

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

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

#### 1.1 Product identifier

Trade name : ARALDITE® RAPID HARDENER

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

Use of the Substance/Mixture : Hardener

#### 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 responsible for the SDS : Global\_Product\_EHS\_AdMat@huntsman.com

#### 1.4 Emergency telephone number

Emergency telephone number : Berlin: 0049 30 19 24 0 & 0049 30 30 68 6 7 32 11  
Bonn: 0049 228 19 27 0 & 0049 228 28 7 3 32 11  
Erfurt: 0049 361 73 07 30  
Freiburg: 0049 761 16 24 0  
Göttingen: 0049 51 19 24 0 & 0049 551 38 31 80  
Homburg: 0049 6841 19 24 0  
Mainz: 0049 6131 19 24 0 & 0049 6131 23 24 66  
München: 0049 89 19 24 0  
Nürnberg: 0049 911 39 8 2 45 1  
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

Lieferant / Supplier:  
Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
76385 Karlsruhe, Germany  
+49 721 5606 0  
sicherheit@carlroth.de

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Eye irritation, Category 2      H319: Causes serious eye irritation.

Skin sensitisation, Category 1      H317: May cause an allergic skin reaction.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

Chronic aquatic toxicity, Category 2

H411: Toxic to aquatic life with long lasting effects.

### 2.2 Label elements

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

Hazard pictograms



Signal word : Warning

Hazard statements : 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.  
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.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P391 Collect spillage.

Hazardous components which must be listed on the label:

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

### 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. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

2,2'-[1,2-ethanediy]bis(oxy)]bis(ethanethiol)	14970-87-7 239-044-2 01-2120768482-47	Acute Tox. 3; H301 Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1  Acute toxicity estimate  Acute oral toxicity: 50,005 mg/kg	>= 2,5 - < 10
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	10563-29-8 234-148-4 01-2119970376-29	Acute Tox. 4; H302 Skin Corr. 1A; H314 Eye Dam. 1; H318 Skin Sens. 1B; H317	>= 1 - < 3
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2 202-013-9 603-069-00-0 01-2119560597-27	Acute Tox. 4; H302 Skin Corr. 1C; H314 Eye Dam. 1; H318	>= 1 - < 3
N,N,4-trimethylpiperazine-1-ethylamine	104-19-8 203-183-7 01-2120785093-51	Acute Tox. 3; H301 Acute Tox. 4; H312 Skin Corr. 1A; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 1 - < 2,5
n-butyl acetate	123-86-4 204-658-1 607-025-00-1	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system) EUH066	>= 1 - < 10

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.  
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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

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

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

None known.

### 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  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
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 : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)

### 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2021
2.0	25.02.2022	400001021216	Date of first issue: 06.12.2017

Print Date 02.03.2022

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.  
Refer to protective measures listed in sections 7 and 8.

#### 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.

#### 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

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.  
Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.  
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.  
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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

### 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.
- Storage class (TRGS 510) : 10
- 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
n-butyl acetate	123-86-4	AGW	62 ppm 300 mg/m <sup>3</sup>	DE TRGS 900
Peak-limit: excursion factor (category)	2;(I)			
Further information	When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		STEL	150 ppm 723 mg/m <sup>3</sup>	2019/1831/E U
Further information	Indicative			
		TWA	50 ppm 241 mg/m <sup>3</sup>	2019/1831/E U
Further information	Indicative			

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

Substance name	End Use	Exposure routes	Potential health effects	Value
2,4,6-tris(dimethylaminomethyl)phenol	Workers	Inhalation	Long-term systemic effects	0,53 mg/m <sup>3</sup>
	Workers	Inhalation	Acute systemic effects	2,1 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	0,150 mg/kg

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version  
2.0

Revision Date:  
25.02.2022

SDS Number:  
400001021216

Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

	Workers	Dermal	Acute systemic effects	0,600 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0,130 mg/m3
	Consumers	Inhalation	Acute systemic effects	0,130 mg/m3
	Consumers	Dermal	Long-term systemic effects	0,075 mg/kg
	Consumers	Dermal	Acute systemic effects	0,075 mg/kg
	Consumers	Oral	Long-term systemic effects	0,075 mg/kg
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
N,N,4-trimethylpiperazine-1-ethylamine	Workers	Inhalation	Long-term systemic effects	0,59 mg/m3
	Workers	Dermal	Long-term systemic effects	0,167 mg/kg

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

Substance name	Environmental Compartment	Value
2,4,6-tris(dimethylaminomethyl)phenol	Fresh water	0,046 mg/l
	Marine water	0,005 mg/l
	Remarks:Assessment Factors	
	Sewage treatment plant	0,262 mg/l
	Remarks:Assessment Factors	
	Freshwater - intermittent	0,46 mg/l
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	Soil	0,025 mg/kg
	Marine water	0,92 µg/l
	Freshwater - intermittent	92 µg/l
	Sewage treatment plant	18,1 mg/l
	Fresh water sediment	0,0336 mg/kg dry weight (d.w.)
	Marine sediment	0,0034 mg/kg dry weight (d.w.)
	Soil	0,0013 mg/kg dry weight (d.w.)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

N,N,4-trimethylpiperazine-1-ethylamine	Fresh water	0,029 mg/l
	Marine water	0,0029 mg/l
	Fresh water sediment	0,118 mg/kg dry weight (d.w.)
	Marine sediment	0,012 mg/kg dry weight (d.w.)
	Sewage treatment plant	100 mg/l
	Soil	0,0066 mg/kg dry weight (d.w.)

