MATERIAL SAFETY DATA SHEET

PART NUMBER 11 10 66 / 11 10 68

SECTION 1 PRODUCT IDENTIFICATION AND MANUFACTURE

1.1 Product identifier

PRODUCT: Epo-Flo Low Viscosity Epoxy Hardener

1.2 Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : Epoxy constituents

1.3 Details of the supplier of the safety data sheet

SUPPLIER: METPREP LTD.
Unit 1, Falkland Close
Charter Avenue
COVENTRY CV4 8AU

CONTACT: sales@metprep.co.uk

1.4 Emergency telephone number

TELEPHONE: 024 7642 1222

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed
Skin irritation, Sub-Category 1A	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard Category 3	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements
Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H302 Causes skin irritation.
H314 Cause severe skin burns and eye damage.
H317 May cause an allergic skin reaction
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P303 + P361 + P343 IF ON SKIN (or hair): Take off Immediately all contaminated clothing Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep Comfortable for breathing. Immediately call a POISON CENTRE/doctor
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:
3-aminomethyl-3,5,5-trimethylcyclohexylamine
2,2,4 (or 2,4,4)-Trimethylhexane-1,6 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

SECTION 3 SUBSTANCE HAZARD IDENTIFICATION

3.2 Mixtures
Hazardous components

Chemical Name	CAS No	Classification	Concent
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2 220-666-8 612-067-00-9 01-2119514687-32	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 30 – < 50
2,2,4 (or 2,4,4)-Trimethylolpropane-1,6-diamine	25513-64-8 247-063-2 01-2119560598-25	Acute Tox. 4; H302 Skin Corr. 1A; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317	>= 20 – < 30

For explanation of abbreviations see section 16.

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures
General advice Move out of dangerous area
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Treat Symptomatically. Get medical attention if symptoms occur.
If Inhalation If inhaled, remove to fresh air.
Get medical attention if symptoms occur.
In case of Skin contact Immediately medical treatment is necessary as untreated wounds from corrosion. Of the skin heal slowly and with difficulty.
If skin, rinse well with water. If on clothes, remove

In case of eye contact	Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In 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	Keep respiratory tract clear. DO NOT induce vomiting Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

None known

4.3 Induction of any immediate medical attention and special treatment needed

Treatment Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	High Volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	Do not allow run-off from firefighting to enter drains or water courses.
Hazardous combustion products	No hazardous combustion products are known.

5.2 Special hazards arising from the substance or mixture

Special protective equipment for firefighters	Wear self-contained breathing apparatus for firefighting if necessary
Specific extinguishing methods	No data is available on the product itself.
Further information	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Personal precautions	Use personal protective equipment. 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 (eg sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal

SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	Do not breathe vapours/dust Avoid exposure – obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. To avoid spills during handling keep bottle on metal tray. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Advice on protection against fire and explosion	Normal measures for preventive fire protection
Hygiene measures	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage containers	Keep container tightly closed in dry and well-ventilated arears and place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe lable precautions. Keep in properly labelled containers.
Advice on common storage	For incompatible materials please refer to Section 10 of this SDS.
Further information on storage Stability	Stable under normal conditions
Recommended storage temperature	2 - 40 °C

7.3 Specific end use(s) : No data available
Specific use(s)

SECTION 8 EXPOSURE CONTROL/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
3-aminomethyl-3,5, 5-trimethylcyclohexylamine	Workers	Inhalation	Systemic effects, short-term exposure	20.1 mg/m3
	Workers	Inhalation	Local effects Short-term exposure	20.1 mg/m3
	Consumers	Oral	Systemic effects Long-term exposure	0.526 mg/kg bw/day
2,2,4(or 2,4,4)-Trimethylhexane-1,6-diamine	Consumers	Oral	Long-term systemic effects	0.05 mg/kg

Predicted effect concentrations

Product/ingredient name	Compartment Detail	Value	Method Detail
3-aminomethyl-3,5, 5-trimethylcyclohexylamine	Fresh water	0.06 mg/l	Assessment Factors
	Marine water	0.006mg/l	Assessment Factors
	Sewage Treatment plant	3.18mg/l	Assessment Factors
	Fresh water sediment	5.784 mg/kg dry	Equilibrium method
	Marine water sediment	0.578	
	Soil	1.121mg/kg dry	Equilibrium method
2,2,4(or 2,4,4)-Trimethylhexane-1,6-diamine	Fresh water	0.102 mg/l	Assessment Factors
	Marine water	0.01 mg/l	Assessment Factors
	Sewage Treatment plant	72 mg/l	Assessment Factors
	Fresh water sediment	0.662 mg/kg	
	Marine sediment	0.62 mg/kg	

8.2 Express 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 — >8h

Material — Solvent-resistant gloves (butyl-rubber)

Material — Nitrile rubber

Break through time — 10-480 mins

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

Skin and body protection — Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the workplace.

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 (A)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic 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
Burning rate,	No data is available on the product itself

Upper explosion limit/Upper Flammability limit	No data is available on the product itself
Lower explosion limit/Lower	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
Relative density	No data is available on the product itself
Density	0.95 g/cm3 at 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
Viscosity	
Viscosity, dynamic	150 mPa.s at (25°C)
Explosive properties	No data is available on the product itself
Oxidizing properties	No data is available on the product itself

9.2 Other information

No data available

SECTION 10 STABILITY AND REACTIVITY PROPERTIES

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 : No hazards to be specially mentioned.

