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

### 1.1 Product identifier

Trade name : ARALDITE® CW 1302 GB

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

Use of the Substance/Mixture : Component used for the manufacture of electrical insulation parts

### 1.3 Details of the supplier of the safety data sheet

Company : Huntsman Advanced Materials (Europe) BV
Address : Everslaan 45
3078 Everberg
Belgium
Telephone : +41 61 299 20 41
Telefax : +41 61 299 20 40

E-mail address of person responsible for the SDS : Global_Product_EHS_AdMat@huntsman.com

### 1.4 Emergency telephone number

Emergency telephone number : Centres Antipoison et de Toxicovigilance:
ANGERS: 02 41 48 21 21
BORDEAUX: 05 56 96 40 80
LILLE: 0 825 812 822
LYON: 04 72 11 69 11
MARSEILLE 04 91 75 25 25
NANCY: 03 83 32 36 36
PARIS: 01 40 05 48 48
RENNES: 02 99 59 22 22
STRASBOURG: 03 88 37 37 37
TOULOUSE: 05 61 77 74 47
EUROPE: +32 35 75 1234
France ORFILA: +33(0)145425959
ASIA: +65 6336-6011
China: +86 20 39377888
+86 532 83889090
India: + 91 22 42 87 5333
Australia: 1800 786 152
New Zealand: 0800 767 437
USA: +1 800-424-9300

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

Skin irritation, Category 2 H315: Causes skin irritation.

| | |
|---|---|
| Eye irritation, Category 2 | H319: Causes serious eye irritation. |
| Skin sensitisation, Category 1 | H317: May cause an allergic skin reaction. |
| Long-term (chronic) aquatic hazard, Category 2 | H411: Toxic to aquatic life with long lasting effects. |

### 2.2 Label elements

**Labeling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :

Signal word : Warning

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 :

**Prevention:**

| | |
|---|---|
| P261 | Avoid breathing mist or vapours. |
| P264 | Wash skin thoroughly after handling. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/ eye protection/ face protection. |

**Response:**

| | |
|---|---|
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/ attention. |
| P391 | Collect spillage. |

**Hazardous components which must be listed on the label:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane
[[(2-ethylhexyl)oxy]methyl]oxirane
bisphenol A - epoxy resins, number average MW >700 - <1100
3-aminopropyltriethoxysilane

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Hazardous components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane | 1675-54-3<br>216-823-5<br>603-073-00-2<br>01-2119456619-26 | Skin Irrit. 2; H315<br>Eye Irrit. 2; H319<br>Skin Sens. 1; H317<br>Aquatic Chronic 2; H411<br><br>specific concentration limit<br>Skin Irrit. 2; H315<br>>= 5 %<br>Eye Irrit. 2; H319<br>>= 5 % | >= 25 - < 30 |
| [[(2-ethylhexyl)oxy]methyl]oxirane | 2461-15-6<br>219-553-6 | Skin Irrit. 2; H315<br>Skin Sens. 1A; H317 | >= 1 - < 10 |
| bisphenol A - epoxy resins, number average MW >700 - <1100 | 25068-38-6<br>Polymer | Skin Irrit. 2; H315<br>Eye Irrit. 2; H319<br>Skin Sens. 1; H317 | >= 0,1 - < 1 |
| 3-aminopropyltriethoxysilane | 919-30-2<br>213-048-4<br>612-108-00-0<br>01-2119480479-24 | Acute Tox. 4; H302<br>Skin Corr. 1B; H314<br>Eye Dam. 1; H318<br>Skin Sens. 1B; H317<br><br>Acute toxicity estimate<br><br>Acute oral toxicity:<br>1 491 mg/kg | >= 0,1 - < 1 |
| Substances with a workplace exposure limit : | | | |
| kaolin | 1332-58-7<br>310-194-1 | | >= 1 - < 10 |

For explanation of abbreviations see section 16.

Both 25068-38-6 and 1675-54-3 can be used to describe the epoxy resin which is produced through the reaction of bisphenol A and epichlorohydrin

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Treat symptomatically.
Get medical attention if symptoms occur.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing

If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Avoid inhalation, ingestion and contact with skin and eyes.
No action shall be taken involving any personal risk or without suitable training.
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

| | | |
|---|---|---|
| If inhaled | : | If inhaled, remove to fresh air.<br>Get medical attention if symptoms occur. |
| In case of skin contact | : | If skin irritation persists, call a physician.<br>If on skin, rinse well with water.<br>If on clothes, remove clothes. |
| In case of eye contact | : | Immediately flush eye(s) with plenty of water.<br>Remove contact lenses.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist. |
| If swallowed | : | Keep respiratory tract clear.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician. |

