SAFETY DATA SHEET
TITANIUM PUTTY (Ti) RESIN.

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

1.1. Product identifier

Product name TITANIUM PUTTY (Ti) RESIN.

Product number X0007

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

TITANIUM PUTTY (Ti) 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)
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) **10-30%**

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

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. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention.

TITANIUM PUTTY (Ti) RESIN.

Skin contact Remove affected person from source of contamination. Wash skin thoroughly 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.

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.

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

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 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.

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 Use only in well-ventilated areas. Handle and open container with care. Keep away from heat, sparks and open flame. Do not use in confined spaces without adequate ventilation and/or respirator. Do not eat, drink or smoke when using the product. Good personal hygiene procedures should be implemented.

7.2. Conditions for safe storage, including any incompatibilities

TITANIUM PUTTY (Ti) RESIN.

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

Ingredient comments No exposure limits known for ingredient(s).

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

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 Wear protective gloves made of the following material: Rubber or plastic. 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 Avoid contact with skin. 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. 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 Paste.

Colour Dark. Grey.

Odour Slight.

TITANIUM PUTTY (Ti) RESIN.

pH	pH (concentrated solution): 7.0 @ 20 ºC
Melting point	N/D°C
Initial boiling point and range	>260°C @
Flash point	> 204°C
Evaporation rate	<<1 (butyl acetate =1)
Vapour pressure	0.03mmHg @ °C
Vapour density	>1
Relative density	2.5 @ @ 20 ºC°C
Solubility(ies)	Slightly soluble in water.
Auto-ignition temperature	>300°C

9.2. Other information

Other information	Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Acids. Amines. 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	Avoid contact with the following materials: Strong oxidising agents. Strong acids. Amines.

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. Vapours/gases/fumes of: Acids - organic. Aldehydes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Inhalation	No significant hazard at normal ambient temperatures. Heating may generate the following products: Irritating gases or vapours.
Ingestion	Irritating. Symptoms following overexposure may include the following: Nausea, vomiting. Stomach pain.
Skin contact	Irritating to skin. May cause sensitisation by skin contact. The product contains a small amount of sensitising substance. May cause sensitisation or allergic reactions in sensitive individuals.
Eye contact	Irritating to eyes.

TITANIUM PUTTY (Ti) RESIN.

Acute and chronic health hazards The product contains an epoxy resin. May cause sensitisation or allergic reactions in sensitive individuals.

SECTION 12: Ecological Information

Ecotoxicity Avoid release to the environment. The product contains substances which are 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 Avoid or minimise the creation of any environmental contamination. 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

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))

TITANIUM PUTTY (Ti) RESIN.

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

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.

TITANIUM PUTTY (Ti) RESIN.

SECTION 16: Other information

Revision date	04/04/2018
Revision	20
Supersedes date	25/04/2017
Hazard statements in full	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.

SAFETY DATA SHEET
TITANIUM PUTTY (Ti) HARDENER.

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

1.1. Product identifier

Product name TITANIUM PUTTY (Ti) HARDENER.

Product number 10761H, 10765H

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
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 Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Muta. 2 - H341

Environmental hazards Not Classified

2.2. Label elements

Pictogram

Signal word Danger

Hazard statements

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H302+H332 Harmful if swallowed or if inhaled.

TITANIUM PUTTY (Ti) HARDENER.

Precautionary statements

P261 Avoid breathing vapour/ spray.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ 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.

Contains

TRIETHYLENETETRAMINE, PHENOL, 2-ETHYL-4-METHYLIMIDAZOLE

Supplementary precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe 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.
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.
P308+P313 IF exposed or concerned: Get medical advice/ attention.
P312 Call a POISON CENTER/ doctor if you feel unwell.
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

TRIETHYLENETETRAMINE **5-10%**

CAS number: 112-24-3 EC number: 203-950-6 REACH registration number: 01-2119487919-13-0000

Classification
Acute Tox. 4 - H312
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1 - H317
Aquatic Chronic 3 - H412

TITANIUM PUTTY (Ti) HARDENER.

PHENOL **5-10%**

CAS number: 108-95-2 EC number: 203-632-7

Classification
Acute Tox. 3 - H301
Acute Tox. 3 - H311
Acute Tox. 3 - H331
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Muta. 2 - H341
STOT RE 2 - H373

2-ETHYL-4-METHYLIMIDAZOLE **1-5%**

CAS number: 931-36-2

Classification
Acute Tox. 4 - H302
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
Skin Sens. 1B - H317

TITANIUM DIOXIDE **1-5%**

CAS number: 13463-67-7 EC number: 236-675-5 REACH registration number: 01-2119489379-17-0000

Classification
Not Classified

4-methylimidazole **<1%**

CAS number: 822-36-6

Classification
Acute Tox. 4 - H302
Acute Tox. 3 - H311
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Carc. 2 - H351

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. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention.

TITANIUM PUTTY (Ti) HARDENER.

Skin contact Remove affected person from source of contamination. Wash skin thoroughly 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.

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.

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 Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Use suitable respiratory protection if ventilation is inadequate. No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin and eyes.

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.

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.

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

TITANIUM PUTTY (Ti) HARDENER.

Usage precautions Use only in well-ventilated areas. Handle and open container with care. Keep away from heat, sparks and open flame. Do not eat, drink or smoke when using the product. Do not use in confined spaces without adequate ventilation and/or respirator. 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

PHENOL

Long-term exposure limit (8-hour TWA): WEL 2 ppm(Sk)
Short-term exposure limit (15-minute): WEL

TITANIUM DIOXIDE

Long-term exposure limit (8-hour TWA): 10 mg/m3 total dust
WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure Limits

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. The following protection should be worn: Chemical splash goggles. 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 made of the following material: Rubber or plastic. 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.

TITANIUM PUTTY (Ti) HARDENER.

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.

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 Paste.

Colour White/off-white.

Odour Amine.

pH pH (concentrated solution): 9.75 @ 20 ºC

Melting point n/d°C

Initial boiling point and range >177°C @

Flash point 136°C

Vapour pressure <0.01 mmHg @ °C

Relative density 1.78 @ 20 ºC°C

Solubility(ies) Slightly soluble in water.

Viscosity 640-1600 Pa s @ 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 Avoid contact with the following materials: Strong oxidising agents. Strong acids. Chlorinated hydrocarbons.

10.6. Hazardous decomposition products

TITANIUM PUTTY (Ti) HARDENER.

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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)	1,402.76

Acute toxicity - dermal

ATE dermal (mg/kg)	3,391.95

Acute toxicity - inhalation

ATE inhalation (gases ppm)	11,312.22
ATE inhalation (vapours mg/l)	48.48
ATE inhalation (dusts/mists mg/l)	8.08

Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation.
Ingestion	Harmful if swallowed.
Skin contact	Irritating to skin. Harmful in contact with skin. May cause sensitisation by skin contact.
Eye contact	Irritating to eyes.
Acute and chronic health hazards	Causes burns.
Route of entry	Inhalation Skin absorption Ingestion.
Target organs	Prolonged or repeated exposure may cause the following adverse effects: May cause damage to the liver and kidneys. Respiratory system, lungs Central nervous system

SECTION 12: Ecological Information

Ecotoxicity Avoid release to the environment.

12.1. Toxicity

Toxicity Not considered toxic to fish.

12.2. Persistence and degradability

Persistence and degradability Phenol: Biological degradability % : 99.5 % .

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

TITANIUM PUTTY (Ti) HARDENER.

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) 1760

UN No. (IMDG) 1760

UN No. (ICAO) 1760

14.2. UN proper shipping name

Proper shipping name (ADR/RID) CORROSIVE LIQUID, N.O.S. (TRIETHYLENETETRAMINE, 1-METHYLIMIDAZOLE)

Proper shipping name (IMDG) CORROSIVE LIQUID, N.O.S. (TRIETHYLENETETRAMINE, 1-METHYLIMIDAZOLE)

Proper shipping name (ICAO) CORROSIVE LIQUID, N.O.S. (TRIETHYLENETETRAMINE, 1-METHYLIMIDAZOLE)

Proper shipping name (ADN) CORROSIVE LIQUID, N.O.S. (TRIETHYLENETETRAMINE, 1-METHYLIMIDAZOLE)

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

TITANIUM PUTTY (Ti) HARDENER.

EmS	F-A, S-B
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	80
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

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	04/04/2018
Revision	19
Supersedes date	25/04/2017
Hazard statements in full	H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H331 Toxic if inhaled. H332 Harmful if inhaled. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.