

ARALDITE® 2020 HARDENER

Version	Revision Date:	SDS Number:	Date of last issue: 2017/09/28
1.2	2020/01/08	400001007685	Date of first issue: 2017/09/27

Print Date 2021/12/28

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ARALDITE® 2020 HARDENER

Manufacturer or supplier's details

Company : Huntsman Advanced Materials (Guangdong) Co., Ltd.

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Recommended use of the chemical and restrictions on use

Recommended use : Adhesives

Restrictions on use : For Research and Development or Export Only.

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	: liquid
Colour	: Clear
	light yellow
Odour	: amine-like

Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful to aquatic life.

GHS Classification

Acute toxicity (Oral) : Category 4

Skin corrosion/irritation : Category 1A

Serious eye damage/eye irritation : Category 1

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Skin sensitisation : Category 1

Short-term (acute) aquatic hazard : Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H402 Harmful to aquatic life.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

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Physical and chemical hazards

Not classified based on available information.

Health hazards

Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. May cause an allergic skin reaction.

Environmental hazards

Harmful to aquatic life.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	≥ 30 - < 50
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	25513-64-8	≥ 25 - < 30

4. FIRST AID MEASURES

General advice	: Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Treat symptomatically. Get medical attention if symptoms occur.
If inhaled	: If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	: Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	: Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	: Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear.

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Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : Harmful if swallowed or in contact with skin.
May cause an allergic skin reaction.
Causes serious eye damage.
Causes severe burns.

Notes to physician : Treat symptomatically.

5. FIREFIGHTING MEASURES

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

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

Specific extinguishing methods : 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.

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

6. ACCIDENTAL RELEASE MEASURES

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

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.

Methods and materials for containment and 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.

7. HANDLING AND STORAGE

Handling

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

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

Storage

Conditions for safe storage : 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.
Observe label precautions.
Keep in properly labelled containers.

Materials to avoid : For incompatible materials please refer to Section 10 of this SDS.

Recommended storage temperature : 2 - 40 °C

Further information on storage stability : Stable under normal conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines

Filter type : Organic vapour type

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

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

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Hand protection

Material : butyl-rubber

Break through time : > 8 h

Material : Solvent-resistant gloves (butyl-rubber)

Material : Nitrile rubber

Break through time : 10 - 480 min

Remarks

: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Hygiene measures

: When using do not eat or drink.

When using do not smoke.

Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : Clear

light yellow

Odour : amine-like

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

pH : No data is available on the product itself.

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

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

Boiling point : > 200 °C

Flash point : > 120 °C

Method: Pensky-Martens closed cup

Evaporation rate : No data is available on the product itself.

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

Flammability (liquids) : 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 : < 0.06 hPa (20 °C)

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

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Relative density	:	No data is available on the product itself.
Density	:	0.95 g/cm ³ (25 °C)
Solubility(ies)	:	
Water solubility	:	partly soluble (20 °C)
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Auto-ignition temperature	:	No data is available on the product itself.
Decomposition temperature	:	> 200 °C
Self-Accelerating decomposition temperature (SADT)	:	No data is available on the product itself.
Viscosity	:	
Viscosity, dynamic	:	150 mPa.s (25 °C)
Explosive properties	:	No data is available on the product itself.
Oxidizing properties	:	No data is available on the product itself.
Particle size	:	No data is available on the product itself.

10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No hazards to be specially mentioned.
Conditions to avoid	:	None known.
Incompatible materials	:	Strong acids and strong bases Strong oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Exposure routes	:	No data is available on the product itself.
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Acute toxicity

Harmful if swallowed or in contact with skin.

Acute oral toxicity - Product	:	Acute toxicity estimate : 1,484 mg/kg Method: Calculation method
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Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Acute inhalation toxicity : (Rat, male and female): > 5.01 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Symptoms: Breathing difficulties

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

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

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

Skin corrosion/irritation

Causes severe burns.

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Species: Rabbit
Assessment: Causes burns.

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Species: Rabbit
Result: Corrosive after 3 minutes or less of exposure

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Species: Rabbit
Result: Corrosive
Method: OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

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

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2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Exposure routes: Skin

Species: Guinea pig

Method: OECD Test Guideline 406

Result: The product is a skin sensitiser, sub-category 1A.

Assessment: No data available

Germ cell mutagenicity

Not classified based on available information.

