

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARADUR® 1953-2 BD

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 19.03.2018     | 400001010612 | Date of first issue: 19.03.2018 |

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

#### 1.1 Product identifier

Trade name : ARADUR® 1953-2 BD

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

Use of the : Hardener  
Substance/Mixture

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

Company : Huntsman Advanced Materials (Europe)BVBA  
Address : Everslaan 45  
3078 Everberg  
Belgium  
Telephone : +41 61 299 20 41  
Telefax : +41 61 299 20 40  
E-mail address of person : Global\_Product\_EHS\_AdMat@huntsman.com  
responsible for the SDS

#### 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 corrosion, Sub-category 1C H314: Causes severe skin burns and eye damage.

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Serious eye damage, Category 1

H318: Causes serious eye damage.

Skin sensitisation, Category 1

H317: May cause an allergic skin reaction.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: H314  
H317

Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.

Precautionary statements

: **Prevention:**

P261

Avoid breathing mist or vapours.

P280

Wear protective gloves/ protective clothing/  
eye protection/ face protection.

#### **Response:**

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do  
NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off  
immediately all contaminated clothing.  
Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh  
air and keep comfortable for breathing.  
Immediately call a POISON  
CENTER/doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously  
with water for several minutes. Remove  
contact lenses, if present and easy to do.  
Continue rinsing. Immediately call a  
POISON CENTER/doctor.

Hazardous components which must be listed on the label:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine

trientine

### 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.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous components

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| Chemical name                                            | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification                                                                                                                       | Concentration<br>(% w/w) |
|----------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine       | 10563-29-8<br>234-148-4<br>01-2119970376-29           | Acute Tox. 4; H302<br>Skin Corr. 1A; H314<br>Skin Sens. 1B; H317                                                                     | >= 5 - < 9,65            |
| Amines, polyethylenepoly-, triethylenetetramine fraction | 90640-67-8<br>292-588-2<br>01-2119487919-13           | Acute Tox. 4; H302<br>Acute Tox. 4; H312<br>Skin Corr. 1B; H314<br>Eye Dam. 1; H318<br>Skin Sens. 1; H317<br>Aquatic Chronic 3; H412 | >= 3 - < 5               |

For explanation of abbreviations see section 16.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.  
If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do NOT induce vomiting.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.

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

None known.

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

Treatment : Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

### 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 : No hazardous combustion products are known

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods : No data is available on the product itself.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. 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.  
Evacuate personnel to safe areas.  
Ensure adequate ventilation.  
In case of inadequate ventilation wear respiratory protection.

### 6.2 Environmental precautions

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

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### 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).  
Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

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

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
To avoid spills during handling keep bottle on a metal tray.  
Dispose of rinse water in accordance with local and national regulations.  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

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. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Recommended storage temperature : 2 - 40 °C

Further information on storage stability : No decomposition if stored and applied as directed.

### 7.3 Specific end use(s)

Specific use(s) : No data available

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

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

| Substance name                                     | End Use   | Exposure routes | Potential health effects   | Value       |
|----------------------------------------------------|-----------|-----------------|----------------------------|-------------|
| N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine | Workers   | Inhalation      | Long-term systemic effects | 3,7 mg/m3   |
|                                                    | Workers   | Inhalation      | Acute systemic effects     | 7,5 mg/m3   |
|                                                    | Workers   | Inhalation      | Long-term local effects    | 3,7 mg/m3   |
|                                                    | Workers   | Inhalation      | Acute local effects        | 7,5 mg/m3   |
|                                                    | Workers   | Dermal          | Long-term systemic effects | 0,67 mg/kg  |
|                                                    | Consumers | Inhalation      | Long-term systemic effects | 0,65 mg/m3  |
|                                                    | Consumers | Inhalation      | Long-term local effects    | 0,65 mg/m3  |
|                                                    | Consumers | Oral            | Long-term systemic effects | 0,2 mg/kg   |
| trientine                                          | Workers   | Inhalation      | Acute systemic effects     | 5380 mg/m3  |
|                                                    | Workers   | Dermal          | Long-term systemic effects | 0,57 mg/kg  |
|                                                    | Workers   | Inhalation      | Long-term systemic effects | 1 mg/m3     |
|                                                    | Workers   | Dermal          | Long-term local effects    | 0,028 mg/m3 |
|                                                    | Consumers | Dermal          | Acute systemic effects     | 8 mg/kg     |
|                                                    | Consumers | Inhalation      | Acute systemic effects     | 1600 mg/m3  |
|                                                    | Consumers | Oral            | Acute systemic effects     | 20 mg/kg    |
|                                                    | Consumers | Dermal          | Acute local effects        | 1 mg/cm2    |
|                                                    | Consumers | Dermal          | Acute local effects        | 0,25 mg/kg  |
|                                                    | Consumers | Inhalation      | Long-term systemic effects | 0,29 mg/m3  |
|                                                    | Consumers | Oral            | Long-term systemic effects | 0,41 mg/kg  |
|                                                    | Consumers | Dermal          | Long-term local effects    | 0,43 mg/cm2 |

