST-AID MEASURES

### 4.1 Description of First Aid Measures

#### General Advice

No known delayed effects. Consult a physician for all exposures except for minor instances.

#### Following Eye Contact

Rinse eyes immediately with plenty of water and seek medical advice



#### Following Inhalation

Move source of dust or move person to fresh air. Obtain medical attention immediately.

#### Following Ingestion

Clean mouth with water and afterwards drink plenty of water. Do NOT induce vomiting. Obtain medical attention.

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## **Following Skin Contact**

Carefully and gently brush the contaminated body surfaces in order to remove all traces of product. Wash affected area immediately with plenty of water. Remove contaminated clothing. If necessary, seek medical advice.



## **Self-protection of the first aider**

Avoid contact with skin, eyes and clothing – wear suitable protective equipment (see section 8.2.2)  
Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8.2.2).

## **4.2 Most important symptoms and effects, both acute and delayed**

Calcium dihydroxide is not acutely toxic via the oral, dermal, or inhalation route. The substance is classified as irritating to skin and the respiratory tract and entails a risk of serious damage to the eye. There is no concern for adverse systemic effects because local effects (PH effect) are the major health hazard.

## **4.3 Indication of any immediate medical attention and special treatment needed**

Follow the advises given in section 4.1

## **5 FIRE-FIGHTING MEASURES**

### **5.1.1 Suitable extinguishing media**

The product is not combustible. Use a dry powder, foam or CO<sub>2</sub> fire extinguisher to extinguish the surrounding fire. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### **5.1.2 Unsuitable extinguishing media**

None

### **5.2 Special hazards arising from the substance or mixture**

None

### **5.3 Advice for fire fighters**

Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Avoid contact with skin and eyes. Do not allow run-off from fire fighting to enter drains or water courses.

**6 ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Ensure suitable personal protection during removal of spillages. Wear suitable protective clothing and eye/face protection. Avoid contact with skin and eyes. Ensure adequate ventilation. Avoid breathing vapours. Avoid dust generation. Please see section 8 for appropriate personal protection equipment.

**6.1.1 For non-emergency personnel**

Ensure adequate ventilation to control mists when spraying.

Keep dust / spray levels to a minimum.

Keep unprotected persons away.

Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8).

Avoid inhalation of dust / spray / vapours – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8).

**6.1.2 For emergency responders**

Ensure adequate ventilation to control mists when spraying.

Keep dust / spray levels to a minimum.

Ensure adequate ventilation.

Keep unprotected persons away.

Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8).

Avoid inhalation of dust / spray / vapours – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8).

**6.2 Environmental precautions**

Contain the spillage. Do not allow the spillage to enter drains, sewers or watercourses. Cover area if possible to avoid unnecessary dust / spray / mist hazard. Avoid uncontrolled spills to watercourses and drains (pH increase). Any large spillage into watercourses must be alerted to the Environment Agency or other regulatory body.

**6.3 Methods and material for containment and cleaning up**

Ensure suitable personal protection during removal of spillages. Contain and cover spilled substance with dry sand or earth or other suitable dry material. Sweep or shovel-up spillage and remove to a safe place. Transfer to a container for disposal. Dispose of this material and its container as hazardous waste.

**6.4 Reference to other sections**

For more information on exposure controls/personal protection or disposal considerations, please check section 8 and 13 and the Annex of this safety data sheet.

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## **7 HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

#### **7.1.1 Protective measures**

Ensure adequate ventilation. Avoid inhalation of high concentrations of vapours. In case of inadequate ventilation wear respiratory protection. Avoid contact with skin and eyes. Wear Protective gloves/eye protection. Do not wear contact lenses when working with this material. Eyewash bottles should be available. When handling bags usual precautions should be paid to the risks outlined in the Council Directive 90/269/EEC.

#### **7.1.2 Advice on general occupational hygiene**

Avoid inhalation or ingestion and contact with skin and eyes. General occupational hygiene measures are required to ensure safe handling of the substance. These measures involve good personal and housekeeping practices (i.e regular cleaning with suitable cleaning devices), no drinking, eating and smoking at the workplace. Shower and change clothes at the end of work shift. Do not wear contaminated clothing at home.

### **7.2 Conditions for safe storage, including any incompatibilities**

Avoid contact with air. Keep away from acids, significant quantities of paper, straw and nitro compounds. Keep out of reach of children. Do not use aluminum for transport or storage if there is a risk of contact with water.

### **7.3 Specific end use(s)**

Please check the identified uses in table 1 of the Appendix of this SDS.

For more information please see the relevant exposure scenario, given in the Appendix, and check section '2.1: Control of worker exposure'.

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8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

DNELs:

Route of exposure	Workers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required			
Inhalation	4 mg / m³ (Respirable dust)	No hazard identified	1 mg / m³ (Respirable dust)	No hazard identified
Dermal	Hazard identified but no DNEL available	No hazard identified	Hazard identified but no DNEL available	No hazard identified

Route of exposure	Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	No exposure expected	No hazard identified	No exposure expected	No hazard identified
Inhalation	4 mg / m³ (Respirable dust)	No hazard identified	1 mg / m³ (Respirable dust)	No hazard identified
Dermal	Hazard identified but no DNEL available	No hazard identified	Hazard identified but no DNEL available	No hazard identified

PNECs:

Environment protection target	PNEC	Remarks
Fresh water	0.49 mg / L	
Freshwater sediments	No PNEC available	Insufficient data available
Marine water	0.32 mg / L	
Marine sediments	No PNEC available	Insufficient data available
Food (bioaccumulation)	No hazard identified	No potential for bioaccumulation
Microorganisms in sewage treatment	3 mg / L	
Soil (agricultural)	1080 mg / kg soil dw	
Air	No hazard identified	

United Kingdom:

Occupational Exposure Limits (OEL) (8hr TWA): 5 mg/m³



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## Europe:

According to Directive (EU) 2017/164 of 31 January 2017

Occupational Exposure Limits (OEL) 8hr TWA: 1mg/m<sup>3</sup> Fine Fraction Dust

Short Term Exposure Limit (STEL), 15min: 4 mg/m<sup>3</sup> Fine Fraction Dust

## 8.2 Exposure controls

To control potential exposures, generation of dust should be avoided. Further, appropriate protective equipment is recommended. Eye protection equipment (e.g goggles or visors) must be worn, unless potential contact with the eye can be excluded by the nature and type of application (i.e. closed process). Additionally, face protection, protective clothing and safety shoes are required to be worn as appropriate. Please check the relevant exposure scenario, given in the Appendix.

### 8.2.1 Appropriate engineering controls

If user operations generate dust, use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne dust levels below recommended exposure limits.

### 8.2.2 Individual protection measures, such as Personal Protective Equipment

#### 8.2.2.1 Eye/face protection

Do not wear contact lenses. Tight fitting goggles with side shields (frame goggles), or wide vision full goggles in accordance with EN 166:2001, at least optical class 2, mechanical strength F. It is also advisable to have individual pocket eyewash.



#### 8.2.2.2 Skin protection

Since calcium dihydroxide is classified as irritating to skin, dermal exposure has to be minimised as far as technically feasible. The use of protective gloves (nitrile (NBR) in accordance with EN ISO 374-1:2018/type A or B (test Chemical K, at least 0,2mm thick)), protective standard working clothes fully covering skin, full length trousers, long sleeved overalls, with close fittings at openings and shoes resistant to caustics and avoiding dust penetration are required to be worn.





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### 8.2.2.3 Respiratory protection

Local ventilation to control airborne dust levels below occupational exposure limits is recommended. A suitable particle filter mask is recommended, depending on the expected exposure levels (low dust level: FFP1 mask; medium dust level: FFP2 mask; high dust level: FFP3 mask) – please check the relevant exposure scenario, given in the Appendix.



### 8.2.2.4 Thermal hazards

The substance does not represent a thermal hazard, thus special consideration is not required.

### 8.2.3 Environmental exposure controls

All ventilation systems should be filtered before discharge to atmosphere.

Avoid releasing to the environment.

Contain the spillage. Any large spillage into watercourses must be alerted to the regulatory authority responsible for environmental protection or other regulatory body.

For detailed explanations of the risk management measures that adequately control exposure of the environment to the substance please check the relevant exposure scenario. For further detailed information, please check the Appendix of this SDS.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance:	White or off white (beige) viscous liquid (suspended in water)
Odour:	Odourless
Odour threshold:	Not applicable
pH:	12.4 (saturated solution at 20 °C)
Melting point/Freezing Point:	0 °C (Water)
Initial boiling point and boiling range:	100 °C (Water)
Flash point:	Not applicable

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Evaporation Rate:	Not applicable
Flammability (solid, gas):	Non-flammable (study result, EU A.10)
Upper/lower flammability or explosive limits:	Not applicable
Vapour pressure:	23 mbar (Water)
Vapour density:	Not determined
Relative density:	1.4 g/cm <sup>3</sup>
Solubility(ies):	Water 1844.9 mg/l (study result, EU Method A.6)
Partition coefficient: n-octanol/water:	Not applicable (Inorganic)
Auto-ignition temperature:	No relative self-ignition temperature below 400 °C (study result, EU Method A.16)
Decomposition temperature:	> 580°C
Typical Viscosity:	Not determined
Explosive properties:	Non-explosive
Oxidising properties:	None known

## 9.2 Other Information

Not available

## 10 STABILITY AND REACTIVITY

### 10.1 Reactivity

In aqueous media Ca(OH)<sub>2</sub> dissociates resulting in the formation of calcium cations and hydroxyl anions (when below the limit of water solubility).

### 10.2 Chemical stability

Under normal conditions of use and storage, calcium dihydroxide is stable.

### 10.3 Possibility of hazardous reactions

Stable under normal conditions.

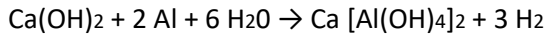
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## 10.4 Conditions to avoid

Minimise exposure to air and moisture to avoid degradation.

## 10.5 Incompatible materials

Calcium dihydroxide reacts exothermically with acids to form salts. Calcium dihydroxide reacts with aluminium and brass in the presence of moisture leading to the production of hydrogen.



## 10.6 Hazardous decomposition products

None.

Further information: calcium dihydroxide reacts with carbon dioxide to form calcium carbonate, which is a common material in nature.

## 11 TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

<b>Acute toxicity - Ingestion</b>	Based upon the available data, the classification criteria are not met. LD50 (oral, rat) mg/kg: > 2000 mg/kg bw/day (OECD 425)
<b>Acute toxicity - Inhalation</b>	Based upon the available data, the classification criteria are not met. No data
<b>Acute toxicity - Skin Contact</b>	Based upon the available data, the classification criteria are not met. LD50 (skin, rabbit) mg/kg: > 2500 (Unnamed 1994)
<b>Skin corrosion/Irritation</b>	Skin irritation – Category 2 Irritating to skin. (rabbit) (OECD 404)
<b>Serious eye damage/irritation</b>	Serious eye damage/irritation – Category 1. Causes severe eye damage. (rabbit) (OECD 405)
<b>Respiratory or Skin sensitization</b>	Based upon the available data, the classification criteria are not met. No data
<b>Germ cell mutagenicity</b>	Based upon the available data, the classification criteria are not met. In vitro: Bacteria – Negative (OECD 471)
<b>Carcinogenicity</b>	Based upon the available data, the classification criteria are not met. NOAEL: 2150 mg/kg bw/day (rat) (Maekawa, A. et al. 1991)
<b>Reproductive toxicity</b>	Based upon the available data, the classification criteria are not met. NOAEL: 680 mg/kg bw/day (rat) (OECD 414)

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**STOT - single exposure** Specific target organ toxicity – single exposure – Category 3 – Positive (Eid, A.H.; el-Sewefy, A.Z. 1969)

**STOT - repeated exposure** Based upon the available data, the classification criteria are not met. Weight of evidence approach.

**Aspiration hazard** Based upon the available data, the classification criteria are not met. Weight of evidence approach.

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

Available data for the substance have been considered against the criteria laid down in Regulations ((EC) NO 1907/2006, (EU) 2017/2100, (EU) 2018/605) and found not to apply.

### 11.2.2 Other information

None

## 12 ECOLOGICAL INFORMATION

### 12.1 Toxicity

**12.1.1 Acute/Prolonged toxicity to fish:** LC50 (96h) for freshwater fish: 50.6 mg/l  
LC50 (96h) for marine water fish: 457 mg/l

**12.1.2 Acute/Prolonged toxicity to aquatic invertebrates:** EC50 (48h) for freshwater invertebrates: 49.1 mg/l  
LC50 (96h) for marine water invertebrates: 158 mg/l

**12.1.3 Acute/Prolonged toxicity to aquatic plants:** EC50 (72h) for freshwater algae: 184.57 mg/l  
NOEC (72h) for freshwater algae: 48 mg/l

**12.1.4 Toxicity to micro-organisms e.g. bacteria:** At high concentration, through the rise of temperature and pH, calcium dihydroxide is used for disinfection of sewage sludges.

**12.1.5 Chronic toxicity to aquatic organisms:** NOEC (14d) for marine water invertebrates: 32 mg/l

**12.1.6 Toxicity to soil dwelling organisms:** EC10/LC10 or NOEC for soil macro-organisms: 2000 mg/kg soil dw  
EC10/LC10 or NOEC for soil micro-organisms: 12000 mg/kg soil dw

**12.1.7 Toxicity to terrestrial plants:** NOEC (21d) for terrestrial plants: 1080 mg/kg

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**12.1.8 General effect**

Acute pH-effect. Although this product is useful to correct water acidity, an excess of more than 1 g/l may be harmful to aquatic life. pH-value of > 12 will rapidly decrease as result of dilution and carbonation.