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Concentration: 2 mg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Concentration: 1375 µg/L
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Concentration: 5000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 5000 µg/plate
Metabolic activation: with and without metabolic activation
Method: Directive 67/548/EEC, Annex, B.13/14
Result: negative

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

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Concentration: 2 mg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

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Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Oral
Dose: 500 mg/kg
Method: Directive 67/548/EEC, Annex V, B.12.
Result: negative

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Genotoxicity in vivo : Species: Chinese hamster (male and female)
Cell type: Bone marrow
Application Route: Oral
Dose: 825 - 1000 mg/kg
Method: OECD Test Guideline 474
Result: negative

Test Type: In vivo micronucleus test
Species: Mouse (male and female)
Application Route: Oral
Dose: 850 - 1000 mg/kg
Method: OECD Test Guideline 474
Result: negative

Germ cell mutagenicity-
Assessment : No data available

Carcinogenicity

Not classified based on available information.
No data available

Carcinogenicity -
Assessment : No data available

Reproductive toxicity

Not classified based on available information.

Components:

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Effects on fertility : Species: Rat, male and female
Application Route: Oral
Dose: 10, 60, 120 mg/kg bw/day
Method: OECD Test Guideline 416
Result: No effects on fertility and early embryonic development were detected.

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Effects on foetal
development : Species: Rat, female
Application Route: Oral
Dose: 10/50/250 milligram per kilogram
General Toxicity Maternal: No-observed-effect level: 50 mg/kg body weight

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Method: OECD Test Guideline 414
Result: No teratogenic effects

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Species: Rabbit, female
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level:
50,000 ppm
Result: No teratogenic effects

Reproductive toxicity - : No data available
Assessment

STOT - single exposure

Not classified based on available information.
No data available

STOT - repeated exposure

Not classified based on available information.
No data available

Repeated dose toxicity

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Species: Rat, male and female
NOAEL: 60 mg/kg
Application Route: Ingestion
Exposure time: 90 d
Dose: 20, 60, 160 mg/kg
Method: OECD Test Guideline 408
Target Organs: Kidney

Species: Rat, male and female
NOEC: 200 mg/m³
Application Route: Inhalation
Test atmosphere: dust/mist
Exposure time: 216 h
Number of exposures: 6h
Method: Subacute toxicity
Target Organs: respiratory tract irritation

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Species: Rat, male and female
NOAEL: 10 mg/kg bw/day
Application Route: Ingestion
Exposure time: 13 Weeks
Number of exposures: Daily
Dose: 10, 60, 180mg/kg bw
Target Organs: Liver

Species: Rat, male and female
LOAEL: 60 mg/kg bw/day

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Application Route: Ingestion
Exposure time: 13 Weeks
Number of exposures: Daily
Dose: 10, 60, 180mg/kg bw
Target Organs: Liver

Repeated dose toxicity - : No data available
Assessment

Aspiration toxicity

Not classified based on available information.
No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Ingestion: No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 110 mg/l
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.1.

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2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 174 mg/l
Exposure time: 48 h
Method: DIN 38412

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 23 mg/l
aquatic invertebrates
End point: mortality
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 202

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 31.5 mg/l
aquatic invertebrates
Exposure time: 24 h
Method: DIN 38412

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Toxicity to algae/aquatic : EC50 (Desmodesmus subspicatus (green algae)): 37 mg/l
plants
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.3.

EC10 (Desmodesmus subspicatus (green algae)): 11.2 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.3.

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Toxicity to algae/aquatic : ErC50 (Pseudokirchneriella subcapitata (algae)): 43.5 mg/l
plants
Exposure time: 72 h
Method: OECD Test Guideline 201

EC50 (Pseudokirchneriella subcapitata (algae)): 37.1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (algae)): 16 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic : No data available
toxicity)

Components:

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

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Toxicity to fish (Chronic toxicity) : NOEC (Brachydanio rerio (zebrafish)): 10.9 mg/l
Exposure time: 30 d
Method: OECD Test Guideline 210

Lowest Observed Effect Concentration (Brachydanio rerio (zebrafish)): 10.9 mg/l
Exposure time: 30 d
Method: OECD Test Guideline 210

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 3 mg/l
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 202
Remarks: No-observed-effect level

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.02 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Lowest Observed Effect Concentration (Daphnia magna (Water flea)): 1.02 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : No data available

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Toxicity to microorganisms : EC10 (Pseudomonas putida): 1,120 mg/l
Exposure time: 18 h
Test Type: static test
Method: Measured

