



**SAFETY DATA SHEET
BRUSHABLE CERAMIC BLUE RESIN**

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name BRUSHABLE CERAMIC BLUE RESIN

Product number X0030

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Resin.

1.3. Details of the supplier of the safety data sheet

Supplier

ITW Performance Polymers
Bay 150
Shannon Industrial Estate
Co. Clare
Ireland
V14 DF82
353(61)771500
353(61)471285
mail@itwpp.com

1.4. Emergency telephone number

Emergency telephone +44(0)1235 239 670 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317

Environmental hazards Aquatic Chronic 2 - H411

Human health

The product contains an epoxy resin. May cause sensitisation or allergic reactions in sensitive individuals.

2.2. Label elements

Pictogram



Signal word

Warning

BRUSHABLE CERAMIC BLUE RESIN

Hazard statements	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
Supplemental label information	EUH205 Contains epoxy constituents. May produce an allergic reaction.
Contains	EPOXY RESIN (Number average MW ≤ 700), 1,4-BIS[(2,3-EPOXYPROPOXY)METHYL]CYCLOHEXANE
Supplementary precautionary statements	P261 Avoid breathing vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P321 Specific treatment (see medical advice on this label). P332+P313 If skin irritation occurs: Get medical advice/ attention. P337+P313 If eye irritation persists: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P391 Collect spillage. P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

EPOXY RESIN (Number average MW ≤ 700)	30-60%
CAS number: 25068-38-6 EC number: 500-033-5	REACH registration number: 01-2119456619-26-0000
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	
1,4-BIS[(2,3-EPOXYPROPOXY)METHYL]CYCLOHEXANE	1-5%
CAS number: 14228-73-0 EC number: 238-098-4	
Classification Skin Sens. 1 - H317	

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TITANIUM DIOXIDE	1-5%
CAS number: 13463-67-7	EC number: 236-675-5
	REACH registration number: 01-2119489379-17-0000
Classification Not Classified	

2-BUTOXYETHANOL	<1%
CAS number: 111-76-2	EC number: 203-905-0
Classification Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	

TOLUENE	<1%
CAS number: 108-88-3	EC number: 203-625-9
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 Repr. 2 - H361d STOT SE 3 - H336 STOT RE 2 - H373 Asp. Tox. 1 - H304	

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Avoid contact with skin and eyes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Inhalation	Move affected person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Do not induce vomiting. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention. Get medical attention if irritation persists after washing.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
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4.3. Indication of any immediate medical attention and special treatment needed

BRUSHABLE CERAMIC BLUE RESIN

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide or dry powder.

5.2. Special hazards arising from the substance or mixture

Specific hazards Irritating gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Keep up-wind to avoid fumes. Do not use water jet as an extinguisher, as this will spread the fire. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Warn everybody of potential hazards and evacuate if necessary. Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Open drum carefully as content may be under pressure. Avoid spilling. Avoid contact with skin and eyes. Keep away from heat, sparks and open flame. Avoid eating, drinking and smoking when using the product. Good personal hygiene procedures should be implemented.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10).

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

BRUSHABLE CERAMIC BLUE RESIN

TITANIUM DIOXIDE

Long-term exposure limit (8-hour TWA): 10 mg/m³ total dust

2-BUTOXYETHANOL

Long-term exposure limit (8-hour TWA): WEL 25 ppm(Sk)

Short-term exposure limit (15-minute): WEL 50 ppm(Sk)

TOLUENE

Long-term exposure limit (8-hour TWA): WEL 50 ppm(Sk) 191 mg/m³(Sk)

Short-term exposure limit (15-minute): WEL 100 ppm(Sk) 384 mg/m³(Sk)

WEL = Workplace Exposure Limit

Ingredient comments

WEL = Workplace Exposure Limits

EPOXY RESIN (Number average MW <= 700) (CAS: 25068-38-6)

DNEL

Workers - Dermal; Short term systemic effects: 8.33 mg/kg/day

Workers - Inhalation; Short term systemic effects: 12.25 mg/m³

TRIETHYLENETETRAMINE (CAS: 112-24-3)

DNEL

Workers - Inhalation; Long term systemic effects: 1 mg/m³

Workers - Inhalation; Short term systemic effects: 5380 mg/m³

Workers - Dermal; Long term systemic effects: 0.57 mg/kg/day

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Wear protective gloves. It is recommended that gloves are made of the following material: Butyl rubber. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 8 hours.

Other skin and body protection

Wear apron or protective clothing in case of contact.

Hygiene measures

Provide eyewash station and safety shower. Keep away from food, drink and animal feeding stuffs. Wash at the end of each work shift and before eating, smoking and using the toilet. Use appropriate skin cream to prevent drying of skin. Promptly remove any clothing that becomes contaminated.