### 8.2 Exposure controls

#### Personal protective equipment

Eye 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)



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Physical state	: liquid
Colour	: yellow
Odour	: slight
Odour Threshold	: No data is available on the product itself.
pH	: No data is available on the product itself.
Melting point/freezing point	: No data is available on the product itself.
Boiling point/boiling range	: > 200 °C
Flash point	: 100 °C
Flammability (solid, gas)	: 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	: < 0,001 kPa
Relative vapour density	: No data is available on the product itself.
Relative density	: 1,165 (25 °C)
Density	: 1,165 g/cm <sup>3</sup> (25 °C)
Solubility(ies)	
Water solubility	: practically insoluble
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	: No data is available on the product itself.
Viscosity	
Viscosity, dynamic	: 20 000 - 40 000 mPa.s (25 °C)

#### 9.2 Other information

No data available

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

### 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

Materials to avoid : None known.

#### 10.6 Hazardous decomposition products

Hazardous decomposition products : carbon monoxide  
carbon dioxide  
Nitrogen oxides (NOx)

### SECTION 11: Toxicological information

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

##### Acute toxicity

##### Product:

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

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

##### Components:

##### **2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol):**

Acute oral toxicity : LD50 (Rat, female): > 50 - 300 mg/kg  
Method: OECD Test Guideline 423

Acute toxicity estimate: 50,005 mg/kg  
Method: Calculation method

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

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

Acute oral toxicity : LD50 (Rat, male and female): 1 669 mg/kg  
Method: OECD Test Guideline 401  
GLP: no  
Assessment: The component/mixture is moderately toxic after single ingestion.

### **2,4,6-tris(dimethylaminomethyl)phenol:**

Acute oral toxicity : LD50 (Rat, male and female): 2 169 mg/kg  
Method: OECD Test Guideline 401  
Assessment: The component/mixture is low toxic after single ingestion.

Acute dermal toxicity : LD50 (Rat, male): > 1 ml/kg  
Assessment: The substance or mixture has no acute dermal toxicity

### **N,N,4-trimethylpiperazine-1-ethylamine:**

Acute oral toxicity : LD50 (Rat, female): 200 - 2 000 mg/kg  
Method: OECD Test Guideline 423  
GLP: yes  
Assessment: The component/mixture is toxic after single ingestion.

Acute dermal toxicity : LD50 (Rabbit, male): 0.51 mL/kg bw  
Assessment: The component/mixture is moderately toxic after single contact with skin.

### **n-butyl acetate:**

Acute oral toxicity : LD50 (Rat): > 8 800 mg/kg  
LD50 (Mouse): 7 060 mg/kg  
LD50 (Rabbit): 7 437 mg/kg  
LD50 (Guinea pig): 4 700 mg/kg  
LD50 (Rat, female): 10 760 mg/kg  
Method: OECD Test Guideline 423

Acute dermal toxicity : LD50 (Rabbit): > 17 600 mg/kg  
LD50 (Rabbit, male and female): 14 112 mg/kg

### **Skin corrosion/irritation**

#### **Product:**

Assessment : Not irritating when applied to human skin.

#### **Components:**

#### **2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol):**

Species : human skin

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

Method : OECD Test Guideline 439  
Result : No skin irritation

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

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Causes severe burns.  
GLP : yes

### **2,4,6-tris(dimethylaminomethyl)phenol:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Corrosive after 1 to 4 hours of exposure

Species : synthetic macromolecular bio-barrier  
Method : OECD Test Guideline 435  
Result : Corrosive after 1 to 4 hours of exposure

### **N,N,4-trimethylpiperazine-1-ethylamine:**

Species : Rabbit  
Assessment : Causes severe burns.  
Method : OECD Test Guideline 404  
Result : Extremely corrosive and destructive to tissue.