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

| | | |
|---|---|---|
| Risks | : | Causes skin irritation.<br>May cause an allergic skin reaction.<br>Causes serious eye irritation. |

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

| | | |
|---|---|---|
| Treatment | : | Treat symptomatically. |

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

| | | |
|---|---|---|
| Suitable extinguishing media | : | Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO2)<br>Dry chemical |
| Unsuitable extinguishing media | : | Exercise caution when using a high volume water jet as it may scatter and spread fire |

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

| | | |
|---|---|---|
| Specific hazards during firefighting | : | Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : | Metal oxides<br>Carbon oxides |

Phenolics

### 5.3 Advice for firefighters

| | | |
|---|---|---|
| Special protective equipment for firefighters | : | Wear self-contained breathing apparatus for firefighting if necessary. |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.<br>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

| | | |
|---|---|---|
| Personal precautions | : | Use personal protective equipment.<br>Refer to protective measures listed in sections 7 and 8. |

### 6.2 Environmental precautions

| | | |
|---|---|---|
| Environmental precautions | : | Prevent product from entering drains.<br>Prevent further leakage or spillage if safe to do so.<br>If the product contaminates rivers and lakes or drains inform respective authorities. |

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

| | | |
|---|---|---|
| Methods for cleaning up | : | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).<br>Keep in suitable, closed containers for disposal. |

### 6.4 Reference to other sections

For disposal considerations see section 13., See Section 1 for emergency contact information., For personal protection see section 8.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

| | | |
|---|---|---|
| Advice on safe handling | : | Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitisation of susceptible persons.<br>Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.<br>Do not breathe vapours/dust.<br>Avoid exposure - obtain special instructions before use.<br>Avoid contact with skin and eyes.<br>For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the |

application area.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers.

Advice on common storage : For incompatible materials please refer to Section 10 of this SDS.

Recommended storage temperature : 2 - 40 °C

Further information on storage stability : Stable under normal conditions.

### 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| kaolin | 1332-58-7 | VME | 10 mg/m3 | FR VLE |
| Further information | Indicative exposure limits | | | |
| | | TWA (Respirable dust) | 0,1 mg/m3 | 2004/37/EC |
| Further information | Carcinogens or mutagens | | | |

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|---|---|---|---|
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane | Workers | Inhalation | Long-term systemic effects | 4,93 mg/m3 |
| | Workers | Dermal | Long-term systemic | 0,75 mg/kg |

| | | | | |
|---|---|---|---|---|
| | | | effects | bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 0,87 mg/m3 |
| | Consumers | Dermal | Long-term systemic effects | 0,0893 mg/kg bw/day |
| | Consumers | Oral | Long-term systemic effects | 0,5 mg/kg bw/day |
| 3-aminopropyltriethoxysilane | Workers | Inhalation | Long-term systemic effects | 59 mg/m3 |
| | Workers | Inhalation | Systemic effects, Short-term exposure | 59 mg/m3 |
| | Workers | Dermal | Long-term systemic effects | 8,3 mg/kg bw/day |
| | Workers | Dermal | Systemic effects, Short-term exposure | 8,3 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 17,4 mg/m3 |
| | Consumers | Inhalation | Systemic effects, Short-term exposure | 17,4 mg/m3 |
| | Consumers | Dermal | Long-term systemic effects | 5 mg/kg bw/day |
| | Consumers | Dermal | Systemic effects, Short-term exposure | 5 mg/kg bw/day |

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

| Substance name | Environmental Compartment | Value |
|---|---|---|
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane | Fresh water | 0,006 mg/l |
| | Marine water | 0,001 mg/l |
| | Fresh water sediment | 0,341 mg/kg dry weight (d.w.) |
| | Marine sediment | 0,034 mg/kg dry weight (d.w.) |
| | Soil | 0,065 mg/kg dry weight (d.w.) |
| | Sewage treatment plant | 10 mg/l |
| | Secondary Poisoning | 11 mg/kg |
| [[(2-ethylhexyl)oxy]methyl]oxirane | Fresh water | 0,0072 mg/l |
| | Remarks:Assessment Factors | |
| | Marine water | 0,001 mg/l |
| | Remarks:Assessment Factors | |
| | Freshwater - intermittent | 0,072 mg/l |
| | Remarks:Assessment Factors | |
| | Sewage treatment plant | 10 mg/l |
| | Remarks:Assessment Factors | |
| | Fresh water sediment | 286,66 mg/kg dry weight (d.w.) |
| | Remarks:Equilibrium method | |
| | Marine sediment | 28,66 mg/kg dry weight (d.w.) |
| | Remarks:Equilibrium method | |

