

# SAFETY DATA SHEET

HARDENER 3112 US

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

### 1.1 Product identifier

**Product name** : HARDENER 3112 US  
**Product code** : 00069913  
**Product description** : Not available.

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

**Product use** : Adhesive Hardener

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

**Supplier** : Huntsman Advanced Materials (Europe)BVBA  
Everslaan 45  
3078 Everberg / Belgium  
Tel.: +41 61 299 20 41  
Fax: +41 61 299 20 40

**e-mail address of person responsible for this SDS** : Global\_Product\_EHS\_AdMat@huntsman.com

### 1.4 Emergency telephone number

#### Supplier

**Telephone number** : EUROPE: +32 35 75 1234  
France ORFILA: +33(0)145425959  
ASIA: +65 6336-6011  
China: +86 20 39377888  
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

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Corr. 1B, H314  
Eye Dam. 1, H318  
Skin Sens. 1, H317

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 4.8%

**Ingredients of unknown ecotoxicity** : Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 88.2%

#### Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : Xn; R20  
C; R34  
R43

**Human health hazards** : Harmful by inhalation. Causes burns. May cause sensitisation by skin contact.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.


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**SECTION 2: Hazards identification**

**2.2 Label elements**

**Hazard pictograms** : 

**Signal word** : Danger

**Hazard statements** : Causes severe skin burns and eye damage.  
 May cause an allergic skin reaction.

**Precautionary statements**

**General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Prevention** : Wear protective gloves. Wear eye or face protection. Wear protective clothing.

**Response** : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or physician. IF IN EYES: Immediately call a POISON CENTER or physician.

**Storage** : Store locked up.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** : isophorone diamine

**Supplemental label elements** : Not applicable.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** : Yes, applicable.

**Tactile warning of danger** : Yes, applicable.

**2.3 Other hazards**

**Other hazards which do not result in classification** : Not available.

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**SECTION 3: Composition/information on ingredients**

**Substance/mixture** : Mixture

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
isophorone diamine	CAS: 2855-13-2 EC: 220-666-8	7-13	Xn; R21/22 C; R34 R43 R52/53	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
4,4'-isopropylidenediphenol	CAS: 80-05-7 EC: 201-245-8 RRN: 01-2119457856-23	0.1-1	Repr. Cat. 3; R62 Xi; R41, R37 R43 R52 <b>See section 16 for the full text of the R-phrases declared above</b>	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 2, H361f STOT SE 3, H335 <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If

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## SECTION 4: First aid measures

unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

#### Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Skin contact** : Causes severe burns. May cause an allergic skin reaction.

**Ingestion** : May cause burns to mouth, throat and stomach.

#### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur

**Ingestion** : Adverse symptoms may include the following:  
stomach pains

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

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : Symptomatic treatment and supportive therapy as indicated. Following severe exposure the patient should be kept under medical review for at least 48 hours.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

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

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides

### 5.3 Advice for firefighters

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## SECTION 5: Firefighting measures

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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**SECTION 7: Handling and storage**

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

**Storage hazard class** : Storage class 8, Corrosive substances  
**Huntsman Advanced Materials**

**7.3 Specific end use(s)**

**Recommendations** : Not available.  
**Industrial sector specific solutions** : Not available.

**SECTION 8: Exposure controls/personal protection**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**8.1 Control parameters**

**Occupational exposure limits**

No exposure limit value known.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

**Derived effect levels**

Product/ingredient name	Type	Exposure	Value	Population	Effects
isophorone diamine	DNEL	Short term Inhalation	20.1 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	20.1 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Oral	0.526 mg/kg bw/day	Consumers	Systemic

**Predicted effect concentrations**

Product/ingredient name	Type	Compartment Detail	Value	Method Detail

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**SECTION 8: Exposure controls/personal protection**

isophorone diamine	PNEC	Secondary Poisoning	-	Assessment Factors
	PNEC	Sewage Treatment Plant	3.18 mg/l	Assessment Factors
	PNEC	Soil	1.121 mg/kg	Assessment Factors
	PNEC	PNECintermittent	0.23 mg/l	Assessment Factors
	PNEC	Marine	0.006 mg/l	Assessment Factors
	PNEC	Fresh water sediment	5.784 mg/kg	Assessment Factors
	PNEC	Marine water sediment	0.578 mg/kg	Assessment Factors
	PNEC	Fresh water	0.06 mg/l	Assessment Factors

**8.2 Exposure controls**

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

**Skin protection**

**Hand protection** : 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.  
 Use gloves approved to relevant standards e.g. EN 374 (Europe), F739 (US). Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers. Additional information can be found for instance at [www.gisbau.de](http://www.gisbau.de).