### **Serious eye damage/eye irritation**

#### **Product:**

Species : Rabbit  
Result : Mild eye irritation

#### **Components:**

### **2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol):**

Species : Bovine cornea  
Method : OECD Test Guideline 437  
Result : No eye irritation

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

Assessment : Risk of serious damage to eyes.  
Result : Risk of serious damage to eyes.  
GLP : no

### **2,4,6-tris(dimethylaminomethyl)phenol:**

Species : Rabbit  
Assessment : Corrosive  
Method : Other guidelines  
Result : Corrosive

### **N,N,4-trimethylpiperazine-1-ethylamine:**

Result : Corrosive

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

### Respiratory or skin sensitisation

#### Product:

Result : May cause sensitisation by skin contact.

#### Components:

##### **2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol):**

Test Type : Maximisation Test  
Exposure routes : Skin  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Does not cause skin sensitisation.

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

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

##### **2,4,6-tris(dimethylaminomethyl)phenol:**

Exposure routes : Skin  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Does not cause skin sensitisation.

##### **N,N,4-trimethylpiperazine-1-ethylamine:**

Result : Did not cause sensitisation on laboratory animals.

##### **n-butyl acetate:**

Exposure routes : Skin  
Species : Guinea pig  
Result : Does not cause skin sensitisation.

### Germ cell mutagenicity

#### Components:

##### **2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol):**

Genotoxicity in vitro : Test Type: Ames test  
Test system: Salmonella tryphimurium and E. coli  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: yes

Test Type: gene mutation test  
Test system: mouse lymphoma cells

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 490  
Result: negative

Test system: Human lymphocytes  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 487  
Result: negative

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

Genotoxicity in vitro : Test Type: in vitro assay  
Test system: Human lymphocytes  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 487  
Result: negative  
GLP: yes

Test Type: reverse mutation assay  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Test system: mouse lymphoma cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative  
GLP: yes

Test Type: reverse mutation assay  
Test system: Salmonella tryphimurium and E. coli  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

### **2,4,6-tris(dimethylaminomethyl)phenol:**

Genotoxicity in vitro : Concentration: 5000 ug/plate  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

Concentration: 2500 ug/plate  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative

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

### **N,N,4-trimethylpiperazine-1-ethylamine:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

Test system: Chinese hamster ovary cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative  
GLP: yes

Test Type: reverse mutation assay  
Test system: Salmonella tryphimurium and E. coli  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: yes

Test Type: Chromosome aberration test in vitro  
Test system: Chinese hamster ovary cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative  
GLP: yes

Metabolic activation: with and without metabolic activation  
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse (male and female)  
Cell type: Bone marrow  
Application Route: Intraperitoneal injection  
Dose: 175/350/560 mg/kg bw /day  
Result: negative  
Remarks: Information given is based on data obtained from similar substances.

### Carcinogenicity

#### Components:

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

Species : Mouse, male  
Application Route : Dermal  
Exposure time : 20 month(s)  
Dose : 1.25/56.3 mg/animal  
Frequency of Treatment : 3 daily  
NOAEL : >= 56,3 mg/kg body weight  
Result : negative  
Remarks : Information given is based on data obtained from similar substances.

### Reproductive toxicity

#### Components:

##### **2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol):**

Effects on fertility : Species: Rat, male and female  
Dose: 50, 100, 150 mg/kg  
General Toxicity - Parent: NOAEL: 50 mg/kg body weight  
General Toxicity F1: NOAEL: 50 mg/kg body weight

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

Method: OECD Test Guideline 421

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

Effects on fertility : Test Type: Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test  
Species: Rat, male and female  
Application Route: Oral  
Dose: 5, 15 and 50 mg/kg bw/d  
General Toxicity - Parent: NOAEL: 15 mg/kg body weight  
General Toxicity F1: NOAEL: 15 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: Animal testing did not show any effects on fertility.  
GLP: yes

Effects on foetal development : Species: Rat, male and female  
Application Route: Oral  
Dose: 5, 15 and 50 mg/kg bw/d  
General Toxicity Maternal: NOAEL: 15 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: Not classified  
GLP: yes

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

### **2,4,6-tris(dimethylaminomethyl)phenol:**

Effects on fertility : Species: Rat, male and female  
Application Route: Oral  
Method: OECD Test Guideline 422  
Remarks: No significant adverse effects were reported

### **N,N,4-trimethylpiperazine-1-ethylamine:**

Effects on fertility : Test Type: Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test  
Species: Rat, male and female  
Dose: 0, 10, 25, 50 mg/kg  
Frequency of Treatment: 7 days/week  
General Toxicity - Parent: NOAEL: 50 mg/kg body weight  
General Toxicity F1: NOAEL: 50 mg/kg body weight  
Fertility: NOAEL: 50 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: negative

### **n-butyl acetate:**

Effects on fertility : Species: Rat, male and female  
Fertility: NOAEC Mating/Fertility: 2 000 ppm  
Method: OECD Test Guideline 416

Effects on foetal development : Species: Rat, male and female  
Strain: Sprague-Dawley  
Application Route: Inhalation  
Developmental Toxicity: NOAEC Parent: 1 500 ppm



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

Method: OECD Test Guideline 414  
Result: No effects on fertility and early embryonic development were detected.