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Toxicity to microorganisms : IC50 (Pseudomonas putida): 89 mg/l
Exposure time: 17 h

Components:

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Toxicity to soil dwelling organisms : NOEC (Eisenia fetida (earthworms)): >= 1,000 mg/kg
Exposure time: 56 d
Method: OECD Test Guideline 222

EC50 (Eisenia fetida (earthworms)): >= 1,000 mg/kg
Exposure time: 56 d
Method: OECD Test Guideline 222

Plant toxicity : No data available

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Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

Ecotoxicology Assessment
Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Persistence and degradability

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 6.9 mg/l
Result: Not readily biodegradable.
Biodegradation: 8 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.A.

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Biodegradability : Inoculum: activated sludge
Concentration: 11.4 mg/l
Result: Not readily biodegradable.
Biodegradation: 7 %
Exposure time: 28 d

Biochemical Oxygen Demand (BOD) : No data available

Chemical Oxygen Demand (COD) : No data available

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available

Physico-chemical removability : No data available

Stability in water : No data available

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Photodegradation : No data available

Impact on Sewage Treatment : No data available

Bioaccumulative potential

Bioaccumulation : No data available

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Partition coefficient: n-octanol/water : log Pow: 0.99 (23 °C)
pH: 6.34

Method: OECD Test Guideline 107

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Partition coefficient: n-octanol/water : log Pow: -0.3 (25 °C)

Method: OECD Test Guideline 117

Mobility in soil

Mobility : No data available

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Distribution among environmental compartments : Koc: 928

Stability in soil : No data available

Other adverse effects

Environmental fate and pathways : No data available

Results of PBT and vPvB assessment : No data available

Endocrine disrupting potential : No data available

Adsorbed organic bound halogens (AOX) : No data available

Hazardous to the ozone layer

Ozone-Depletion Potential : Not applicable

Additional ecological information - Product : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

Global warming potential (GWP) : No data available

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13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of contents/ container to an approved waste disposal plant.
- Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

14. TRANSPORT INFORMATION

International Regulations

IATA

- UN/ID No. : UN 2735
- Proper shipping name : Amines, liquid, corrosive, n.o.s.
(TRIMETHYLHEXAMETHYLENEDIAMINE, ISOPHORONE DIAMINE)
- Class : 8
- Packing group : III
- Labels : Class 8 - Corrosive substances
- Packing instruction (cargo aircraft) : 856
- Packing instruction (passenger aircraft) : 852

IMDG

- UN number : UN 2735
- Proper shipping name : AMINES, LIQUID, CORROSIVE, N.O.S.
(TRIMETHYLHEXAMETHYLENEDIAMINE, ISOPHORONE DIAMINE)
- Class : 8
- Packing group : III
- Labels : 8
- EmS Code : F-A, S-B
- Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

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GB 6944/12268

UN number	: UN 2735
Proper shipping name	: AMINES, LIQUID, CORROSIVE, N.O.S. (TRIMETHYLHEXAMETHYLENEDIAMINE, ISOPHORONE DIAMINE)
Class	: 8
Packing group	: III
Labels	: 8

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.

15. REGULATORY INFORMATION

National regulatory information

China Occupational Disease Prevention Law

Occupational hazard factor classification category : Not listed

Occupational disease list : Not listed

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : Not listed

Identification of major hazard installations for dangerous chemicals : Not listed

Hazardous Chemicals Under Priority Management : Not listed

Labor Protection Regulations

High toxic substances catalog : Not listed

Environmental management regulations for first import of chemicals and import & export of toxic chemicals

Strictly controlled toxic chemicals for import/export : Not listed

Environmental Administration of New Chemical Substances

Inventory of existing chemicals in China : Notified. Allowed to be imported / manufactured only by the notifiers. Please contact your Huntsman sales representative for more information.

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

CH INV : The formulation contains substances listed on the Swiss

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Inventory

DSL	: This product contains one or several components that are not on the Canadian DSL nor NDSL.
AICS	: Notified. Allowed to be imported / manufactured only by the notifiers. Please contact your Huntsman sales representative for more information.
ENCS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Notified. Allowed to be imported / manufactured only by the notifiers. Please contact your Huntsman sales representative for more information.
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: Not On TSCA Inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

16. OTHER INFORMATION

Date format : yyyy/mm/dd

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

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

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

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and

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behaviour should be determined by the user and made known to handlers, processors and end users.

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