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

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

**Appearance**

**Physical state** : Liquid.  
**Colour** : Amber.  
**Odour** : Not available.  
**Odour threshold** : Not available.  
**pH** : Not available.

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## SECTION 9: Physical and chemical properties

**Melting point/freezing point** : Not available.

**Initial boiling point and boiling range** : Not available.

**Flash point** : Closed cup: >93°C

**Evaporation rate** : Not available.

**Flammability (solid, gas)** : Not available.

**Burning time** : Not applicable.

**Burning rate** : Not applicable.

**Upper/lower flammability or explosive limits** : Not available.

**Vapour pressure** : Not available.

**Vapour density** : Not available.

**Relative density** : Not available.

**Solubility(ies)**

**Water solubility** :

**Partition coefficient: n-octanol/water (LogK<sub>ow</sub>)** : Not available.

**Auto-ignition temperature** : Not available.

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

### 9.2 Other information

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : No specific data.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.



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**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Acute toxicity

Product/ingredient name	Endpoint	Species	Result	Exposure
isophorone diamine 4,4'-isopropylidenediphenol	LD50 Oral	Rat - Male	1030 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	10300 mg/kg
Dermal	11000 mg/kg
Inhalation (dusts and mists)	27.72 mg/l

Irritation/Corrosion

Product/ingredient name	Test	Species	Route of exposure	Result
isophorone diamine	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes	Corrosive
		Rabbit	Skin	Corrosive
4,4'-isopropylidenediphenol	-	Rabbit	Eyes	Severe irritant
		Rabbit	Skin	Mild irritant

Conclusion/Summary

**Skin** : isophorone diamine Corrosive to the skin.  
 4,4'-isopropylidenediphenol Slightly irritating to the skin.

**Eyes** : isophorone diamine Corrosive to eyes.  
 4,4'-isopropylidenediphenol Severely irritating to eyes.

**Respiratory** : No additional information.

Sensitiser

Product/ingredient name	Test	Route of exposure	Species	Result
isophorone diamine	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitising

**Conclusion/Summary** : No additional information.

Mutagenicity

Product/ingredient name	Test	Result
4,4'-isopropylidenediphenol	- OECD 474 Mammalian Erythrocyte Micronucleus Test	Negative Negative

**Conclusion/Summary** : isophorone diamine: Not mutagenic in a standard battery of genetic toxicological tests.

Carcinogenicity

Product/ingredient name	Test	Species	Exposure	Result	Route of exposure	Target organs
4,4'-isopropylidenediphenol	-	Rat	103 weeks; 7 days per week	Negative	Oral	-

Reproductive toxicity

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Product/ingredient name	Test	Species	Result/Result type	Target organs
4,4'-isopropylidenediphenol	-	Rat	Oral: 5 mg/kg NOAEL	-

Teratogenicity

Product/ingredient name	Test	Species	Result/Result type
isophorone diamine	OECD 414 Prenatal Developmental Toxicity Study	Rat - Female	>250 mg/kg NOAEL
4,4'-isopropylidenediphenol	-	Rat - Female	640 mg/kg NOAEL

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
4,4'-isopropylidenediphenol	Category 3	Not determined	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

Potential acute health effects

- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : May cause burns to mouth, throat and stomach.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : No specific data.
- Ingestion** : Adverse symptoms may include the following:  
stomach pains
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

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**SECTION 11: Toxicological information**

**Potential chronic health effects**

Product/ingredient name	Test	Result type	Result	Target organs
isophorone diamine	OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	NOAEL -	60 mg/kg	kidneys
4,4'-isopropylidenediphenol	-	NOAEL -	75 mg/kg	-
	-	NOEC Dusts and mists	10 mg/m3	respiratory tract

**Conclusion/Summary** : Not available.

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Other information** : Not available.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Test	Endpoint	Exposure	Species	Result
isophorone diamine	Measured EU EC C.3 Algal Inhibition Test OECD 202 <i>Daphnia</i> sp. Acute Immobilisation Test EU EC C.1 Acute Toxicity for Fish	Acute EC10	18 hours	Bacteria	1120 mg/L
		Acute EC50	72 hours	Algae	37 mg/L
		Acute EC50	48 hours	Daphnia	23 mg/L
		Acute LC50	96 hours	Fish	110 mg/L
4,4'-isopropylidenediphenol	-	Acute EC50	96 hours	Algae	2.5 to 3.1 mg/L
		Acute EC50	48 hours	Daphnia	3.9 to 10.2 mg/L
		Acute LC50	96 hours	Fish	7.5 mg/L

