

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 01-Jul-2024

Revision date 07-Aug-2025

Revision Number 5

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product Code(s) 12964

Safety data sheet number 12964

Product Name AKYPO LF4

Synonyms AKYPO LF4 RSPO MB

Pure substance/mixture Mixture

Contains POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)-;
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(HEXYLOXY)-

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

Recommended use surfactant
Metal cleaning
Manufacture of soaps and detergents.
Metal working fluids / rolling oils,

1.3. Details of the supplier of the safety data sheet**Supplier**

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Skin corrosion/irritation	Category 2 - (H315)
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Serious eye damage/eye irritation

Category 1 - (H318)

2.2. Label elements

Contains POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)-;
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(HEXYLOXY)-

**Signal word**

Danger

Hazard statements

H315 - Causes skin irritation

H318 - Causes serious eye damage

Precautionary statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P264 - Wash skin thoroughly after handling

P362 - Take off contaminated clothing and wash before reuse

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)-53563-70-5	>= 70 - <=80 %	-	-	Eye Dam. 1 (H318)	-	-	-
POLY(OXY-1,2-ETHANEDIYL),	>= 20 - <= 25 %	-	-	Skin Irrit. 2 (H315) Eye Dam. 1 (H318)	-	-	-

.ALPHA.-(CARBOXYMETHYL)-OMEGA.-(HEXYLOXY)-105391-15-9							
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Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	IF INHALED: Remove 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 breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Place unconscious person on the side in the recovery position and ensure breathing can take place. Get medical attention immediately if symptoms occur. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately if symptoms occur. Chemical burns must be treated promptly by a physician.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. Wash contaminated clothing before reuse.
Ingestion	Rinse mouth thoroughly with water. Remove dentures if any. 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. If vomiting occurs, the head should be kept low so that stomach vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. Place unconscious person on the side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Self-protection of the first aider	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. Avoid direct contact with skin. Use barrier 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

Symptoms

Eyes	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. Causes eye burns. Overexposure may cause the following adverse effects. May cause redness and tearing of the eyes. Pain.
Dermal	Causes skin irritation. Overexposure may cause the following adverse effects. Pain. Irritation. Redness. Blistering.
Ingestion	Overexposure may cause the following adverse effects Stomach pain

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

Note to doctors Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable Extinguishing Media Dry chemical, CO₂, alcohol-resistant foam or water spray.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical When heated and in case of fire, toxic vapours/gases may be formed. Containers can burst violently when heated, due to excess pressure build-up.

Hazardous combustion products Carbon oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions Provide adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. No action shall be taken involving any personal risk or without suitable training. Evacuate area. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. In case of inadequate ventilation wear respiratory protection.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Stop leak if possible without any risk. Move containers from fire area if you can do it without risk. Keep upwind. Do not allow run-off from fire-fighting to enter drains or water courses. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Do not swallow. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep container closed when not in use. Empty containers retain product residue and can be hazardous. Do not re-use container.

General hygiene considerations Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas. Use personal protection recommended in Section 8. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Protect from direct sunlight. See section 10 for more information. Keep away from food, drink and animal feedingstuffs. Store locked up. Keep containers upright. Keep in properly labelled containers. Use appropriate containment to avoid environmental contamination.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers No information available

Derived No Effect Level (DNEL) - General Public No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection Protective gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Wear protective butyl rubber gloves		> 8 hours

Skin and body protection Wear appropriate clothing to prevent reasonably probable skin contact.

Respiratory protection Use appropriate respiratory protection.

General hygiene considerations Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas. Use personal protection recommended in Section 8. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear liquid
Colour	Colourless To Slight Yellowish
Odour	Fresh.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	< 0 °C	
Initial boiling point and boiling range	> 100 °C	
Flammability		Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and moisture. No information available.