**12.2 Persistence and degradability**

Not relevant for inorganic substance

**12.3 Bioaccumulative potential**

Not relevant for inorganic substance

**12.4 Mobility in soils**

Calcium dihydroxide, which is sparingly soluble, presents a low mobility in most soils

**12.5 Results of PBT and vPvB assessment**

Not relevant for inorganic substances

**12.6 Endocrine disrupting properties**

Available data for the substance have been considered against the criteria laid down in Regulations ((EC) NO 1907/2006, (EU) 2017/2100, (EU) 2018/605) and found not to apply.

**12.7 Endocrine disrupting properties**

No other adverse effects are identified

According to the criteria of the European classification and labelling system, the substance does not require classification as hazardous for the environment.

**13 DISPOSAL CONSIDERATIONS****13.1 Waste treatment:**

Disposal of calcium dihydroxide should be in accordance with local and national legislation. Processing, use or contamination of this product may change the waste management options. Dispose of container and unused contents in accordance with applicable member state and local requirements. The used packing is only meant for packing this product; it should not be reused for other purposes. After usage, empty the packing completely.

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## 14 TRANSPORT INFORMATION

Calcium dihydroxide is not classified as hazardous for transport [ADR (Road), RID (Rail), ICAO/IATA (air), AND (inland waterways) and IMDG (Sea)].

14.1	UN No:	Not regulated
14.2	UN Proper Shipping Name:	Not regulated
14.3	Transport Hazard classes:	Not regulated
14.4	Packing Group:	Not regulated
14.5	Environmental hazards:	None
14.6	Special precautions for user:	Avoid any release of dust during transportation, by using air-tight tanks
14.7	Maritime transport in bulk according to IMO instruments:	Not regulated.

## 15 REGULATORY INFORMATION

### 15.1 Safety, Health and Environmental Regulations/Legislation specific for the substance

Authorisations:	Not required
Restrictions on use:	None
Other EU regulations:	Calcium dihydroxide is not a SEVESO substance, not an ozone-depleting substance and not a persistent organic pollutant.
National regulations:	None

### 15.2 Chemical Safety Assessment

A chemical safety assessment has been carried out for this substance.

## 16 OTHER INFORMATION

Data are based on our latest knowledge but do not constitute a guarantee for any specific product features and do not establish a legally valid contractual relationship.

### 16.1 Indications of change

The SDS has been revised to comply with Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of REACH.

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## 16.2 Abbreviations

EC50:	median effective concentration
LC50:	median lethal concentration
LD50:	median lethal dose
NOEC:	no observable effect concentration
OEL:	occupational exposure limit
PBT:	persistent, bioaccumulative, toxic chemical
PNEC:	predicted no-effect concentration
SCOEL:	Scientific Committee on occupational exposure limits
STEL:	short-term exposure limit
TWA:	time weighted average
vPvB:	very persistent, very bioaccumulative chemical

## 16.3 Key Literature References

1. Maekawa, A. et al., 1991, Fd Chem. Toxic. Vol. 29, No. 9: 589-594
2. Eid, A.H.; El-Sewefy, A.Z., J. Egypt. Med. Assoc. 52, 400-406
3. Locke A., Doe K.G., Fairchild W.L., Jackman P.M and Reese E.J., 2008, Aquatic Invasions (2009) Volume 4, Issue 1: 221-236

## 16.4 Relevant H-statements & P-phrases

### Hazard Statements

H315:	Causes skin irritation
H318:	Causes serious eye damage
H335:	May cause respiratory irritation

### Precautionary statements

P102:	Keep out of reach of children
P280:	Wear protective gloves/protective clothing/eye protection/face protection
P305+P351+P338:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352:	IF ON SKIN: Wash with plenty of water
P310:	Immediately call a POISON CENTRE or doctor/physician.
P261:	Avoid breathing dust/spray
P304+P340:	IF INHALED: Remove person to fresh air and keep comfortable for breathing
P501:	Dispose of contents/container in accordance with local/regional/national/international Regulation.



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## DISCLAIMER

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship.

This version of the SDS supersedes all previous versions.

**APPENDIX including Exposure Scenarios 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 9.11, 9.12, 9.13, 9.14, 9.15 and 9.16**

**END OF SAFETY DATA SHEET**