### STOT - single exposure

#### Components:

##### **n-butyl acetate:**

Exposure routes : Inhalation  
Target Organs : Narcotic effects  
Assessment : May cause drowsiness or dizziness.

### STOT - repeated exposure

No data available

### Repeated dose toxicity

#### Components:

##### **2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol):**

Species : Rat, male and female  
NOAEL : 60 mg/kg  
Application Route : Oral  
Dose : 20, 60, 180 mg/kg  
Method : OECD Test Guideline 407

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

Species : Rat, male and female  
NOEC : 550 mg/m<sup>3</sup>  
Application Route : Inhalation  
Test atmosphere : vapour  
Exposure time : 3 w 6 h  
Number of exposures : 5 d/w  
Dose : 550 mg/m<sup>3</sup>  
Method : Subchronic toxicity  
Remarks : Based on data from similar materials

Species : Mouse, male  
NOAEL : >= 56,3 mg/kg/d  
Application Route : Skin contact  
Number of exposures : 3 d  
Method : Chronic toxicity  
Remarks : Based on data from similar materials

Species : Rat, male and female  
NOAEL : 1000 ppm  
Application Route : Oral  
Exposure time : 90 d  
Method : OECD Test Guideline 408  
Remarks : Based on data from similar materials

##### **2,4,6-tris(dimethylaminomethyl)phenol:**

Species : Rat, male and female

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

NOEL : 15 mg/kg  
Application Route : Ingestion  
Exposure time : 1 032 h  
Number of exposures : 7 d  
Method : Subacute toxicity

### **N,N,4-trimethylpiperazine-1-ethylamine:**

Species : Rat, male and female  
NOAEL : 50 mg/kg  
Application Route : Oral  
Exposure time : 6 - 10 weeks  
Number of exposures : 7 days/week  
Dose : 0, 10, 25, 50mg/kg bw/day  
Method : OECD Test Guideline 422  
GLP : yes

### **n-butyl acetate:**

Species : Rat, male and female  
NOAEL : 2,4 mg/l  
Application Route : Inhalation  
Test atmosphere : vapour

### **Aspiration toxicity**

No data available

## **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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Components:

##### **2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol):**

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 5,7 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,76 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 3,11 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes
- M-Factor (Acute aquatic toxicity) : 1
- M-Factor (Chronic aquatic toxicity) : 1

##### **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  
Analytical monitoring: yes  
Test substance: Fresh water  
Method: OECD Test Guideline 203  
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 9,2 mg/l  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: no  
Test substance: Fresh water  
Method: OECD Test Guideline 202  
GLP: yes
- Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): 21 mg/l  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Test substance: Fresh water  
Method: OECD Test Guideline 201  
GLP: yes

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

NOEC (Selenastrum capricornutum (green algae)): 5,7 mg/l  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Test substance: Fresh water  
Method: OECD Test Guideline 201  
GLP: yes

Toxicity to microorganisms : EC50 (Pseudomonas putida): 181 mg/l  
Exposure time: 16 h  
Test Type: static test  
Analytical monitoring: no  
Test substance: Fresh water  
Method: DIN 38 412 Part 8  
GLP: no

### **2,4,6-tris(dimethylaminomethyl)phenol:**

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 175 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water

Toxicity to daphnia and other aquatic invertebrates : LC50 (Palaeomonetes vulgaris (Grass shrimp)): 718 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: no  
Test substance: Marine water

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 84 mg/l  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Test substance: Fresh water  
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 6,25 mg/l  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Test substance: Fresh water  
Method: OECD Test Guideline 201

### **N,N,4-trimethylpiperazine-1-ethylamine:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 29 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 66 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (algae)): 29 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
  
NOEC (Pseudokirchneriella subcapitata (algae)): 3,2 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (activated sludge): > 1 000 mg/l  
Exposure time: 3 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 209  
GLP: yes

### Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

### n-butyl acetate:

Toxicity to fish : EC50 (Menidia beryllina (Silverside)): 185 mg/l  
Exposure time: 96 h  
  
LC50 (Pimephales promelas (fathead minnow)): 18 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 : 205 mg/l  
Exposure time: 24 h  
  
EC50 : 44 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 674,7 mg/l  
Exposure time: 72 h

Toxicity to microorganisms : IC0 : 1 200 mg/l  
Exposure time: 24 h

## 12.2 Persistence and degradability

### Components:

#### 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol):

Biodegradability : Test Type: aerobic  
Inoculum: activated sludge  
Concentration: 38,2 mg/l  
Result: Not biodegradable  
Biodegradation: < 10 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301A

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

Biodegradability : Test Type: aerobic  
Result: Readily biodegradable.  
Biodegradation: 100 %  
Related to: Dissolved organic carbon (DOC)  
Exposure time: 28 d  
Method: OECD Test Guideline 301A  
GLP: yes