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

| Substance name | Environmental Compartment | Value |
|----------------|---------------------------|-------|
|----------------|---------------------------|-------|

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|                                                    |                           |               |
|----------------------------------------------------|---------------------------|---------------|
| N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine | Fresh water               | 9,2 µg/l      |
| Remarks:                                           | Assessment Factors        |               |
|                                                    | Marine water              | 0,92 µg/l     |
|                                                    | Assessment Factors        |               |
|                                                    | Freshwater - intermittent | 92 µg/l       |
|                                                    | Assessment Factors        |               |
|                                                    | Sewage treatment plant    | 18,1 mg/l     |
|                                                    | Assessment Factors        |               |
|                                                    | Fresh water sediment      | 0,0336 mg/kg  |
|                                                    | Equilibrium method        |               |
|                                                    | Marine sediment           | 0,00336 mg/kg |
|                                                    | Equilibrium method        |               |
|                                                    | Soil                      | 0,00132 mg/kg |
|                                                    | Equilibrium method        |               |
| trientine                                          | Fresh water               | 190 µg/l      |
|                                                    | Assessment Factors        |               |
|                                                    | Fresh water sediment      | 95,9 mg/kg    |
|                                                    | Equilibrium method        |               |
|                                                    | Marine water              | 38 µg/l       |
|                                                    | Assessment Factors        |               |
|                                                    | Freshwater - intermittent | 200 µg/l      |
|                                                    | Assessment Factors        |               |
|                                                    | Marine sediment           | 19,2 mg/kg    |
|                                                    | Equilibrium method        |               |
|                                                    | Soil                      | 19,1 mg/kg    |
|                                                    | Equilibrium method        |               |
|                                                    | Sewage treatment plant    | 4,25 mg/l     |
|                                                    | Assessment Factors        |               |
|                                                    | Secondary Poisoning       | 0,18 mg/kg    |
|                                                    | Assessment Factors        |               |

### 8.2 Exposure controls

#### Engineering measures

Effective exhaust ventilation system

#### Personal protective equipment

Eye protection : Eye wash bottle with pure water

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Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.  
Ensure that eyewash stations and safety showers are close to the workstation location.

### 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 : The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC 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). The suitability for a specific workplace should be discussed with the producers of the protective gloves.

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  
Recommended Filter type:  
Combined particulates and organic vapour type

Filter type : Filter type A-P

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : light yellow

Odour : slight

Odour Threshold : No data is available on the product itself.

pH : No data is available on the product itself.

Freezing point : No data is available on the product itself.

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|                                                  |                                               |
|--------------------------------------------------|-----------------------------------------------|
| Melting point                                    | : No data is available on the product itself. |
| Boiling point                                    | : > 200 °C                                    |
| Flash point                                      | : 110 °C<br>Method: Pensky-Martens closed cup |
| Evaporation rate                                 | : No data is available on the product itself. |
| Flammability (solid, gas)                        | : No data is available on the product itself. |
| Burning rate                                     | : No data is available on the product itself. |
| Upper explosion limit / Upper flammability limit | : No data is available on the product itself. |
| Lower explosion limit / Lower flammability limit | : No data is available on the product itself. |
| Vapour pressure                                  | : 0,04 hPa (20 °C)                            |
| Relative vapour density                          | : No data is available on the product itself. |
| Relative density                                 | : No data is available on the product itself. |
| Density                                          | : 0,95 g/cm <sup>3</sup> (25 °C)              |
| 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. |
| Auto-ignition temperature                        | : No data is available on the product itself. |
| Decomposition temperature                        | : > 200 °C                                    |
| Viscosity                                        |                                               |
| Viscosity, dynamic                               | : 20 000 - 35 000 mPa.s (25 °C)               |
| Explosive properties                             | : No data is available on the product itself. |
| Oxidizing properties                             | : No data is available on the product itself. |

### 9.2 Other information

No data available

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### 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 decomposition if stored and applied as directed.