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Respiratory protection If ventilation is inadequate, suitable respiratory protection must be worn. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Check that the respirator fits tightly and the filter is changed regularly. Wear a respirator fitted with the following cartridge: Gas filter, type A2. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Blue.
Odour	Slight.
pH	pH (diluted solution): 7.0 50g/l H ₂ O
Initial boiling point and range	>260°C @
Flash point	>204°C
Vapour pressure	<0.03mmHg @ °C
Relative density	1.83 @ °C
Solubility(ies)	Slightly soluble in water.
Auto-ignition temperature	>300°C
Viscosity	50,000 cP @ 25°C

9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Acids. Strong oxidising agents.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not available.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Aldehydes. Acids.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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Skin contact	Irritating to skin. Prolonged contact may cause redness, irritation and dry skin. May cause sensitisation by skin contact. May cause sensitisation or allergic reactions in sensitive individuals.
Eye contact	Irritating to eyes.
Acute and chronic health hazards	The product contains an epoxy resin. May cause sensitisation or allergic reactions in sensitive individuals.
Route of entry	Inhalation Ingestion.

SECTION 12: Ecological Information

Ecotoxicity Avoid release to the environment. The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Toxicity Very toxic to aquatic organisms.

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility Do not discharge into drains or watercourses or onto the ground.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	When handling waste, the safety precautions applying to handling of the product should be considered.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Waste class	08 04 99

SECTION 14: Transport information

General No other information known.

14.1. UN number

UN No. (ADR/RID)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082

14.2. UN proper shipping name

BRUSHABLE CERAMIC BLUE RESIN

Proper shipping name (ADR/RID)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN (Number average MW <= 700))
Proper shipping name (IMDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN (Number average MW <= 700))
Proper shipping name (ICAO)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN (Number average MW <= 700))
Proper shipping name (ADN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN (Number average MW <= 700))

14.3. Transport hazard class(es)

ADR/RID class	9
ADR/RID label	9
IMDG class	9
ICAO class/division	9

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS	F-A, S-F
Emergency Action Code	•3Z
Hazard Identification Number (ADR/RID)	90
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information required.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

BRUSHABLE CERAMIC BLUE RESIN

EU legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision date 03/04/2018

Revision 19

Supersedes date 28/04/2017

Hazard statements in full

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H336 May cause drowsiness or dizziness.
- H361d Suspected of damaging the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

ITW Performance Polymers

SAFETY DATA SHEET BRUSHABLE CERAMIC HARDENER

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name BRUSHABLE CERAMIC HARDENER
Product number X0017

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Hardener.

1.3. Details of the supplier of the safety data sheet

Supplier ITW Performance Polymers
Bay 150
Shannon Industrial Estate
Co. Clare
Ireland
V14 DF82
353(61)771500
353(61)471285
customerservice.shannon@itwpp.com

1.4. Emergency telephone number

Emergency telephone +44(0)1235 239 670 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified
Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Corr. 1A - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT RE 2 - H373
Environmental hazards Aquatic Chronic 3 - H412
Human health Corrosive to skin and eyes. Corrosive. Prolonged contact causes serious eye and tissue damage.

2.2. Label elements

Pictogram



Signal word

Danger

BRUSHABLE CERAMIC HARDENER

Hazard statements	H302+H332 Harmful if swallowed or if inhaled. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P260 Do not breathe vapour/ spray. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P314 Get medical advice/ attention if you feel unwell.
Contains	BENZYL ALCOHOL, m-XYLYLENEDIAMINE, PACM Oligomers, METHYLENEDI(CYCLOHEXYLAMINE)
Supplementary precautionary statements	P261 Avoid breathing vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310 Immediately call a POISON CENTER/ doctor. P321 Specific treatment (see medical advice on this label). P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P363 Wash contaminated clothing before reuse. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

m-XYLYLENEDIAMINE		10-30%
CAS number: 1477-55-0	EC number: 216-032-5	REACH registration number: 01-2119480150-50-0000
Classification		
Acute Tox. 4 - H302		
Acute Tox. 4 - H332		
Skin Corr. 1A - H314		
Eye Dam. 1 - H318		
Skin Sens. 1 - H317		
Aquatic Chronic 3 - H412		

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PACM Oligomers	10-30%
CAS number: 135108-88-2	
Classification	
Acute Tox. 4 - H302	
Skin Corr. 1C - H314	
Skin Sens. 1 - H317	
STOT RE 2 - H373	
Aquatic Chronic 3 - H412	
BENZYL ALCOHOL	10-30%
CAS number: 100-51-6	
EC number: 202-859-9	
Classification	
Acute Tox. 4 - H302	
Acute Tox. 4 - H332	
METHYLENEDI(CYCLOHEXYLAMINE)	5-10%
CAS number: 1761-71-3	
EC number: 217-168-8	
Classification	
Acute Tox. 4 - H302	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	
STOT RE 2 - H373	

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Avoid contact with skin and eyes. Do not breathe vapour. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Inhalation	Move affected person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if any discomfort continues.
Ingestion	This product is corrosive. Give plenty of water to drink. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Toxic by inhalation. Severe irritation of nose and throat.

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Ingestion	Harmful if swallowed. This product is corrosive.
Skin contact	This product is corrosive. May cause an allergic skin reaction. Allergic rash. May cause serious chemical burns to the skin.
Eye contact	This product is corrosive. Dust or splashes from the mixture may cause permanent eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with the following media: Carbon dioxide (CO ₂). Dry chemicals. Foam. Water.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	Avoid breathing fire gases or vapours.
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5.3. Advice for firefighters

Protective actions during firefighting	Keep up-wind to avoid fumes. Control run-off water by containing and keeping it out of sewers and watercourses.
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Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation.
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6.2. Environmental precautions

Environmental precautions	Avoid or minimise the creation of any environmental contamination. Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb spillage with sand or other inert absorbent. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.
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6.4. Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Use only in well-ventilated areas. Keep away from heat, sparks and open flame. Avoid contact with skin and eyes. Do not eat, drink or smoke when using the product. Good personal hygiene procedures should be implemented.
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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10).
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7.3. Specific end use(s)

BRUSHABLE CERAMIC HARDENER

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Ingredient comments WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

It is recommended that chemical-resistant, impervious gloves are worn. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 8 hours.

Other skin and body protection

Wear chemical protective suit.

Hygiene measures

Provide eyewash station and safety shower. Keep away from food, drink and animal feeding stuffs. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Do not eat, drink or smoke when using the product. Change work clothing daily before leaving workplace.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Check that the respirator fits tightly and the filter is changed regularly. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. Wear a respirator fitted with the following cartridge: Gas filter, type A2.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Amber.
Odour	Amine.
pH	pH (diluted solution): 10.5-11.5 5%
Initial boiling point and range	>204°C @
Flash point	93°C
Evaporation rate	<<1
Upper/lower flammability or explosive limits	Upper flammable/explosive limit: N/D Lower flammable/explosive limit: N/D

BRUSHABLE CERAMIC HARDENER

Vapour pressure	<1mmHg @ °C
Vapour density	>1
Relative density	1.05 @ 20 °C°C
Solubility(ies)	Miscible with water.

9.2. Other information

Other information	Not available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Acids. Strong oxidising agents. Organic peroxides/hydroperoxides.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Will not polymerise.
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10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time. Avoid exposure to high temperatures or direct sunlight.
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10.5. Incompatible materials

Materials to avoid	Avoid contact with the following materials: Acids. Oxidising agents. Organic peroxides/hydroperoxides. Inorganic peroxides.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Fire or high temperatures create: Nitrous gases (NOx). Oxides of the following substances: Carbon monoxide (CO). Carbon dioxide (CO2). Vapours/gases/fumes of: Ammonia or amines.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)	505.2
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Acute toxicity - inhalation

ATE inhalation (gases ppm)	7,502.5
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ATE inhalation (vapours mg/l)	18.34
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ATE inhalation (dusts/mists mg/l)	2.5
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Inhalation	Vapours may irritate throat/respiratory system. Symptoms following overexposure may include the following: Coughing. Toxic by inhalation.
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Ingestion	Causes burns. Harmful if swallowed. May cause severe internal injury. Irritating. Symptoms following overexposure may include the following: Nausea, vomiting. Stomach pain.
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Skin contact	May be absorbed through the skin. Causes burns. May cause sensitisation by skin contact. Harmful in contact with skin.
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BRUSHABLE CERAMIC HARDENER

Eye contact	This product is strongly corrosive. Causes severe burns. Immediate first aid is imperative. A single exposure may cause the following adverse effects: Corneal damage.
Acute and chronic health hazards	This product is corrosive.
Target organs	Liver Kidneys Central nervous system

SECTION 12: Ecological Information

Ecotoxicity Avoid releasing into the environment.

12.1. Toxicity

Toxicity Not considered toxic to fish.

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility Do not discharge into drains or watercourses or onto the ground.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Waste class 08 04 99

SECTION 14: Transport information

General No other information known.

14.1. UN number

UN No. (ADR/RID) 2735

UN No. (IMDG) 2735

UN No. (ICAO) 2735

14.2. UN proper shipping name

Proper shipping name (ADR/RID) AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S (HEXAMETHYLENEDIAMINE, DIETHYLENETRIAMINE)

Proper shipping name (IMDG) AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S (HEXAMETHYLENEDIAMINE, DIETHYLENETRIAMINE)

BRUSHABLE CERAMIC HARDENER

Proper shipping name (ICAO) AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S (HEXAMETHYLENEDIAMINE, DIETHYLENETRIAMINE)

Proper shipping name (ADN) AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S (HEXAMETHYLENEDIAMINE, DIETHYLENETRIAMINE)

14.3. Transport hazard class(es)

ADR/RID class 8

ADR/RID label 8

IMDG class 8

ICAO class/division 8

Transport labels



14.4. Packing group

ADR/RID packing group III

IMDG packing group III

ICAO packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS F-A, S-B

Emergency Action Code 3X

Hazard Identification Number 80
(ADR/RID)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information required.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments Revised classification.

Revision date 03/08/2018

BRUSHABLE CERAMIC HARDENER

Revision	15
Supersedes date	03/04/2018
Hazard statements in full	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H332 Harmful if inhaled. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.