10.4 Conditions to avoid : None known.

Conditions to avoid

10.5 Incompatible materials : None known.

Materials to avoid

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

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

Components:

3-Aminomethyl-3,5,5-trimethylcyclohexylamine**:** : (Rat, male and female): > 5.01 mg/l
Acute inhalation toxicity Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Symptoms: Breathing difficulties

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

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

Skin corrosion/irritation

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
Components:
2,2,4(or 2,4,4)-Trimethylhexane-1,6-diamine**:**
Species: Rabbit
Method: OECD Test Guideline 405
Result: Corrosive

Respiratory or skin sensitisation
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.

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
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 ug/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 ug/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

Components:
3-Aminomethyl-3,5,5-trimethylcyclohexylamine**:** :
Genotoxicity in vitro
Test Type: In vitro micronucleus test
Test system: 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 vitro : Test Type: 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
Test species: Mouse (male and female)
Application Route: Oral
Dose: 825 - 1000 mg/kg
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity
No data available
Carcinogenicity – Assessment : No data available

Reproductive toxicity

Components:
2,2,4(or 2,4,4)-Trimethylhexane-1,6-diamine:
Genotoxicity in vitro : 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**:** :
Genotoxicity in vitro
Species: rat female

Application Route: Oral
Dose: 10/50/250 mg/kg
General Toxicity Maternal: No observed-effect level: 50 mg/kg body weight
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 Material: No observed adverse effect level: 50,000 ppm
Result: No teratogenic effects

Reproductive toxicity – Assessment : No data available

STOT - single exposure
No data available

STOT - repeated exposure
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
Application Route: Inhalation
Test atmosphere: dust/mist
Exposure time: 216 hNumber 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
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
Application Route: Ingestion
Exposure time: 13 Weeks Number of exposures: Daily
Dose: 10, 60, 180mg/kg bw
Target Organs: Liver

Reproductive toxicity – Assessment : No data available

Aspiration toxicity
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 contact:	No data available

Toxicology, Metabolism, Distribution
No data available

Neurological effects
No data available

Further information
Ingestion: No data available

SECTION 12 ECOLOGICAL INFORMATION

12.1 Toxicity
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.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 23 mg/l End point: mortality Exposure time: 48 h Test Type: static test Analytical monitoring: yes Test substance: Fresh water Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): 37 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. 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.
Toxicity to microorganisı	:	EC10 (Pseudomonas putida): 1,120 mg/l Exposure time: 18 h Test Type: static test Method: Measured
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 3 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) 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 fish

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

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

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (algae)): 43.5 mg/l
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

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

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

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

Toxicity to daphnia and other aquatic invertebrates : NOEC: 1.02 mg/l
Exposure time: 21 d

(Chronic toxicity)
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

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

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

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

12.2 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

12.3 Bioaccumulative potential
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

12.4 Mobility in soil
Components:
3-Aminomethyl-3,5,5-trimethylcyclohexylamine
Distribution among Environmental compartments :Koc: 928

12.5 Results of PBT and vPvB assessment
Product:
Assessment : This substance/mixture contains no components considered To be either persistent, Bioaccumulative and toxic (PBT), or very persistent and very Bioaccumulative (vPvB) at levels of 0.1% or higher.

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

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product 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.

SECTION 14 TRANSPORT INFORMATION

IATA

14.1 UN number : UN 2289
14.2 UN proper shipping name : Isophoronediamine
(TRIMETHYLHEXAMETHYLENEDIAMINE, ISOPHORONE DIAMINE)
14.3 Transport hazard class(es) : 8
14.4 Packing group : III
Labels : Class 8 - Corrosive substances
Packing instruction (cargo Aircraft) : 856
Packaging instruction (passenger aircraft) : 852

IMDG
14.1 UN number : UN 2289
14.2 UN proper shipping name : Isophoronediamine
(TRIMETHYLHEXAMETHYLENEDIAMINE, ISOPHORONE DIAMINE)
14.3 Transport hazard class(es) : 8
14.4 Packing group : III
Labels : 8
EmS Code : F-A, S-B
14.5 Environmental hazards
Marine pollutant : no

ADR
14.1 UN number : UN 2289
14.2 UN proper shipping name : Isophoronediamine
(TRIMETHYLHEXAMETHYLENEDIAMINE, ISOPHORONE DIAMINE)

14.3 Transport hazard class(es) : 8
14.4 Packing group : III
Labels : 8
14.5 Environmental hazards
Environmentally hazardous : no

RID
14.1 UN number : UN 2289
14.2 UN proper shipping name : Isophoronediamine
(TRIMETHYLHEXAMETHYLENEDIAMINE, ISOPHORONE DIAMINE)

14.3 Transport hazard class(es) : 8
14.4 Packing group : III
Labels : 8
14.5 Environmental hazards
Environmentally hazardous : no

14.7 Transport in bulk according to Annex II or Marpol and the IBC Code
Not applicable for product as supplied

SECTION 15 REGULATORY INFORMATION

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

REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
REACH - List of substances subject to authorisation – Future sunset date	:	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. 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 DSK nor NDSL
AICS	: Notified. Allowed to be imported / manufactured only by the notifiers. Please contact your Huntsman sales representative for more information.
ENCS	: Not 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 sales representative for mor information.
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: Not on TSCA Inventory

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

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

SECTION 16 OTHER INFORMATION

Full text of H-Statements H302	:	Harmful if swallowed.
H312	:	Harmful in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations
Acute Tox.
: Acute toxicity
Aquatic Chronic : Long-term (chronic) aquatic hazard

Eye Dam.	:	Serious eye damage
Skin Corr.	:	Skin corrosion
Skin Sens.	:	Skin sensitisation

Further information Classification of the mixture:		**Classification procedure:**
Acute Tox. 4	H302	Calculation method
Skin Corr. 1A	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 3	H412	Calculation method

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

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

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

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

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

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