#### 10.4 Conditions to avoid

Conditions to avoid : No data available

#### 10.5 Incompatible materials

Materials to avoid : Strong acids and strong bases  
Strong oxidizing agents

#### 10.6 Hazardous decomposition products

Nitrogen oxides (NO<sub>x</sub>)  
Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide  
Burning produces noxious and toxic fumes.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : > 2 000 mg/kg  
Method: Calculation method

Acute inhalation toxicity : No data available

Acute dermal toxicity - Product : Acute toxicity estimate : > 2 000 mg/kg  
Method: Calculation method

Acute toxicity (other routes of administration) : No data available

##### Skin corrosion/irritation

##### Product:

Result: Corrosive after 1 to 4 hours of exposure

##### Serious eye damage/eye irritation

##### Product:

Species: Rabbit

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Assessment: Corrosive

Result: Corrosive

Remarks: May cause irreversible eye damage.

### Respiratory or skin sensitisation

#### Product:

Remarks: Causes sensitisation.

Assessment: No data available

### Germ cell mutagenicity

#### Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 487  
Result: negative

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

: Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative

trientine:

Genotoxicity in vitro : Concentration: 0 - 200 µg/L  
Metabolic activation: negative  
Method: OECD Test Guideline 482  
Result: negative

#### Components:

trientine:

Genotoxicity in vivo : Application Route: Intraperitoneal injection  
Dose: 0 - 600 mg/kg  
Method: OECD Test Guideline 474  
Result: negative

### Carcinogenicity

#### Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Species: Mouse, male

Application Route: Dermal

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Exposure time: 20 month(s)  
Frequency of Treatment: 3 daily  
Result: negative

trientine:  
Species: Mouse, male  
Application Route: Dermal  
Dose: 42 mg/kg  
Frequency of Treatment: 3 daily  
Method: OECD Test Guideline 451  
Result: negative

Carcinogenicity - : No data available  
Assessment

### Reproductive toxicity

#### Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:  
Effects on fertility : Species: Rat, male and female  
Application Route: Oral  
Method: OECD Test Guideline 422  
Result: Animal testing did not show any effects on fertility.

#### Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:  
Effects on foetal : Species: Rat, male and female  
development : Application Route: Oral  
General Toxicity Maternal: No observed adverse effect level:  
15 mg/kg body weight  
Developmental Toxicity: No observed adverse effect level: 15  
mg/kg body weight  
Embryo-foetal toxicity: No observed adverse effect level: 15  
mg/kg body weight  
Method: OECD Test Guideline 422  
Result: No effects on fertility and early embryonic  
development were detected.

trientine:

Species: Rat  
Application Route: Oral  
General Toxicity Maternal: No observed adverse effect level:  
> 750 mg/kg body weight  
Method: OECD Test Guideline 414  
Result: No teratogenic effects

Species: Rabbit  
Application Route: Dermal  
General Toxicity Maternal: No observed adverse effect level:  
125 mg/kg body weight  
Method: OECD Test Guideline 414  
Result: No teratogenic effects

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### Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Reproductive toxicity - : No evidence of adverse effects on sexual function and fertility,  
Assessment or on development, based on animal experiments.

### **STOT - single exposure**

No data available

### **STOT - repeated exposure**

No data available

### **Repeated dose toxicity**

#### Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Species: Rat, male and female

: 550

Application Route: Ingestion

Test atmosphere: vapour

Exposure time: 3 WeeksNumber of exposures: 7 d

Method: Subchronic toxicity

Species: Mouse, male

NOAEL: >= 56,3

Application Route: Skin contact

Exposure time: 20 hNumber of exposures: 3 d

Method: Chronic toxicity

trientine:

Species: Rat, male and female

NOAEL: 50 mg/kg

Application Route: Ingestion

Exposure time: 26 WeeksNumber of exposures: 7 d

Method: Subchronic toxicity

Repeated dose toxicity - : No data available  
Assessment

### **Aspiration toxicity**

No data available

### **Experience with human exposure**

General Information: No data available

Inhalation: No data available

Skin contact: No data available

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Eye contact: No data available

Ingestion: No data available

### Toxicology, Metabolism, Distribution

No data available

### Neurological effects

No data available

### Further information

#### Product:

Remarks: No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 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)): 9,2 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 21 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (Pseudomonas putida): 181 mg/l  
Exposure time: 16 h  
Test Type: static test  
Test substance: Fresh water  
Method: DIN 38 412 Part 8

trientine:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 330 mg/l

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Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: Fish Acute Toxicity Test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 31,1 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water  
Method: Directive 67/548/EEC, Annex V, C.2.

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 20 mg/l  
Exposure time: 72 h  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (activated sludge): 800 mg/l  
Exposure time: 0,5 h  
Test Type: static test  
Test substance: Fresh water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: 1,9 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

Ecotoxicology Assessment  
Acute aquatic toxicity : This product has no known ecotoxicological effects.