| | | |
|---|---|---|
| | Soil | 57,16 mg/kg |
| | Remarks:Equilibrium method | |
| 3-aminopropyltriethoxysilane | Fresh water | 0,33 mg/l |
| | Remarks:Assessment Factors | |
| | Marine water | 0,033 mg/l |
| | Remarks:Assessment Factors | |
| | Sewage treatment plant | 13 mg/l |
| | Remarks:Assessment Factors | |
| | Fresh water sediment | 1,2 mg/kg dry weight (d.w.) |
| | Remarks:Equilibrium method | |
| | Marine sediment | 0,12 mg/kg dry weight (d.w.) |
| | Remarks:Equilibrium method | |
| | Soil | 0,05 mg/kg dry weight (d.w.) |
| | Remarks:Equilibrium method | |

### 8.2 Exposure controls

**Personal protective equipment**

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection

Material : butyl-rubber
Break through time : > 8 h

Material : Nitrile rubber
Break through time : 10 - 480 min

Material : Ethyl Vinyl Alcohol Laminate (EVAL)
Break through time : > 8 h

Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. The suitability for a specific workplace should be discussed with the producers of the protective gloves.
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

| | | |
|---|---|---|
| Respiratory protection | : | Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Equipment should conform to EN 14387 |
| Filter type | : | Combined particulates and organic vapour type (A-P) |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | paste |
| Colour | : | No data is available on the product itself. |
| Odour | : | slight |
| Odour Threshold | : | No data is available on the product itself. |
| Melting point/freezing point | : | No data available |
| Boiling point | : | > 200 °C |
| Flammability (solid, gas) | : | No data is available on the product itself. |
| Lower explosion limit / Lower flammability limit | : | No data is available on the product itself. |
| Upper explosion limit / Upper flammability limit | : | No data is available on the product itself. |
| Flash point | : | > 100 °C<br>Method: closed cup |
| Auto-ignition temperature | : | No data is available on the product itself. |
| Decomposition temperature | : | > 200 °C |
| pH | : | substance/mixture is non-soluble (in water) |
| Viscosity | | |
| Viscosity, dynamic | : | 20 000 - 27 000 mPa.s (25 °C)<br>Method: ISO 3219 |
| Solubility(ies) | | |
| Water solubility | : | practically insoluble (20 °C) |
| Solubility in other solvents | : | No data is available on the product itself. |

| | | |
|---|---|---|
| Partition coefficient: n-octanol/water | : | No data is available on the product itself. |
| Vapour pressure | : | 0,01 hPa (20 °C) |
| Density | : | 1,74 - 1,77 g/cm3 (20 °C) |
| Relative density | : | 1,74 - 1,77 (20 °C) |
| Relative vapour density | : | No data is available on the product itself. |
| Particle characteristics | : | No data is available on the product itself. |

**9.2 Other information**

| | | |
|---|---|---|
| Miscibility with water | : | immiscible |
| Molecular weight | : | No data available |

## SECTION 10: Stability and reactivity

**10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

**10.2 Chemical stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : No hazards to be specially mentioned.

**10.4 Conditions to avoid**

Conditions to avoid : None known.

**10.5 Incompatible materials**

**10.6 Hazardous decomposition products**

No hazardous decomposition products are known.

## SECTION 11: Toxicological information

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute toxicity**

Not classified due to lack of data.

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

Acute oral toxicity : LD50 (Rat, female): > 2 000 mg/kg

Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rat, male and female): > 2 000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

Acute oral toxicity : LD50 (Rat, male and female): > 5 000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 0,15 mg/l
Exposure time: 7 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 (Rat, male and female): > 4 000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Information given is based on data obtained from similar substances.

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

Acute oral toxicity : LD50 (Rat, female): > 2 000 mg/kg
Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 2 000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

**3-aminopropyltriethoxysilane:**

Acute oral toxicity : LD50 (Rat, male and female): 1 491 - 2 688 mg/kg
Method: Acute Oral Toxicity

Acute toxicity estimate: 1 491 mg/kg
Method: Calculation method

Acute inhalation toxicity : LC50 (Rat, male): > 5 ppm
Exposure time: 6 h
Test atmosphere: vapour

Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit, male and female): 4 075 mg/kg
Method: Acute Dermal Toxicity
Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

Causes skin irritation.