**12.2 Persistence and degradability**

Product/ingredient name	Test	Period	Result
isophorone diamine	EU EC C.4-A Biodegradation: Determination of the "Ready" Biodegradability: Dissolved Organic Carbon (DOC) Die-Away Test	28 days	8 %
4,4'-isopropylidenediphenol	-	28 days	1 to 2 %

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
isophorone diamine	-	-	Not readily
4,4'-isopropylidenediphenol	-	-	Not readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
isophorone diamine	0.99	-	low

**12.4 Mobility in soil**

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**SECTION 12: Ecological information**

- Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.
- Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

Not applicable.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

**12.7 Other ecological information**

**SECTION 13: Disposal considerations**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**13.1 Waste treatment methods**

Product

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

- Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.


Packaging

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

- Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.



**SECTION 14: Transport information**

	<b>14.1 UN number</b>	<b>14.2 UN proper shipping name</b>
<b>ADR/RID</b>	UN2289	ISOPHORONEDIAMINE MIXTURE
<b>IMDG</b>	UN2289	ISOPHORONEDIAMINE MIXTURE
<b>IATA</b>	UN2289	ISOPHORONEDIAMINE MIXTURE

	<b>14.3 Transport hazard class(es)</b>	<b>14.4 Packing group</b>	<b>14.5 Environmental hazards</b>	<b>14.6 Special precautions for user</b>	<b>Additional information</b>
<b>ADR/RID</b>	8 	III	No.	Not available.	<b>Hazard identification number</b> 80  <b>Tunnel code</b> E

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<b>IMDG</b>	8		III	No.	Not available.	<b>Emergency schedules (EmS)</b> F-A, S-B
<b>IATA</b>	8		III	No.	Not available.	<b>Passenger and Cargo Aircraft</b> Quantity limitation: 5 L Packaging instructions: 852 <b>Cargo Aircraft Only</b> Quantity limitation: 60 L Packaging instructions: 856

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not applicable.

**SECTION 15: Regulatory information**

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

Other EU regulations

**Europe inventory** : At least one component is not listed.

**Black List Chemicals** : Not listed

**Priority List Chemicals** : Not listed

**Integrated pollution prevention and control list (IPPC) - Air** : Not listed

**Integrated pollution prevention and control list (IPPC) - Water** : Not listed

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
4,4'-isopropylidenediphenol	-	-	-	Repr. 2, H361f

National regulations

**References** : The provision of Safety Data Sheets comes under Regulation 6 of CHIP (CHIP is the recognised abbreviation for the Chemicals Hazard Information and Packaging Regulations). This is an addition to the Health and Safety at Work Act 1974.

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## SECTION 15: Regulatory information

### International regulations

**Chemical Weapons Convention List Schedule I Chemicals** : Not listed

**Chemical Weapons Convention List Schedule II Chemicals** : Not listed

**Chemical Weapons Convention List Schedule III Chemicals** : Not listed

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Corr. 1B, H314	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method

**Full text of abbreviated 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.  
 H335 May cause respiratory irritation.  
 H361f Suspected of damaging fertility.  
 H412 Harmful to aquatic life with long lasting effects.

**Full text of classifications [CLP/GHS]** : Acute Tox. 4, H302 ACUTE TOXICITY: ORAL - Category 4  
 Acute Tox. 4, H312 ACUTE TOXICITY: SKIN - Category 4  
 Aquatic Chronic 3, H412 AQUATIC TOXICITY (CHRONIC) - Category 3  
 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
 Repr. 2, H361f TOXIC TO REPRODUCTION [Fertility] - Category 2  
 Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B  
 Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1  
 STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3

**Full text of abbreviated R phrases** : R62- Possible risk of impaired fertility.  
 R20- Harmful by inhalation.  
 R21/22- Harmful in contact with skin and if swallowed.  
 R34- Causes burns.  
 R41- Risk of serious damage to eyes.  
 R37- Irritating to respiratory system.  
 R43- May cause sensitisation by skin contact.  
 R52- Harmful to aquatic organisms.  
 R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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**SECTION 16: Other information**

**Full text of classifications [DSD/DPD]** : Repr. Cat. 3 - Toxic to reproduction category 3  
 C - Corrosive  
 Xn - Harmful  
 Xi - Irritant

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