### 12.2 Persistence and degradability

#### Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 100 %  
Exposure time: 28 d  
Method: ISO Method, other

trientine:

Biodegradability : Inoculum: activated sludge  
Result: Not readily biodegradable.  
Biodegradation: 0 %  
Exposure time: 162 d  
Method: OECD Test Guideline 301D

Inoculum: activated sludge  
Result: Not readily biodegradable.  
Biodegradation: 20 %  
Exposure time: 84 d  
Method: Inherent Biodegradability: Modified SCAS Test

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### 12.3 Bioaccumulative potential

#### Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Partition coefficient: n-octanol/water : log Pow: 0,5

log Pow: -0,56 (25 °C)

pH: 11,6

Method: OECD Test Guideline 107

trientine:

Partition coefficient: n-octanol/water : log Pow: -2,65 (20 °C)  
Method: OECD Test Guideline 117

### 12.4 Mobility in soil

#### Components:

trientine:

Distribution among environmental compartments : Koc: 1584,9 - 5012  
Method: OECD Test Guideline 106

### 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 Other adverse effects

#### Product:

Additional ecological information : No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

|                        |                                                                                                                                                                          |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product                | : Do not dispose of waste into sewer.<br>Do not contaminate ponds, waterways or ditches with chemical or used container.<br>Send to a licensed waste management company. |
| Contaminated packaging | : Empty remaining contents.<br>Dispose of as unused product.<br>Do not re-use empty containers.                                                                          |

## SECTION 14: Transport information

IATA

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**14.1 UN number** : UN 2735  
**14.2 UN proper shipping name** : Polyamines, liquid, corrosive, n.o.s.  
(N-(3-DIMETHYLAMINOPROPYL)-1,3-PROPYLENEDIAMINE)  
**14.3 Transport hazard class(es)** : 8  
**14.4 Packing group** : III  
Labels : Corrosive  
Packing instruction (cargo aircraft) : 856  
Packing instruction (passenger aircraft) : 852

**IMDG**  
**14.1 UN number** : UN 2735  
**14.2 UN proper shipping name** : POLYAMINES, LIQUID, CORROSIVE, N.O.S.  
(N-(3-DIMETHYLAMINOPROPYL)-1,3-PROPYLENEDIAMINE)  
**14.3 Transport hazard class(es)** : 8  
**14.4 Packing group** : III  
Labels : 8  
EmS Code : F-A, S-B  
**14.5 Environmental hazards**  
Marine pollutant : no

**ADR**  
**14.1 UN number** : UN 2735  
**14.2 UN proper shipping name** : POLYAMINES, LIQUID, CORROSIVE, N.O.S.  
(N-(3-DIMETHYLAMINOPROPYL)-1,3-PROPYLENEDIAMINE)  
**14.3 Transport hazard class(es)** : 8  
**14.4 Packing group** : III  
Labels : 8  
**14.5 Environmental hazards**  
Environmentally hazardous : no

**RID**  
**14.1 UN number** : UN 2735  
**14.2 UN proper shipping name** : POLYAMINES, LIQUID, CORROSIVE, N.O.S.  
(N-(3-DIMETHYLAMINOPROPYL)-1,3-PROPYLENEDIAMINE)  
**14.3 Transport hazard class(es)** : 8  
**14.4 Packing group** : III  
Labels : 8  
**14.5 Environmental hazards**

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Environmentally hazardous : no

### Transport in bulk according to Annex II of Marpol and the IBC Code

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 - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

REACH - List of substances subject to authorisation - Future sunset date : Not applicable

Occupational Illnesses (R-461-3, France) : Not applicable

Other regulations:

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 : This product contains one or several components listed in the Canadian NDSL.

AICS : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : Not 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 : On the inventory, or in compliance with the inventory

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### Inventories

AICS (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.                              |
| H312 | : Harmful in contact with skin.                      |
| H314 | : Causes severe skin burns and eye damage.           |
| H317 | : May cause an allergic skin reaction.               |
| H318 | : Causes serious eye damage.                         |
| H412 | : Harmful to aquatic life with long lasting effects. |

### Full text of other abbreviations

|                 |                            |
|-----------------|----------------------------|
| Acute Tox.      | : Acute toxicity           |
| Aquatic Chronic | : Chronic aquatic toxicity |
| Eye Dam.        | : Serious eye damage       |
| Skin Corr.      | : Skin corrosion           |
| Skin Sens.      | : Skin sensitisation       |

### Further information

#### Classification of the mixture:

|               |      |
|---------------|------|
| Skin Corr. 1C | H314 |
| Eye Dam. 1    | H318 |
| Skin Sens. 1  | H317 |

#### Classification procedure:

|                                     |
|-------------------------------------|
| Based on product data or assessment |
| Based on product data or assessment |
| Calculation method                  |

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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.

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