### **2,4,6-tris(dimethylaminomethyl)phenol:**

Biodegradability : Test Type: aerobic  
Inoculum: activated sludge, non-adapted  
Concentration: 2 mg/l  
Result: Not biodegradable  
Biodegradation: 4 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D

### **N,N,4-trimethylpiperazine-1-ethylamine:**

Biodegradability : Test Type: aerobic  
Inoculum: activated sludge  
Result: Not readily biodegradable.  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

### **n-butyl acetate:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 98 %  
Exposure time: 28 d

## 12.3 Bioaccumulative potential

### Components:

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

Partition coefficient: n-octanol/water : log Pow: -0,56 (25 °C)  
pH: 11,6  
Method: OECD Test Guideline 107

#### **2,4,6-tris(dimethylaminomethyl)phenol:**

Partition coefficient: n-octanol/water : Pow: >= 0,219 (21,5 °C)  
log Pow: -0,66 (21,5 °C)  
Method: OPPTS 830.7550

#### **N,N,4-trimethylpiperazine-1-ethylamine:**

Partition coefficient: n-octanol/water : log Pow: -0,591 (21 °C)  
pH: 9,6

### **n-butyl acetate:**

Bioaccumulation : Bioconcentration factor (BCF): 4 - 14

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

### 12.4 Mobility in soil

No data available

### 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.  
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.  
Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

**ADN** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(TRIETHYLENEGLYCOL-DIMERCAPTANE)

**ADR** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(TRIETHYLENEGLYCOL-DIMERCAPTANE)

**RID** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(TRIETHYLENEGLYCOL-DIMERCAPTANE)

**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(TRIETHYLENEGLYCOL-DIMERCAPTANE)

**IATA** : Environmentally hazardous substance, liquid, n.o.s.  
(TRIETHYLENEGLYCOL-DIMERCAPTANE)

### 14.3 Transport hazard class(es)

**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



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version 2.0      Revision Date: 25.02.2022      SDS Number: 400001021216      Date of last issue: 28.09.2021  
Date of first issue: 06.12.2017

Print Date 02.03.2022

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

### 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 (Regulation (EC) No 1907/2006 (REACH), Article 57).

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

Water hazard class (Germany) : WGK 1 slightly hazardous to water  
Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany) : Total dust:  
Not applicable  
: Inorganic substances in powdered form:  
Not applicable  
: Inorganic substances in vapour or gaseous form:

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2021
2.0	25.02.2022	400001021216	Date of first issue: 06.12.2017

Print Date 02.03.2022

Not applicable  
: Organic Substances:  
Not applicable  
: Carcinogenic substances:  
Not applicable  
: Mutagenic:  
Not applicable  
: Toxic to reproduction:  
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 that are not on the Canadian DSL nor NDSL.

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

NZIoC : Not 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 : Not 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 or in compliance with the active portion of 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2021
2.0	25.02.2022	400001021216	Date of first issue: 06.12.2017

Print Date 02.03.2022

### SECTION 16: Other information

#### Full text of H-Statements

H226	: Flammable liquid and vapour.
H301	: Toxic if swallowed.
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.
H336	: May cause drowsiness or dizziness.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.
EUH066	: Repeated exposure may cause skin dryness or cracking.

#### Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Chronic aquatic toxicity
Eye Dam.	: Serious eye damage
Flam. Liq.	: Flammable liquids
Skin Corr.	: Skin corrosion
Skin Sens.	: Skin sensitisation
STOT SE	: Specific target organ toxicity - single exposure
2019/1831/EU	: Europe. Commission Directive 2019/1831/EU establishing a fifth list of indicative occupational exposure limit values
DE TRGS 900	: Germany. TRGS 900 - Occupational exposure limit values.
2019/1831/EU / TWA	: Limit Value - eight hours
2019/1831/EU / STEL	: Short term exposure limit
DE TRGS 900 / AGW	: Time Weighted Average

#### Further information

##### Classification of the mixture:

Eye Irrit. 2	H319
Skin Sens. 1	H317
Aquatic Chronic 2	H411

##### Classification procedure:

Based on product data or assessment
Based on product data or assessment
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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID HARDENER

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2021
2.0	25.02.2022	400001021216	Date of first issue: 06.12.2017

Print Date 02.03.2022

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.

The trademarks above are the property of Huntsman Corporation or an affiliate thereof.