Flammability Limit in Air
Upper flammability or explosive limits
Lower flammability or explosive limits

Flash point	188 °C	Closed cup.
Autoignition temperature	400 °C	Not applicable.
Decomposition temperature	> 100 °C	
pH		No information available.
pH (as aqueous solution)	2 - 3	solution (1 %).
Kinematic viscosity		No information available.
Dynamic viscosity	100 - 400 cP	@ 20 °C.
Water solubility	Soluble in water	
Solubility(ies)		No information available.
Partition coefficient		Not applicable.
Vapour pressure		
Relative density	1.05	@ 20 °C.
Bulk density		No information available
Liquid Density	No information available	No information available

Relative vapour density	No information available.
Particle characteristics	Not applicable.
Particle Size	No information available
Particle Size Distribution	No information available
Explosive properties	Slightly explosive in the presence of the following materials or conditions: open flames, sparks, static discharge and heat. Non-explosive in the presence of the following materials or conditions: shocks and mechanical impacts and moisture.
Oxidising properties	No information available

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

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

10.4. Conditions to avoid

Conditions to avoid Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and moisture.
Slightly explosive in the presence of the following materials or conditions: open flames, sparks, static discharge and heat.
Non-explosive in the presence of the following materials or conditions: shocks and mechanical impacts and moisture.

10.5. Incompatible materials

Incompatible materials Protect from moisture.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation Inhalation of vapours in high concentration may cause irritation of respiratory system.

Eye contact	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. Causes eye burns. Overexposure may cause the following adverse effects. May cause redness and tearing of the eyes. Pain.
Skin contact	Causes skin irritation. Overexposure may cause the following adverse effects. Pain. Irritating. Redness. Blistering.
Ingestion	Overexposure may cause the following adverse effects. Stomach pain.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)-	> 2000 mg/kg (Rat)	-	-
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(HEXYLOXY)-	> 2000 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes skin irritation.

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 439		in vitro Dermal			Causes skin irritation

POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)- (53563-70-5)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion		Dermal			non-irritant

POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(HEXYLOXY)- (105391-15-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Causes skin irritation

Serious eye damage/eye irritation Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. Causes eye burns.

POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)- (53563-70-5)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion		eye			Causes serious eye damage May cause permanent damage if eye is not immediately irrigated. Causes eye burns

POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(HEXYLOXY)- (105391-15-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Causes serious eye damage May cause permanent damage if eye is not immediately irrigated. Causes eye burns

Respiratory or skin sensitisation No information available.

POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)- (53563-70-5)

Method	Species	Exposure route	Results
	Mouse	Dermal	Non-sensitizing.

Germ cell mutagenicity Not mutagenic.

Component Information

POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)- (53563-70-5)

Method	Species	Results
	Bacteria in vitro	Negative

Carcinogenicity No information available.**Reproductive toxicity** No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** No information available.**Aspiration hazard** No information available.**Other adverse effects** No information available.**SECTION 12: Ecological information****12.1. Toxicity****Ecotoxicity** The environmental impact of this product has not been fully investigated.**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)- (53563-70-5)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 201: Freshwater Algae and	Algae	EC50	> 100 mg/L	72 hours	

Cyanobacteria, Growth Inhibition Test					
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	67 mg/L	48 hours	
OECD Test No. 203: Fish, Acute Toxicity Test	Fish	LC50	> 100 mg/L	96 hours	

POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(HEXYLOXY)- (105391-15-9)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Fish	LC50	> 100 mg/L	96 hours	

12.2. Persistence and degradability

Persistence and degradability

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)- (53563-70-5)

Method	Exposure time	Value	Results
			Readily biodegradable

POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(HEXYLOXY)- (105391-15-9)

Method	Exposure time	Value	Results
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)	28 days	Biodegradation > 90 %	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation

There is no data for this product.

12.4. Mobility in soil

Mobility in soil

Soluble in water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(CARBOXYMETHYL)-.OMEGA.-(OCTYLOXY)-	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).
This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL	- Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	- Japan Existing and New Chemical Substances
IECSC	- China Inventory of Existing Chemical Substances
KECL	- Korean Existing and Evaluated Chemical Substances
PICCS	- Philippines Inventory of Chemicals and Chemical Substances
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment**Chemical Safety Report**

Chemical Safety Assessments have been carried out for these substances

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H315 - Causes skin irritation

H318 - Causes serious eye damage

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note SDS sections updated 1 2 4 10 11 14 15 16

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 Environmental Protection Agency
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
 Organisation for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Prepared By Lisa Bland

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This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
 Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet