SAFETY DATA SHEET
IRS2012-1 HARDENER

According to Regulation (EC) No 1907/2006, Annex II, as amended. COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name IRS2012-1 HARDENER

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

Identified uses Curing agent.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier

Intertronics
Unit 12a
Station Field Industrial Estate
Banbury Road
Kidlington
Oxfordshire, OX5 1JD
+44 (0)1865842842

1.4. Emergency telephone number

Emergency telephone +44 (0)1285 712755 (Monday-Friday 8am-4.30pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Corr. 1B - H314 Skin Sens. 1 - H317

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Hazard pictograms

Signal word Danger

Hazard statements

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

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Precautionary statements	P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
Supplemental label information	EUH210 Safety data sheet available on request.
Contains	Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane
Supplementary precautionary statements	P260 Do not breathe vapour/ spray. P261 Avoid breathing vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+P352 IF ON SKIN: Wash with plenty of water. P310 Immediately call a POISON CENTER/ doctor. P321 Specific treatment (see medical advice on this label). P362+P364 Take off contaminated clothing and wash it before reuse. P363 Wash contaminated clothing before reuse. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane **50-70%**

CAS number: 38294-64-3 EC number: 500-101-4 REACH registration number: 01-2119965165-33-XXXX

Classification
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1 - H317
Aquatic Chronic 3 - H412

benzyl alcohol		**30-50%**
CAS number: 100-51-6	EC number: 202-859-9	REACH registration number: 01-2119492630-38-XXXX

Classification
Acute Tox. 4 - H302
Acute Tox. 4 - H332
Eye Irrit. 2 - H319

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place.

Ingestion Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention if a large quantity has been ingested. Keep affected person under observation. Get medical attention if symptoms are severe or persist.

Skin contact It is important to remove the substance from the skin immediately. Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes and get medical attention. Chemical burns must be treated by a physician. In the event of any sensitisation symptoms developing, ensure further exposure is avoided. Get medical attention if symptoms are severe or persist after washing.

Eye contact Rinse immediately with plenty of water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Keep affected person under observation. Get medical attention if symptoms are severe or persist after washing.

Protection of first aiders It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation A single exposure may cause the following adverse effects: Severe irritation of nose and throat. Symptoms following overexposure may include the following: Corrosive to the respiratory tract.

Ingestion May cause sensitisation or allergic reactions in sensitive individuals. May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.

Skin contact May cause skin sensitisation or allergic reactions in sensitive individuals. May cause serious chemical burns to the skin. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.

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Eye contact Causes serious eye damage. Risk of serious damage to eyes. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

Notes for the doctor Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up. This product is toxic. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapours. Oxides of carbon.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. This product is corrosive. Provide adequate ventilation. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. This product is corrosive. Immediate first aid is imperative. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Keep away from food, drink and animal feeding stuffs. Store at temperatures between 10°C and 35°C. When exposed to air, this product will absorb moisture.

Storage class Corrosive storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Any relevant occupational exposure limits for ingredients are listed.

Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane (CAS: 38294-64-3)

DNEL

Workers - Inhalation; Long term systemic effects: 0.493 mg/m³
Workers - Dermal; Long term systemic effects: 0.14 mg/kg bw/day
General population - Inhalation; Long term systemic effects: 74 µg/m3
General population - Dermal; Long term systemic effects: 50 µg/kg bw/bay
General population - Oral; Long term systemic effects: 50 µg/kg bw/bay

benzyl alcohol (CAS: 100-51-6)

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DNEL	Workers - Inhalation; Long term systemic effects: 90 mg/m³ Workers - Inhalation; Short term systemic effects: 450 mg/m³ Workers - Dermal; Long term systemic effects: 9.5 mg/kg/day Workers - Dermal; Short term systemic effects: 47 mg/kg/day Consumer - Inhalation; Short term systemic effects: 95.5 mg/m³ Consumer - Dermal; Long term systemic effects: 5.7 mg/kg/day Consumer - Dermal; Short term systemic effects: 28.5 mg/kg/day Consumer - Oral; Long term systemic effects: 5 mg/kg/day Consumer - Oral; Short term systemic effects: 25 mg/kg/day
PNEC	Fresh water; 1 mg/l marine water; 0.1 mg/l Intermittent release; 2.3 mg/l Sediment; 5.27 mg/kg Sediment (Marinewater); 0.527 mg/kg Soil; 0.456 mg/kg STP; 39 mg/l

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. Gloves made from the following material may provide suitable chemical protection: Butyl rubber. Nitrile rubber. Laminate of polyethylene and ethylene vinyl alcohol (PE/EVOH). Rubber (natural, latex). The breakthrough time for any glove material may be different for different glove manufacturers. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.
Respiratory protection	Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

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Environmental exposure controls	Keep container tightly sealed when not in use. 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	Liquid.
Colour	Colourless to pale yellow.
Odour	Amine.
pH	pH (concentrated solution): 11.4
Initial boiling point and range	>240°C
Flash point	>100°C
Vapour pressure	<0.02 mbar @ 20°C
Relative density	1.02 g/cc
Solubility(ies)	Slightly soluble in water. Very soluble in the following materials: Alcohols. Aromatic solvents.
Auto-ignition temperature	>360°C

9.2. Other information

Other information	No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	See the other subsections of this section for further details.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid	Avoid exposure to high temperatures or direct sunlight. Avoid freezing.

10.5. Incompatible materials

Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Corrosive gases or vapours. Oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

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Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data	Skin Corr. 1B - H314 Causes severe skin burns and eye damage.

Serious eye damage/irritation

Serious eye damage/irritation	Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation

Respiratory sensitisation	Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation	May cause an allergic skin reaction. May cause skin sensitisation or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard	Based on available data the classification criteria are not met.

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals. May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
Eye contact	Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of exposure	Ingestion Inhalation Skin and/or eye contact

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Target organs No specific target organs known.

Medical considerations Skin disorders and allergies.

Toxicological information on ingredients.

Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane

Toxicological effects No information available.

benzyl alcohol

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg) 1,620.0

Species Rat

ATE oral (mg/kg) 1,620.0

Acute toxicity - dermal

Notes (dermal LD_{50}) 2,000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC_{50}) 4,178 mg/l, Inhalation, Rat

ATE inhalation (dusts/mists mg/l) 1.5

SECTION 12: Ecological information

12.1. Toxicity

Toxicity Dangerous for the environment. Harmful to aquatic life with long lasting effects.

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: >400 mg/l, Pimephales promelas (Fat-head Minnow)
Estimated value.

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: >200 mg/l, Daphnia magna
Estimated value.

Acute toxicity - aquatic plants ErC50, 72 hours: >700 mg/l, Algae
Estimated value.

Ecological information on ingredients.

Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: 70.7 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: 11.1 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC_{50}, 72 hours: 79.4 mg/l, Pseudokirchneriella subcapitata

Acute toxicity - microorganisms	EC_{50}, 3 hours: >=1000 mg/l, Activated sludge

benzyl alcohol

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 460 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 230 mg/l, Daphnia magna
Acute toxicity - aquatic plants	ErC50, 72 hours: 770 mg/l, Algae
Acute toxicity - microorganisms	IC_{50}, 24 hours: 390 mg/l, Bacteria

12.2. Persistence and degradability

Persistence and degradability Not expected to be readily biodegradable.

Ecological information on ingredients.

Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane

Persistence and degradability	Not readily biodegradable.

benzyl alcohol

Persistence and degradability	The product is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely.

Ecological information on ingredients.

Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane

Bioaccumulative potential	The product is not bioaccumulating.

benzyl alcohol

Bioaccumulative potential	Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

12.4. Mobility in soil

Mobility Slightly soluble in water.

Ecological information on ingredients.

Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane

Adsorption/desorption coefficient	Water and sediment - Log Kp: 5.29 @ 20°C

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benzyl alcohol

Mobility Soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

benzyl alcohol

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 2735

UN No. (IMDG) 2735

UN No. (ICAO) 2735

UN No. (ADN) 2735

14.2. UN proper shipping name

Proper shipping name (ADR/RID) POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane)

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Proper shipping name (IMDG)	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane)
Proper shipping name (ICAO)	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane)
Proper shipping name (ADN)	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Reaction product of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane)

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C7
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels

14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III
ADN packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

IMDG Code segregation group	18. Alkalis
EmS	F-A, S-B
ADR transport category	3
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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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

National regulations Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC_{50}: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
Eye Dam. = Serious eye damage
Skin Corr. = Skin corrosion
Skin Sens. = Skin sensitisation
Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Classification procedures according to Regulation (EC) 1272/2008 Acute Tox. 4 - H332: Acute Tox. 4 - H302: Eye Dam. 1 - H318: Skin Corr. 1B - H314: Skin Sens. 1 - H317: : Calculation method. Aquatic Chronic 3 - H412: : Calculation method.

Training advice Only trained personnel should use this material.

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Revision date	07/10/2021
Revision	1
SDS number	5174
Hazard statements in full	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H412 Harmful to aquatic life with long lasting effects.