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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

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

#### 1.1 Product identifier

Trade name : ARALDITE® RAPID RESIN

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

Use of the Substance/Mixture : Epoxy constituents

#### 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 responsible for the SDS : Global\_Product\_EHS\_AdMat@huntsman.com

#### 1.4 Emergency telephone number

Emergency telephone number : Berlin: 0049 30 19 24 0 & 0049 30 30 68 6 7 11  
Bonn: 0049 228 19 27 0 & 0049 228 28 7 3 32 11  
Erfurt: 0049 361 73 07 30  
Freiburg: 0049 761 16 24 0  
Göttingen: 0049 51 19 24 0 & 0049 551 38 31 80  
Homburg: 0049 6841 19 24 0  
Mainz: 0049 6131 19 24 0 & 0049 6131 23 24 66  
München: 0049 89 19 24 0  
Nürnberg: 0049 911 39 8 2 45 1  
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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

Skin sensitisation, Category 1


H317: May cause an allergic skin reaction.

Chronic aquatic toxicity, Category 2

H411: Toxic to aquatic life with long lasting effects.

### 2.2 Label elements

#### Labelling (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	:	<b>Prevention:</b> 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. <b>Response:</b> 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  
1,4-bis(2,3 epoxypropoxy)butane

### 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.	Classification	Concent
---------------	---------	----------------	---------

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

	EC-No. Index-No. Registration number		ration (% w/w)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	1675-54-3 216-823-5 603-073-00-2 01-2119456619-26	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411  specific concentration limit Skin Irrit. 2; H315 >= 5 % Eye Irrit. 2; H319 >= 5 %	>= 70 - < 90
1,4-bis(2,3 epoxypropoxy)butane	2425-79-8 219-371-7 603-072-00-7 01-2119494060-45	Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Chronic 3; H412 Eye Dam. 1; H318  Acute toxicity estimate  Acute dermal toxicity: 1 100 mg/kg	>= 3 - < 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

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

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

None known.

### 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  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
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 : Carbon oxides  
Halogenated compounds

### 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.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

---

### SECTION 6: Accidental release measures

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

Personal precautions : Use personal protective equipment.  
Refer to protective measures listed in sections 7 and 8.

#### 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.

#### 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

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.  
Persons suffering from asthma, eczema or skin problems  
should avoid contact, including dermal contact, with this  
product.  
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.  
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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

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.

Storage class (TRGS 510) : 10

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

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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Workers	Inhalation	Long-term systemic effects	4,93 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	0,75 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,87 mg/m <sup>3</sup>
	Consumers	Dermal	Long-term systemic effects	0,0893 mg/kg bw/day
1,4-bis(2,3-epoxypropoxy)butane	Consumers	Oral	Long-term systemic effects	0,5 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	4,7 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	6,66 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1,16 mg/m <sup>3</sup>
	Consumers	Dermal	Long-term systemic effects	3,33 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	0,33 mg/kg bw/day

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

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

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
1,4-bis(2,3 epoxypropoxy)butane	Fresh water	0,024 mg/l
	Remarks:Assessment Factors	
	Marine water	0,002 mg/l
	Remarks:Assessment Factors	
	Sewage treatment plant	100 mg/l
	Remarks:Assessment Factors	
	Fresh water sediment	0,084 mg/kg dry weight (d.w.)
	Remarks:Equilibrium method	
	Marine sediment	0,008 mg/kg dry weight (d.w.)
	Remarks:Equilibrium method	
	Soil	0,003 mg/kg dry weight (d.w.)
	Remarks:Equilibrium method	
	Oral	0,028 mg/kg

### 8.2 Exposure controls

#### Personal protective equipment

Eye 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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

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 : liquid

Colour : light yellow

Odour : No data is available on the product itself.

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

pH : No data is available on the product itself.

Melting point/freezing point : No data is available on the product itself.

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

Flash point : > 200 °C  
Method: Pensky-Martens closed cup

Flammability (solid, gas) : 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 : No data is available on the product itself.

Relative vapour density : No data is available on the product itself.

Relative density : No data is available on the product itself.

Density : No data is available on the product itself.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

Solubility(ies)  
Water solubility : No data is available on the product itself.  
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 : No data is available on the product itself.  
Viscosity : No data is available on the product itself.

### 9.2 Other information

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

Materials to avoid : None known.

### 10.6 Hazardous decomposition products

Hazardous decomposition products : carbon dioxide  
carbon monoxide  
Halogenated compounds

## SECTION 11: Toxicological information

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

#### Acute toxicity

##### Product:

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

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l  
Exposure time: 4 h

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

Test atmosphere: dust/mist  
Method: Calculation method

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

### 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

#### **1,4-bis(2,3 epoxypropoxy)butane:**

Acute oral toxicity : LD50 (Rat, male and female): 1 163 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes  
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat): > 2,068 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Test atmosphere: dust/mist  
Method: Expert judgement  
Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity : Acute toxicity estimate: 1 100 mg/kg  
Method: Converted acute toxicity point estimate

Assessment: The component/mixture is moderately toxic after single contact with skin.

