

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

Supersedes date 09-Aug-2023

Revision date 26-May-2026

Revision Number 10

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

1.1. Product identifier

Product Code(s)	10174
Safety data sheet number	10174
Product Name	AMIDES, C8-18 (EVEN NUMBERED) AND C18-UNSATD., N, N-BIS(HYDROXYETHYL)
EC Number	931-329-6
CAS No	68155-07-7
Synonyms	CAFLON CDG
Pure substance/mixture	Substance

Contains AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL)

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

Recommended use	Manufacture of substance Cleaning agent Cosmetics surfactant Industrial use Professional use Consumer use For further information, see attached Exposure Scenario
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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)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Chronic aquatic toxicity	Category 2 - (H411)

2.2. Label elements

Contains AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL)

Not classified



Signal word

Danger

Hazard statements

Not classified

H315 - Causes skin irritation

H318 - Causes serious eye damage

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements

P264 - Wash face, hands and any exposed skin thoroughly after handling

P273 - Avoid release to the environment

P280 - Wear protective gloves and eye/face protection

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

P391 - Collect spillage

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

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)
AMIDES, C8-18 AND C18-UNSATD.,	100 %	931-329-6	-	Skin Irrit. 2 (H315) Eye Dam. 1 (H318)	-	-	-

N,N-BIS(HYDROXY ETHYL) 68155-07-7				Aquatic Chronic 2 (H411)			
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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

General advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. 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. 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.
Eye contact	Get immediate medical attention. 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. Keep eye wide open while rinsing. Do not rub affected area. 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. Chemical burns must be treated promptly by a physician.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists. Wash skin with soap and water. Remove and isolate 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. Wash contaminated clothing before reuse.
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a doctor. Rinse mouth thoroughly with water. 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. Place unconscious person on the side in the recovery position and ensure breathing can take place.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

Symptoms	Burning sensation.
Eyes	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. May cause chemical eye burns. Overexposure may cause the following adverse effects. Pain. Watering eyes. Redness.
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. Do not allow run-off from fire-fighting to enter drains or water courses.

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

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Keep unnecessary and unprotected personnel from entering. 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. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Pick up and transfer to properly labelled containers. After cleaning, flush away traces with water. Do not allow run-off from fire-fighting to enter drains or water

courses.

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 Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash it before reuse. Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Do not swallow. Avoid release to the environment. 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.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. 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. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. 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

Chemical name	Oral	Dermal	Inhalation
AMIDES, C8-18 AND C18-UNSATD.,		4.16 mg/kg bw/day [4] [6]	73.4 mg/m ³ [4] [6]

Chemical name	Oral	Dermal	Inhalation
N,N-BIS(HYDROXYETHYL) 68155-07-7		0.0936 mg/cm ² [5] [6]	

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL) 68155-07-7	6.25 mg/kg bw/day [4] [6]	2.5 mg/kg bw/day [4] [6] 0.056 mg/cm ² [5] [6]	21.73 mg/m ³ [4] [6]

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL) 68155-07-7	2.4 µg/l	0.024 mg/L	0.24 µg/l		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL) 68155-07-7	14.5 µg/kg dwt	0.0195 mg/kg sediment dw	830 mg/L	6.48 µg/kg dwt	

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Tight sealing safety goggles. Wear safety glasses with side shields (or goggles). According to EN 16321-1.

Hand protection Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.

Gloves

Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Polyvinyl chloride (PVC)		> 8 hours

Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Wear appropriate clothing to prevent reasonably probable skin contact.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygiene considerations	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	clear white To Yellowish
Odour	Amine.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	< 15 °C	
Initial boiling point and boiling range	> 300 °C	
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	> 150 °C	Closed cup.
Autoignition temperature	> 400 °C	
Decomposition temperature		No information available.
pH		No information available.
pH (as aqueous solution)	9.0 - 11.0	solution (1.0 %).
Kinematic viscosity		No information available.
Dynamic viscosity	< 1000 cP	@ 20 °C.
Water solubility	Insoluble in water	
Solubility(ies)		No information available.
Partition coefficient		Not applicable.
Vapour pressure		
Relative density	0.994	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	No information available	
Oxidising properties	No information available	

9.2. Other information

Softening point	-1 to -3 °C
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable under recommended storage conditions.