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Exposure time | : | 4 h |
| Assessment | : | Irritating to skin. |
| Method | : | OECD Test Guideline 404 |
| Result | : | Irritating to skin. |

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Assessment | : | Irritating to skin. |
| Result | : | Irritating to skin. |
| GLP | : | yes |

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

| | | |
|---|---|---|
| Method | : | OECD Test Guideline 404 |
| Result | : | Skin irritation |

**3-aminopropyltriethoxysilane:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | Causes burns. |

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Assessment | : | Irritating to eyes. |
| Method | : | OECD Test Guideline 405 |
| Result | : | Irritating to eyes. |

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Assessment | : | No eye irritation |
| Method | : | OECD Test Guideline 405 |
| Result | : | slight irritation |
| GLP | : | yes |

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | Eye irritation |

**3-aminopropyltriethoxysilane:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | Risk of serious damage to eyes. |

**Respiratory or skin sensitisation**

**Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

Not classified due to lack of data.

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

| | | |
|---|---|---|
| Test Type | : | Local lymph node assay (LLNA) |
| Exposure routes | : | Skin |
| Species | : | Mouse |
| Method | : | OECD Test Guideline 429 |
| Result | : | The product is a skin sensitiser, sub-category 1B. |

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

| | | |
|---|---|---|
| Test Type | : | Maurer optimisation test |
| Exposure routes | : | Skin |
| Species | : | Guinea pig |
| Assessment | : | Probability or evidence of high skin sensitisation rate in humans |
| Method | : | OECD Test Guideline 406 |
| Result | : | Probability or evidence of high skin sensitisation rate in humans |
| GLP | : | yes |

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

| | | |
|---|---|---|
| Exposure routes | : | Skin |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | May cause sensitisation by skin contact. |

**3-aminopropyltriethoxysilane:**

| | | |
|---|---|---|
| Exposure routes | : | Skin |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | The product is a skin sensitiser, sub-category 1B. |

**Germ cell mutagenicity**

Not classified due to lack of data.

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: without metabolic activation
Result: positive

Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative

Genotoxicity in vivo : Test Type: in vivo assay
Species: Mouse (male)
Cell type: Germ
Application Route: Oral
Dose: 3333, 10000 mg/kg
Result: negative

Test Type: gene mutation test
Species: Rat (male)
Cell type: Somatic
Application Route: Oral
Dose: 50,250,500,1000 mg/kg bw/day
Method: OECD Test Guideline 488
Result: negative

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

Genotoxicity in vitro : Test Type: gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: positive
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow

Application Route: Intraperitoneal injection
Dose: 0/1000/2000/4000 mg/kg bw/day
Method: OECD Test Guideline 474
Result: negative
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Test Type: Chromosome aberration test in vitro
Species: Rat (male and female)
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Dose: 213.8/712.5/2137.5 mg/kg
Method: OECD Test Guideline 475
Result: negative
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: Positive results were obtained in some in vitro tests.

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Cell type: Germ
Application Route: Oral
Method: OECD Test Guideline 478
Result: negative

Cell type: Somatic
Application Route: Oral
Dose: 0 - 5000 mg/kg
Method: OPPTS 870.5395
Result: negative

**3-aminopropyltriethoxysilane:**

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

**Carcinogenicity**

Not classified due to lack of data.

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

| | | |
|---|---|---|
| Species | : | Rat, male |
| Application Route | : | Oral |
| Exposure time | : | 24 month(s) |
| Dose | : | 0, 2, 15, or 100 mg/kg bw/day |
| Frequency of Treatment | : | 7 days/week |
| NOAEL | : | 15 mg/kg bw/day |
| Method | : | OECD Test Guideline 453 |
| Result | : | negative |
| Target Organs | : | Digestive organs |

| | | |
|---|---|---|
| Species | : | Mouse, male |
| Application Route | : | Dermal |
| Exposure time | : | 24 month(s) |
| Dose | : | 0, 0.1, 10, 100 mg/kg bw/day |
| Frequency of Treatment | : | 3 days/week |
| NOEL | : | 0,1 mg/kg body weight |
| Method | : | OECD Test Guideline 453 |
| Result | : | negative |
| Target Organs | : | Digestive organs |

| | | |
|---|---|---|
| Species | : | Rat, female |
| Application Route | : | Dermal |
| Exposure time | : | 24 month(s) |
| Dose | : | 0.1, 100, 1000 mg/kg bw/day |
| Frequency of Treatment | : | 5 days/week |
| NOEL | : | 100 mg/kg body weight |
| Method | : | OECD Test Guideline 453 |
| Result | : | negative |

| | | |
|---|---|---|
| Species | : | Rat, female |
| Application Route | : | Oral |
| Exposure time | : | 24 month(s) |
| Dose | : | 0, 2, 15, or 100 mg/kg bw/day |
| Frequency of Treatment | : | 7 days/week |
| NOAEL | : | 100 mg/kg bw/day |
| Method | : | OECD Test Guideline 453 |
| Result | : | negative |
| Target Organs | : | Digestive organs |

| | | |
|---|---|---|
| Species | : | Rat, females |
| Application Route | : | Oral |
| Exposure time | : | 24 month(s) |
| Dose | : | 0, 2, 15, or 100 mg/kg bw/day |
| Frequency of Treatment | : | 7 days/week |
| NOEL | : | 2 mg/kg bw/day |
| Method | : | OECD Test Guideline 453 |
| Result | : | negative |
| Target Organs | : | Digestive organs |