### **Skin corrosion/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.

#### **1,4-bis(2,3 epoxypropoxy)butane:**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Skin irritation  
GLP : yes

### Serious eye damage/eye irritation

#### Product:

Species : Not Assigned  
Method : OECD Test Guideline 437  
Result : 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.

##### **1,4-bis(2,3 epoxypropoxy)butane:**

Species : Rabbit  
Assessment : Risk of serious damage to eyes.  
Method : OECD Test Guideline 405  
GLP : yes

### Respiratory or skin sensitisation

#### 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.

##### **1,4-bis(2,3 epoxypropoxy)butane:**

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

Assessment : Harmful if inhaled.

### Germ cell mutagenicity

#### Components:

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

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

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

### 1,4-bis(2,3 epoxypropoxy)butane:

Genotoxicity in vitro

: Test Type: reverse mutation assay  
Concentration: 10 - 5000 ug/plate  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: positive  
GLP: yes  
Remarks: Not classified due to data which are conclusive although insufficient for classification.

Test Type: Chromosome aberration test in vitro  
Test system: Chinese hamster lung cells  
Concentration: 1 - 100 µg/L  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: positive  
GLP: yes  
Remarks: Not classified due to data which are conclusive although insufficient for classification.

Test Type: In vitro mammalian cell gene mutation test  
Test system: Chinese hamster lung cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: positive  
GLP: no  
Remarks: Not classified due to data which are conclusive although insufficient for classification.



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse (male)  
Cell type: Somatic  
Application Route: Oral  
Exposure time: 4 d  
Dose: 187.5 - 750 mg/kg  
Method: OECD Test Guideline 474  
Result: negative  
GLP: yes

Test Type: unscheduled DNA synthesis assay  
Species: Rat  
Cell type: Liver cells  
Application Route: Oral  
Method: OECD Test Guideline 486  
Result: negative

Germ cell mutagenicity-Assessment : Weight of evidence does not support classification as a germ cell mutagen., Animal testing did not show any mutagenic effects.

### Carcinogenicity

#### 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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

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

### Reproductive toxicity

#### Components:

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

Effects on fertility : Test Type: Two-generation study  
Species: Rat, male and female  
Application Route: Oral  
Dose: 0, 50, 180, 540 or 750 milligram per kilogram  
Duration of Single Treatment: 238 d  
Frequency of Treatment: 1 daily  
General Toxicity - Parent: NOEL: 540 mg/kg body weight  
General Toxicity F1: NOEL: 750 mg/kg body weight  
Symptoms: No adverse effects  
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  
Dose: 0, 30, 100 or 300 milligram per kilogram  
Duration of Single Treatment: 28 d  
Frequency of Treatment: 1 daily  
General Toxicity Maternal: NOEL: 30 mg/kg body weight  
Developmental Toxicity: NOEL: 300 mg/kg body weight  
Method: Other guidelines  
Result: No teratogenic effects

Test Type: Pre-natal  
Species: Rabbit, female  
Application Route: Oral  
Dose: 0, 20, 60 or 180 milligram per kilogram  
Duration of Single Treatment: 13 d  
Frequency of Treatment: 1 daily

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

General Toxicity Maternal: NOAEL: 60 mg/kg body weight  
Developmental Toxicity: NOAEL: 180 mg/kg body weight  
Method: OECD Test Guideline 414  
Result: No teratogenic effects

Test Type: Pre-natal  
Species: Rat, female  
Application Route: Oral  
Dose: 0, 60, 180 and 540 milligram per kilogram  
Duration of Single Treatment: 10 d  
Frequency of Treatment: 1 daily  
General Toxicity Maternal: NOAEL: 180 mg/kg body weight  
Developmental Toxicity: NOAEL: > 540 mg/kg body weight  
Method: OECD Test Guideline 414  
Result: No teratogenic effects

### 1,4-bis(2,3 epoxypropoxy)butane:

Effects on foetal development : Test Type: Pre-natal  
Species: Rat, female  
Application Route: Oral  
Dose: 0/30/100/300 mg/kg bw/day  
Duration of Single Treatment: 17 d  
General Toxicity Maternal: NOAEL: 300 mg/kg body weight  
Developmental Toxicity: NOAEL: 300 mg/kg body weight  
Method: OECD Test Guideline 414  
GLP: yes  
Remarks: Information given is based on data obtained from similar substances.

### STOT - single exposure

No data available

### STOT - repeated exposure

No data available

### 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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

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

### 1,4-bis(2,3 epoxypropoxy)butane:

Species : Rat, male and female  
NOAEL : 200 mg/kg  
Application Route : Oral  
Exposure time : 28 d  
Number of exposures : daily  
Dose : 25, 100, 200, 400 mg/kg  
Method : Subacute toxicity

Species : Rat, male and female  
NOAEL : 263 mg/kg  
Application Route : Oral  
Exposure time : 90 h  
Number of exposures : daily  
Dose : 0,30,100,300 mg/kg bw/day  
Method : OECD Test Guideline 408  
GLP : yes  
Remarks : Information given is based on data obtained from similar substances.