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 Excessive heat.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

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. Pain. Watering eyes. Redness.
Skin contact	Causes skin irritation. (based on components). Causes skin irritation. Overexposure may cause the following adverse effects. Pain. Irritation. Redness. Blistering.
Ingestion	Overexposure may cause the following adverse effects. Stomach pain.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. May cause redness and tearing of the eyes.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL)	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-

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

Skin corrosion/irritation Causes skin irritation.

AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL) (68155-07-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal			Causes skin irritation
	Rabbit	Dermal	300 microliters		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.

AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL) (68155-07-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	eye	100 microliters		Causes serious eye damage May cause permanent damage if eye is not immediately irrigated. Causes eye burns
	Rabbit	eye			Causes serious eye damage

Respiratory or skin sensitisation Not a skin sensitiser.

AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL) (68155-07-7)

Method	Species	Exposure route	Results
	Guinea pig	Dermal	Not a skin sensitiser

Germ cell mutagenicity No information available.

Component Information

AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL) (68155-07-7)

Method	Species	Results
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro Bacteria	Negative
OECD Test No. 474: Mammalian Erythrocyte Micronucleus Test	in vivo Mammalian-Animal	Negative

Carcinogenicity No information available.

Reproductive toxicity No information available.

AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL) (68155-07-7)

Method	Species	Results
Fertility effects	Rat	Negative
Developmental toxicity	Rat	Negative

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 Toxic to aquatic life with long lasting effects.

AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL) (68155-07-7)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Algae/aquatic plants	EC50	0.32 mg/L	48 hours	
	Algae/aquatic plants	LC50	2.4 mg/L	96 hours	
	Fish	LC50	2 mg/L	96 hours	
Chronic toxicity	Algae Desmodesmus subspicatus	EC50	0.69 mg/L	72 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.

AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL) (68155-07-7)

Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)	28 days	Biodegradation 71.1 %	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation Not likely to bioaccumulate.

Bioconcentration factor (BCF) 65.36

Component Information

Chemical name	Partition coefficient
AMIDES, C8-18 AND C18-UNSATD.,	3.75

N,N-BIS(HYDROXYETHYL)	
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12.4. Mobility in soil

Mobility in soil Insoluble.

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
AMIDES, C8-18 AND C18-UNSATD., N,N-BIS(HYDROXYETHYL)	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 UN3082
 14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS AMIDES C8 - 18 (EVEN NUMBERED) AND C18 UNSATURATED N,N, BIS (HYDROXYETHYL))
 14.3 Transport hazard class(es) 9
 14.4 Packing group III
 14.5 Environmental hazards Yes
 14.6 Special precautions for user
 Special Provisions A97, A158, A197
 ERG Code 9L

IMDG

14.1 UN number or ID number UN3082
 14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (AMIDES C8 - 18 (EVEN NUMBERED) AND C18 UNSATURATED N,N, BIS (HYDROXYETHYL))
 14.3 Transport hazard class(es) 9
 14.4 Packing group III
 14.5 Environmental hazards Yes
 14.6 Special precautions for user
 Special Provisions 274, 335, 969
 EmS-No F-A, S-F
 14.7 Maritime transport in bulk according to IMO instruments No information available

RID

14.1 UN number or ID number UN3082
 14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (AMIDES C8 - 18 (EVEN NUMBERED) AND C18 UNSATURATED N,N, BIS (HYDROXYETHYL))

14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 375, 601
Classification code	M6

ADR

14.1 UN number or ID number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS AMIDES C8 - 18 (EVEN NUMBERED) AND C18 UNSATURATED N,N, BIS (HYDROXYETHYL))
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 601, 375
Classification code	M6
Tunnel restriction code	(-)

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

Dangerous substance category per COMAH Regulations 2015 (as amended)

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

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 A Chemical Safety Assessment has been carried out for this substance

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
H411 - Toxic to aquatic life with long lasting effects

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 ***Indicates updated data since last publication

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 Jitendra Panchal

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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

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis (hydroxyethyl)
Pure substance/mixture Substance
REACH registration number 01-2119490100-53-XXXX
CAS No 931-329-6
EC No (EU Index No) 68155-07-7, 68603-42-9
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

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

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Manufacture of substance
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC1 - Manufacture of substances
Process category(ies) PROC3 - Use in closed batch process (synthesis or formulation)
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8
 - Manufacture of bulk, large scale chemicals (including petroleum products)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC1 - Manufacture of substances

Other operational conditions of use affecting environmental exposure

Emission days	100
Release fraction to air from process (initial release prior to RMM)	0.00001
Release fraction to wastewater from process (initial release prior to RMM)	0.001
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d

Environmental factors not influenced by risk management

Local freshwater dilution factor	35
Local marine water dilution factor	100
Remarks	Receiving surface water flow 680000 m3/d

Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure	
Title	General measures applicable to all activities
Covers concentrations up to	100%
Exposure duration	Avoid carrying out operation for more than 4 hours
Use frequency	Covers use up to 1 days per week
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection and gloves
Remarks	Assumes a good basic standard of occupational hygiene is implemented

Title	Bulk transfers
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Organisational measures to prevent /limit releases, dispersion and exposure	Remotely vent displaced vapours

Title	Drum/batch transfers
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better Wear suitable gloves tested to EN 374

Title	Equipment cleaning and maintenance
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better Wear suitable gloves tested to EN 374
Organisational measures to prevent /limit releases, dispersion and exposure	Retain drain downs in sealed storage pending disposal or for subsequent recycle

Section 3 - Exposure estimation

Environmental release category(ies) - ERC1 - Manufacture of substances

Predicted No Effect Concentration (PNEC)

Freshwater	2.4 µg/l
Freshwater sediment	14.5 µg/kg dwt
Marine water	0.24 µg/l
Soil	6.48 µg/kg dwt
Impact on Sewage Treatment	830 mg/l

Calculation method	Used EUSES model
Remarks	Qualitative approach used to conclude safe use

Derived No Effect Level (DNEL):

Worker - dermal, long-term - local	0.09 mg/cm ²
Worker - dermal, long-term - systemic	4.16 mg/kg bw/d
Worker - inhalative, long-term - systemic	73.4 mg/m ³
Consumer - oral, long-term - systemic	6.25 mg/kg bw/d
Consumer - dermal, long-term - systemic	2.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	21.73 mg/m ³

Calculation method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
Remarks	Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis (hydroxyethyl)
Pure substance/mixture Substance
REACH registration number 01-2119490100-53-XXXX
CAS No 931-329-6
EC No (EU Index No) 68155-07-7, 68603-42-9
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

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

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Formulation Washing and cleaning products
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC2 - Formulation of preparations (mixtures)
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
 SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

Other operational conditions of use affecting environmental exposure

Emission days	300
Release fraction to air from process (initial release prior to RMM)	0
Release fraction to wastewater from process (initial release prior to RMM)	0.002
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Remarks	Receiving surface water flow 1800 m3/d
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Exposure duration	Avoid carrying out operation for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Use with local exhaust ventilation
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection and gloves
Remarks	Assumes a good basic standard of occupational hygiene is implemented

Title	Bulk transfers
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Organisational measures to prevent /limit releases, dispersion and exposure	Remotely vent displaced vapours

Title	Drum/batch transfers
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better Wear suitable gloves tested to EN 374

Title	Material transfers
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves tested to EN 374

Title	Drum and small package filling
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system Use with local exhaust ventilation
Organisational measures to prevent /limit releases, dispersion and exposure	Put lids on containers immediately after use

Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Ensure adequate ventilation
Organisational measures to prevent	Avoid manual contact with wet work pieces

/limit releases, dispersion and exposure	
Title	Equipment cleaning and maintenance
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better Wear suitable gloves tested to EN 374
Organisational measures to prevent /limit releases, dispersion and exposure	Retain drain downs in sealed storage pending disposal or for subsequent recycle

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

Predicted No Effect Concentration (PNEC)

Freshwater	2.4 µg/l
Freshwater sediment	14.5 µg/kg dwt
Marine water	0.24 µg/l
Soil	6.48 µg/kg dwt
Impact on Sewage Treatment	830 mg/l

Calculation method	Used EUSES model
Remarks	Qualitative approach used to conclude safe use

Derived No Effect Level (DNEL):

Worker - dermal, long-term - local	0.09 mg/cm2
Worker - dermal, long-term - systemic	4.16 mg/kg bw/d
Worker - inhalative, long-term - systemic	73.4 mg/m ³
Consumer - oral, long-term - systemic	6.25 mg/kg bw/d
Consumer - dermal, long-term - systemic	2.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	21.73 mg/m ³

Calculation method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
Remarks	Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis (hydroxyethyl)
Pure substance/mixture Substance
REACH registration number 01-2119490100-53-XXXX
CAS No 931-329-6
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Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
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Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Formulation Cosmetics, personal care products
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC2 - Formulation of preparations (mixtures)
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
 PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising
 PROC15 - Use as laboratory reagent

Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
 SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

Other operational conditions of use affecting environmental exposure

Emission days	300
Release fraction to air from process (initial release prior to RMM)	0.0001
Release fraction to wastewater from process (initial release prior to RMM)	0.002
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment	2000 m3/d

plant flow	
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Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100
Remarks	Receiving surface water flow is 18000 m3/d

Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	5%
Physical form of product	Liquid
Exposure duration	Avoid carrying out operation for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Use with local exhaust ventilation
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection and gloves
Remarks	Assumes a good basic standard of occupational hygiene is implemented

Title	Bulk transfers
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Organisational measures to prevent /limit releases, dispersion and exposure	Remotely vent displaced vapours

Title	Drum/batch transfers
Technical conditions and measures to control dispersion from source towards the worker	Ensure adequate ventilation
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better Wear suitable gloves tested to EN 374

Title	Material transfers
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves tested to EN 374

Title	Drum and small package filling
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system Use with local exhaust ventilation
Organisational measures to prevent /limit releases, dispersion and exposure	Put lids on containers immediately after use

Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Ensure adequate ventilation
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid manual contact with wet work pieces
Title	Equipment cleaning and maintenance
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better Wear suitable gloves tested to EN 374
Organisational measures to prevent /limit releases, dispersion and exposure	Retain drain downs in sealed storage pending disposal or for subsequent recycle

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

Predicted No Effect Concentration
(PNEC)

Freshwater	2.4 µg/l
Freshwater sediment	14.5 µg/kg dwt
Marine water	0.24 µg/l
Soil	6.48 µg/kg dwt
Impact on Sewage Treatment	830 mg/l

Calculation method Used EUSES model
Remarks Qualitative approach used to conclude safe use

Derived No Effect Level (DNEL):

Worker - dermal, long-term - local	0.09 mg/cm2
Worker - dermal, long-term - systemic	4.16 mg/kg bw/d
Worker - inhalative, long-term - systemic	73.4 mg/m ³
Consumer - oral, long-term - systemic	6.25 mg/kg bw/d
Consumer - dermal, long-term - systemic	2.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	21.73 mg/m ³

Calculation method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.
Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. If scaling reveals a

condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis (hydroxyethyl)
Pure substance/mixture	Substance
REACH registration number	01-2119490100-53-XXXX
CAS No	931-329-6
EC No (EU Index No)	68155-07-7, 68603-42-9
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Washing and cleaning products
Type	Worker
Main user group	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies)	ERC2 - Formulation of preparations (mixtures) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles ERC5 - Industrial use resulting in inclusion into or onto a matrix ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems ERC8e - Wide dispersive outdoor use of reactive substances in open systems
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC11 - Non industrial spraying PROC13 - Treatment of articles by dipping and pouring PROC19 - Hand-mixing with intimate contact and only PPE available
Sector(s) of use	SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)
 - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
 - ERC5 - Industrial use resulting in inclusion into or onto a matrix
 - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems
 - ERC8e - Wide dispersive outdoor use of reactive substances in open systems

Other operational conditions of use affecting environmental exposure

Emission days	300
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Release fraction to air from process (initial release prior to RMM)	0.0005
Release fraction to wastewater from process (initial release prior to RMM)	0.003
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100
Remarks	Receiving surface water flow is 18000 m3/d

Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	25%
Physical form of product	Liquid
Exposure duration	Avoid carrying out operation for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Use with local exhaust ventilation
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Indoor/Outdoor use	Indoor use

Title	General measures applicable to all activities
Covers concentrations up to	25%
Physical form of product	Liquid
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Indoor/Outdoor use	Outdoor use

Title	Bulk transfers
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Organisational measures to prevent /limit releases, dispersion and exposure	Remotely vent displaced vapours

Title	Drum/batch transfers
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves tested to EN 374

Title	Material transfers
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves tested to EN 374

Title	Spraying
Technical conditions and measures to control dispersion from source towards the worker	Carry out in a vented booth or extracted enclosure
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better Wear suitable gloves (tested to EN 374), coverall and eye protection

Title	Treatment of articles by dipping and pouring
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves tested to EN 374
Organisational measures to prevent /limit releases, dispersion and exposure	Provide extract ventilation to points where emissions occur Avoid manual contact with wet work pieces

Title	Manual Rolling, brushing
Technical conditions and measures to control dispersion from source towards the worker	Use only in well-ventilated areas
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves tested to EN 374
Organisational measures to prevent /limit releases, dispersion and exposure	Use long handled tools where possible

Title	Drum and small package filling
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system Clear spills immediately
Organisational measures to prevent /limit releases, dispersion and exposure	Fill containers/cans at dedicated fill points supplied with local extract ventilation Put lids on containers immediately after use

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)
- ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
- ERC5 - Industrial use resulting in inclusion into or onto a matrix
- ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8d - Wide dispersive outdoor use of processing aids in open systems

- ERC8e - Wide dispersive outdoor use of reactive substances in open systems

**Predicted No Effect Concentration
(PNEC)**

Freshwater	2.4 µg/l
Freshwater sediment	14.5 µg/kg dwt
Marine water	0.24 µg/l
Soil	6.48 µg/kg dwt
Impact on Sewage Treatment	830 mg/l

Calculation method	Used EUSES model
Remarks	Qualitative approach used to conclude safe use

Derived No Effect Level (DNEL):

Worker - dermal, long-term - local	0.09 mg/cm ²
Worker - dermal, long-term - systemic	4.16 mg/kg bw/d
Worker - inhalative, long-term - systemic	73.4 mg/m ³
Consumer - oral, long-term - systemic	6.25 mg/kg bw/d
Consumer - dermal, long-term - systemic	2.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	21.73 mg/m ³

Calculation method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
Remarks	Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis (hydroxyethyl)
Pure substance/mixture Substance
REACH registration number 01-2119490100-53-XXXX
CAS No 931-329-6
EC No (EU Index No) 68155-07-7, 68603-42-9
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
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Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Cosmetics, personal care products
Type Consumer
Main user group Consumer uses: Private households (= general public = consumers)
Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems
Product category(ies) PC39 - Cosmetics, personal care products
Sector(s) of use SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems

Other operational conditions of use affecting environmental exposure

Emission days	365
Release fraction to air from process (initial release prior to RMM)	0
Release fraction to wastewater from process (initial release prior to RMM)	1
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100
Remarks	Receiving surface water flow 1800 m3/d

Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems

**Predicted No Effect Concentration
(PNEC)**

Freshwater	2.4 µg/l
Freshwater sediment	14.5 µg/kg dwt
Marine water	0.24 µg/l
Soil	6.48 µg/kg dwt
Impact on Sewage Treatment	830 mg/l

Calculation method	Used EUSES model
Remarks	Qualitative approach used to conclude safe use

Derived No Effect Level (DNEL):

Worker - dermal, long-term - local	0.09 mg/cm ²
Worker - dermal, long-term - systemic	4.16 mg/kg bw/d
Worker - inhalative, long-term - systemic	73.4 mg/m ³
Consumer - oral, long-term - systemic	6.25 mg/kg bw/d
Consumer - dermal, long-term - systemic	2.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	21.73 mg/m ³

Calculation method	Risk management measures are based on qualitative risk characterization
Remarks	No exposure assessment presented for human health.

Section 4 - Guidance to check compliance with the exposure scenario

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMS or a site-specific chemical safety assessment is required. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis (hydroxyethyl)
Pure substance/mixture	Substance
REACH registration number	01-2119490100-53-XXXX
CAS No	931-329-6
EC No (EU Index No)	68155-07-7, 68603-42-9
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Consumer use
Type	Consumer
Main user group	Consumer uses: Private households (= general public = consumers)
Environmental release category(ies)	ERC2 - Formulation of preparations (mixtures) ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems ERC8e - Wide dispersive outdoor use of reactive substances in open systems
Product category(ies)	PC2 - Adsorbent(s) PC4 - Anti-freeze and de-icing products PC9a - Coatings and paints, thinners, paint removers PC24 - Lubricants, greases, release products PC32 - Polymer preparations and compounds PC35 - Washing and cleaning products (including solvent based products) PC38 - Welding and soldering products, flux products
Article categories	AC13 - Plastic articles
Sector(s) of use	SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)
 - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems
 - ERC8e - Wide dispersive outdoor use of reactive substances in open systems

Other operational conditions of use affecting environmental exposure

Emission days	300
Release fraction to air from process (initial release prior to RMM)	0.0005
Release fraction to wastewater from process (initial release prior to RMM)	0.003
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d

Further information

Operational conditions	Indoor use
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Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100
Remarks	Receiving surface water flow is 18000 m3/d

Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of consumer exposure

Title	General measures applicable to all activities
Covers concentrations up to	25%
Physical form of product	Liquid
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Risk management measures	Use with local exhaust ventilation
Indoor/Outdoor use	Indoor use

Title	General measures applicable to all activities
Covers concentrations up to	25%
Physical form of product	Liquid
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Indoor/Outdoor use	Outdoor use

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

- ERC8a - Wide dispersive indoor use of processing aids in open systems

- ERC8d - Wide dispersive outdoor use of processing aids in open systems

- ERC8e - Wide dispersive outdoor use of reactive substances in open systems

Predicted No Effect Concentration (PNEC)

Freshwater	2.4 µg/l
Freshwater sediment	14.5 µg/kg dwt
Marine water	0.24 µg/l
Soil	6.48 µg/kg dwt
Impact on Sewage Treatment	830 mg/l

Remarks Qualitative approach used to conclude safe use

Derived No Effect Level (DNEL):

Worker - dermal, long-term - local	0.09 mg/cm2
Worker - dermal, long-term - systemic	4.16 mg/kg bw/d
Worker - inhalative, long-term - systemic	73.4 mg/m ³
Consumer - oral, long-term - systemic	6.25 mg/kg bw/d
Consumer - dermal, long-term - systemic	2.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	21.73 mg/m ³

Calculation method Risk management measures are based on qualitative risk characterization

Remarks

Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.