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| Application Route | : | Oral |

| | | |
|---|---|---|
| Exposure time | : | 24 month(s) |
| Dose | : | 15 mg/kg |
| Frequency of Treatment | : | 7 daily |
| Method | : | OECD Test Guideline 453 |
| Result | : | negative |

**Reproductive toxicity**

Not classified due to lack of data.

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation study<br>Species: Rat, male and female<br>Application Route: Oral<br>Dose: 0, 50, 180, 540 or 750 milligram per kilogram<br>Duration of Single Treatment: 238 d<br>Frequency of Treatment: 1 daily<br>General Toxicity - Parent: NOEL: 540 mg/kg body weight<br>General Toxicity F1: NOEL: 750 mg/kg body weight<br>Symptoms: No adverse effects<br>Method: OECD Test Guideline 416<br>Result: No effects on fertility and early embryonic development were detected. |
| Effects on foetal development | : | Species: Rabbit, female<br>Application Route: Dermal<br>Dose: 0, 30, 100 or 300 milligram per kilogram<br>Duration of Single Treatment: 28 d<br>Frequency of Treatment: 1 daily<br>General Toxicity Maternal: NOAEL: 30 mg/kg body weight<br>Developmental Toxicity: NOAEL: 300 mg/kg body weight<br>Method: Other guidelines<br>Result: No teratogenic effects<br><br>Test Type: Pre-natal<br>Species: Rabbit, female<br>Application Route: Oral<br>Dose: 0, 20, 60 or 180 milligram per kilogram<br>Duration of Single Treatment: 13 d<br>Frequency of Treatment: 1 daily<br>General Toxicity Maternal: NOAEL: 60 mg/kg body weight<br>Developmental Toxicity: NOAEL: 180 mg/kg body weight<br>Method: OECD Test Guideline 414<br>Result: No teratogenic effects<br><br>Test Type: Pre-natal<br>Species: Rat, female<br>Application Route: Oral<br>Dose: 0, 60, 180 and 540 milligram per kilogram<br>Duration of Single Treatment: 10 d<br>Frequency of Treatment: 1 daily<br>General Toxicity Maternal: NOAEL: 180 mg/kg body weight<br>Developmental Toxicity: NOAEL: > 540 mg/kg body weight<br>Method: OECD Test Guideline 414 |

Result: No teratogenic effects

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

Effects on fertility : Species: Rat, female
Application Route: Dermal
Dose: 0/1/10/50/100/200
Duration of Single Treatment: 10 d
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEL: >= 200 mg/kg body weight
General Toxicity F1: NOAEL: >= 200 mg/kg body weight
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Effects on foetal development : Test Type: Pre-natal
Species: Rat, females
Application Route: Dermal
Dose: 0/1/10/50/100/200 milligram per kilogram
Duration of Single Treatment: 10 d
Frequency of Treatment: 7 days/week
General Toxicity Maternal: NOAEL: >= 200 mg/kg body weight
Developmental Toxicity: NOAEL: >= 200 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

Effects on fertility : Species: Rat, male and female
Application Route: Oral
General Toxicity - Parent: NOEL: 750 mg/kg body weight
General Toxicity F1: NOEL: 750 mg/kg body weight
Method: OECD Test Guideline 416
Result: No effects on fertility and early embryonic development were detected.

Effects on foetal development : Species: Rabbit, female
Application Route: Dermal
General Toxicity Maternal: NOAEL: 30 mg/kg body weight
Method: Other guidelines
Result: No teratogenic effects

Species: Rabbit, female
Application Route: Oral
General Toxicity Maternal: NOAEL: 60 mg/kg body weight
Method: OECD Test Guideline 414
Result: No teratogenic effects

Species: Rat, female
Application Route: Oral
General Toxicity Maternal: NOAEL: 180 mg/kg body weight
Method: OECD Test Guideline 414
Result: No teratogenic effects

**STOT - single exposure**

Not classified due to lack of data.

**STOT - repeated exposure**

Not classified due to lack of data.

**Repeated dose toxicity**

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| NOAEL | : | 50 mg/kg |
| Application Route | : | oral (gavage) |
| Exposure time | : | 14 Weeks |
| Number of exposures | : | 7 d |
| Dose | : | 0, 50, 250, 1000 mg/kg/day |
| Method | : | OECD Test Guideline 408 |

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| NOAEL | : | >= 10 mg/kg |
| Application Route | : | Skin contact |
| Exposure time | : | 13 Weeks |
| Number of exposures | : | 5 d |
| Dose | : | 0, 10, 100, 1000 mg/kg/day |
| Method | : | OECD Test Guideline 411 |

| | | |
|---|---|---|
| Species | : | Mouse, male |
| NOAEL | : | 100 mg/kg |
| Application Route | : | Skin contact |
| Exposure time | : | 13 Weeks |
| Number of exposures | : | 3 d |
| Dose | : | 0, 1, 10, 100 mg/kg/day |
| Method | : | OECD Test Guideline 411 |

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| NOEL | : | 100 mg/kg/d |
| Application Route | : | Skin contact |
| Exposure time | : | 13 Weeks |
| Number of exposures | : | 5 days/week |
| Dose | : | 0/10/10/100 mg/kg bw/day |
| Method | : | Subchronic toxicity |
| Remarks | : | Information given is based on data obtained from similar substances. |

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| NOAEL | : | 50 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 14 Weeks |
| Number of exposures | : | 7 d |
| Method | : | Subchronic toxicity |

| | | |
|---|---|---|
| Species | : | Rat, male and female |

| | | |
|---|---|---|
| NOEL | : | 10 mg/kg |
| Application Route | : | Skin contact |
| Exposure time | : | 13 Weeks |
| Number of exposures | : | 5 d |
| Method | : | Subchronic toxicity |

**3-aminopropyltriethoxysilane:**

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| NOAEL | : | 200 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 2 160 h |
| Method | : | Subchronic toxicity |

**Aspiration toxicity**

Not classified due to lack of data.

### 11.2 Information on other hazards

**Endocrine disrupting properties**

**Product:**

| | | |
|---|---|---|
| Assessment | : | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |

**Experience with human exposure**

No data available

**Toxicology, Metabolism, Distribution**

No data available

**Neurological effects**

No data available

**Further information**

No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 2 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 1,8 mg/l<br>Exposure time: 48 h<br>Test Type: static test<br>Test substance: Fresh water<br>Method: OECD Test Guideline 202 |

| | | |
|---|---|---|
| Toxicity to algae/aquatic plants | : | EC50 : 11 mg/l<br>Exposure time: 72 h<br>Test Type: static test<br>Test substance: Fresh water<br>Method: EPA-660/3-75-009<br><br>NOEC : 4,2 mg/l<br>Exposure time: 72 h<br>Test Type: static test<br>Test substance: Fresh water<br>Method: EPA-660/3-75-009 |
| Toxicity to microorganisms | : | IC50 (activated sludge): > 100 mg/l<br>Exposure time: 3 h<br>Test Type: static test<br>Test substance: Fresh water |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 0,3 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Test Type: semi-static test<br>Test substance: Fresh water<br>Method: OECD Test Guideline 211 |

**Ecotoxicology Assessment**

| | | |
|---|---|---|
| Chronic aquatic toxicity | : | Toxic to aquatic life with long lasting effects. |

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (Daphnia magna (Water flea)): 7,2 mg/l<br>End point: Immobilization<br>Exposure time: 48 h<br>Test Type: static test<br>Analytical monitoring: yes<br>Test substance: Fresh water<br>Method: OECD Test Guideline 202<br>GLP: yes<br>Remarks: Information given is based on data obtained from similar substances. |
| Toxicity to algae/aquatic plants | : | IC50 (Selenastrum capricornutum (green algae)): 843,75 mg/l<br>Exposure time: 72 h<br>Test Type: static test<br>Analytical monitoring: yes<br>Test substance: Fresh water<br>Method: OECD Test Guideline 201<br>GLP: yes<br>Remarks: Information given is based on data obtained from similar substances.<br><br>NOEC (Selenastrum capricornutum (green algae)): 500 mg/l<br>Exposure time: 72 h<br>Test Type: static test<br>Analytical monitoring: yes |

Test substance: Fresh water
Method: OECD Test Guideline 201
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Toxicity to microorganisms : NOEC (Bacteria): 100 mg/l
Exposure time: 28 d
Test Type: static test
GLP: yes

**Ecotoxicology Assessment**

Chronic aquatic toxicity : No toxicity at the limit of solubility, This product has no known ecotoxicological effects.

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EgC50 (Selenastrum capricornutum (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

**3-aminopropyltriethoxysilane:**

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 934 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 331 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 1 000 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.3.

Toxicity to microorganisms : EC50 (Pseudomonas putida): 43 mg/l
Exposure time: 5,75 h
Test Type: static test
Test substance: Fresh water

**12.2 Persistence and degradability**

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 20 mg/l
Result: Not readily biodegradable.
Biodegradation: 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Stability in water : Degradation half life (DT50): 4,83 d (25 °C)
pH: 4
Method: OECD Test Guideline 111
Remarks: Fresh water

Degradation half life (DT50): 7,1 d (25 °C)
pH: 9
Method: OECD Test Guideline 111
Remarks: Fresh water

Degradation half life (DT50): 3,58 d (25 °C)
pH: 7
Method: OECD Test Guideline 111
Remarks: Fresh water

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

Biodegradability : Inoculum: activated sludge
Concentration: 100 mg/l
Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Stability in water : Degradation half life (DT50): 0,3 hrs (20 °C)
pH: 4
Method: No information available.
GLP: No information available.
Remarks: Fresh water

Degradation half life (DT50): 20 d (20 °C)
pH: 7
Method: No information available.
GLP: No information available.
Remarks: Fresh water

pH: 9
Method: No information available.

GLP: No information available.
Remarks: see user defined free text

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

Biodegradability : Test Type: aerobic
Inoculum: Sewage (STP effluent)
Concentration: 20 mg/l
Result: Not biodegradable
Biodegradation: 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Stability in water : Degradation half life (DT50): 4,83 d (25 °C)
pH: 4
Method: OECD Test Guideline 111
Remarks: Fresh water

Degradation half life (DT50): 7,1 d (25 °C)
pH: 9
Method: OECD Test Guideline 111
Remarks: Fresh water

Degradation half life (DT50): 3,58 d (25 °C)
pH: 7
Method: OECD Test Guideline 111
Remarks: Fresh water

**3-aminopropyltriethoxysilane:**

Biodegradability : Inoculum: activated sludge
Concentration: 8,95 mg/l
Result: Not readily biodegradable.
Biodegradation: 67 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.A.

### 12.3 Bioaccumulative potential

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

Bioaccumulation : Bioconcentration factor (BCF): 31
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 3,242 (25 °C)
pH: 7,1
Method: OECD Test Guideline 117

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

Partition coefficient: n-octanol/water : Pow: 6 730 (40 °C)
log Pow: 3,83 (40 °C)
pH: 6,34
Method: OECD Test Guideline 117
GLP: yes

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 31
Remarks: Does not bioaccumulate.

**3-aminopropyltriethoxysilane:**

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 3,4
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 1,7 (20 °C)
pH: 7

### 12.4 Mobility in soil

**Components:**

**2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:**

Distribution among environmental compartments : Koc: 445

**[[(2-ethylhexyl)oxy]methyl]oxirane:**

Distribution among environmental compartments : Koc: > 426580, log Koc: > 5,63
Method: OECD Test Guideline 121
Remarks: Information taken from reference works and the literature.

**bisphenol A - epoxy resins, number average MW >700 - <1100:**

Distribution among environmental compartments : Koc: 445

### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

**Product:**

| | | |
|---|---|---|
| Additional ecological information | : | An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.<br>Toxic to aquatic life with long lasting effects. |

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

| | | |
|---|---|---|
| Product | : | Dispose of contents and container in accordance with all local, regional, national and international regulations.<br>Do not dispose of waste into sewer.<br>Do not contaminate ponds, waterways or ditches with chemical or used container. |
| Contaminated packaging | : | Empty remaining contents.<br>Dispose of as unused product.<br>Do not re-use empty containers. |

## SECTION 14: Transport information

### 14.1 UN number or ID number

| | | |
|---|---|---|
| **ADN** | : | UN 3082 |
| **ADR** | : | UN 3082 |
| **RID** | : | UN 3082 |
| **IMDG** | : | UN 3082 |
| **IATA** | : | UN 3082 |

### 14.2 UN proper shipping name

| | | |
|---|---|---|
| **ADN** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(BISPHENOL A EPOXY RESIN) |
| **ADR** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(BISPHENOL A EPOXY RESIN) |
| **RID** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(BISPHENOL A EPOXY RESIN) |
| **IMDG** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(BISPHENOL A EPOXY RESIN) |
| **IATA** | : | Environmentally hazardous substance, liquid, n.o.s.<br>(BISPHENOL A EPOXY RESIN) |

### 14.3 Transport hazard class(es)

| | | Class | Subsidiary risks |
|---|---|---|---|
| **ADN** | : | 9 | |
| **ADR** | : | 9 | |