### Aspiration toxicity

No data available

## 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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

### 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  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,8 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 : 11 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: EPA-660/3-75-009

NOEC : 4,2 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: EPA-660/3-75-009

Toxicity to microorganisms : IC50 (activated sludge): > 100 mg/l  
Exposure time: 3 h  
Test Type: static test  
Test substance: Fresh water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,3 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 211

##### **Ecotoxicology Assessment**

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

##### **1,4-bis(2,3 epoxypropoxy)butane:**

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 24 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: no  
Test substance: Fresh water  
Method: OECD Test Guideline 203  
GLP: no

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 75 mg/l  
End point: Immobilization  
Exposure time: 24 h  
Test Type: static test  
Analytical monitoring: no  
Test substance: Fresh water  
Method: OECD Test Guideline 202  
GLP: no
- Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 160 mg/l  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Test substance: Fresh water  
Method: OECD Test Guideline 201  
GLP: yes
- NOELR (Pseudokirchneriella subcapitata (green algae)): 40 mg/l  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Test substance: Fresh water  
Method: OECD Test Guideline 201  
GLP: yes
- Toxicity to microorganisms : IC50 (activated sludge): > 100 mg/l  
Exposure time: 3 h  
Test Type: static test  
Analytical monitoring: no  
Test substance: Fresh water  
Method: OECD Test Guideline 209  
GLP: no

### 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)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

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

### 1,4-bis(2,3 epoxypropoxy)butane:

Biodegradability : Test Type: aerobic  
Inoculum: activated sludge  
Concentration: 20 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 43 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F  
GLP: yes

Test Type: aerobic  
Inoculum: Sewage (STP effluent)  
Concentration: 20 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 38 %  
Related to: Dissolved organic carbon (DOC)  
Exposure time: 28 d  
Method: OECD Test Guideline 301E  
GLP: no

## 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

#### 1,4-bis(2,3 epoxypropoxy)butane:

Partition coefficient: n-octanol/water : log Pow: -0,269 (25 °C)  
pH: 6,7  
Method: OECD Test Guideline 117  
GLP: yes

## 12.4 Mobility in soil

### Components:

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

Distribution among environmental compartments : Koc: 445

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

### 1,4-bis(2,3 epoxypropoxy)butane:

Distribution among environmental compartments : Koc: 12,59  
Method: OECD Test Guideline 121

### 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.  
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.  
Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
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



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

**IMDG** : UN 3082

**IATA** : UN 3082

### 14.2 UN proper shipping name

**ADN** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(BISPHENOL A EPOXY RESIN)

**ADR** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(BISPHENOL A EPOXY RESIN)

**RID** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(BISPHENOL A EPOXY RESIN)

**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(BISPHENOL A EPOXY RESIN)

**IATA** : Environmentally hazardous substance, liquid, n.o.s.  
(BISPHENOL A EPOXY RESIN)

### 14.3 Transport hazard class(es)

**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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

### 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 (Regulation (EC) No 1907/2006 (REACH), Article 57).

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version 1.3      Revision Date: 07.03.2022      SDS Number: 400001021215      Date of last issue: 26.10.2020  
Date of first issue: 06.12.2017

Print Date 15.07.2022

### HAZARDS

- Water hazard class (Germany) : WGK 2 obviously hazardous to water  
Classification according to AwSV, Annex 1 (5.2)
- TA Luft List (Germany) : Total dust:  
Not applicable  
: Inorganic substances in powdered form:  
Not applicable  
: Inorganic substances in vapour or gaseous form:  
Not applicable  
: Organic Substances:  
Not applicable  
: Carcinogenic substances:  
Not applicable  
: Mutagenic:  
Not applicable  
: Toxic to reproduction:  
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 : All components of this product are on the Canadian DSL
- AIIC : 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 : 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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version	Revision Date:	SDS Number:	Date of last issue: 26.10.2020
1.3	07.03.2022	400001021215	Date of first issue: 06.12.2017

Print Date 15.07.2022

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.
H312	: Harmful in contact with skin.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H332	: Harmful if inhaled.
H411	: Toxic to aquatic life with long lasting effects.
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
Eye Irrit.	: Eye irritation
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation

### Further information

#### Classification of the mixture:

Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
Aquatic Chronic 2	H411

#### Classification procedure:

Calculation method
Based on product data or assessment
Calculation method
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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**HUNTSMAN**

Enriching lives through innovation

## ARALDITE® RAPID RESIN

Version	Revision Date:	SDS Number:	Date of last issue: 26.10.2020
1.3	07.03.2022	400001021215	Date of first issue: 06.12.2017

Print Date 15.07.2022

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.

The trademarks above are the property of Huntsman Corporation or an affiliate thereof.

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.