**RID** : 9

**IMDG** : 9

**IATA** : 9

### 14.4 Packing group

**ADN**

| | | |
|---|---|---|
| Packing group | : | III |
| Classification Code | : | M6 |
| Hazard Identification Number | : | 90 |
| Labels | : | 9 |

**ADR**

| | | |
|---|---|---|
| Packing group | : | III |
| Classification Code | : | M6 |
| Hazard Identification Number | : | 90 |
| Labels | : | 9 |
| Tunnel restriction code | : | (-) |

**RID**

| | | |
|---|---|---|
| Packing group | : | III |
| Classification Code | : | M6 |
| Hazard Identification Number | : | 90 |
| Labels | : | 9 |

**IMDG**

| | | |
|---|---|---|
| Packing group | : | III |
| Labels | : | 9 |
| EmS Code | : | F-A, S-F |

**IATA (Cargo)**

| | | |
|---|---|---|
| Packing instruction (cargo aircraft) | : | 964 |
| Packing instruction (LQ) | : | Y964 |
| Packing group | : | III |
| Labels | : | Miscellaneous |

**IATA (Passenger)**

| | | |
|---|---|---|
| Packing instruction (passenger aircraft) | : | 964 |
| Packing instruction (LQ) | : | Y964 |
| Packing group | : | III |
| Labels | : | Miscellaneous |

### 14.5 Environmental hazards

**ADN**

Environmentally hazardous : yes

**ADR**

Environmentally hazardous : yes

**RID**

Environmentally hazardous : yes

**IMDG**

Marine pollutant : yes

**IATA (Passenger)**

Environmentally hazardous : yes

**IATA (Cargo)**
Environmentally hazardous : yes

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

| | | |
|---|---|---|
| REACH - List of substances subject to authorisation (Annex XIV) | : | Not applicable |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | This product does not contain substances of very high concern. |
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) | : | Conditions of restriction for the following entries should be considered:<br>Number on list 75, 3<br><br>If you intend to use this product as tattoo ink, please contact your vendor. |

| | | |
|---|---|---|
| Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. | E2 | ENVIRONMENTAL HAZARDS |

| | | |
|---|---|---|
| Occupational Illnesses (R-461-3, France) | : | 51, 84, 25 |
| Installations classified for the protection of the environment (Environment Code R511-9) | : | 4511 |

**Other regulations:**

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| DSL | : | All components of this product are on the Canadian DSL |
| AIIC | : | On the inventory, or in compliance with the inventory |
| ENCS | : | On the inventory, or in compliance with the inventory |
| KECI | : | On the inventory, or in compliance with the inventory |
| PICCS | : | On the inventory, or in compliance with the inventory |
| IECSC | : | On the inventory, or in compliance with the inventory |
| TCSI | : | On the inventory, or in compliance with the inventory |
| TSCA | : | All substances listed as active on the TSCA inventory |

**Inventories**

AICS (Australia), AIIC (Australia), DSL (Canada), IECSC (China), ENCS (Japan), KECI (Korea), NZIOC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States of America (USA))

### 15.2 Chemical safety assessment

Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.

## SECTION 16: Other information

**Full text of H-Statements**

| | | |
|---|---|---|
| H302 | : | Harmful if swallowed. |
| H314 | : | Causes severe skin burns and eye damage. |
| H315 | : | Causes skin irritation. |
| H317 | : | May cause an allergic skin reaction. |
| H318 | : | Causes serious eye damage. |
| H319 | : | Causes serious eye irritation. |
| H411 | : | Toxic to aquatic life with long lasting effects. |

**Full text of other abbreviations**

| | | |
|---|---|---|
| Acute Tox. | : | Acute toxicity |
| Aquatic Chronic | : | Long-term (chronic) aquatic hazard |
| Eye Dam. | : | Serious eye damage |
| Eye Irrit. | : | Eye irritation |
| Skin Corr. | : | Skin corrosion |

| | | |
|---|---|---|
| Skin Irrit. | : | Skin irritation |
| Skin Sens. | : | Skin sensitisation |
| 2004/37/EC | : | Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work |
| FR VLE | : | France. Occupational Exposure Limits |
| 2004/37/EC / TWA | : | Long term exposure limit |
| FR VLE / VME | : | Time Weighted Average |

**Further information**

| **Classification of the mixture:** | | **Classification procedure:** |
|---|---|---|
| Skin Irrit. 2 | H315 | Calculation method |
| Eye Irrit. 2 | H319 | Calculation method |
| Skin Sens. 1 | H317 | Calculation method |
| Aquatic Chronic 2 | H411 | Calculation method |

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.



NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.