

SAFETY DATA SHEET

# Alu Klor Hårdt

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

1.1.	Product i	dentifier
	1 I O G G C I	activities

Trade name

Alu Klor Hårdt

Product no.

833 Unique formula identifier (UFI) WSPE-27PQ-H00X-G4G1

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

Relevant identified uses of the substance or mixture

Dishwasher detergent Restricted to professional users.

Use descriptors (UK REACH)

Sectors of use	Description
LCS "PW"	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Product category	Description
PC 35	Washing and Cleaning Products (including solvent based products)
Process category	Description
PROC 2	Use in closed, continuous PROC ess with occasional controlled exposure
Environmental release category	Description
ERC 4	Industrial use of processing aids in processes and products, not becoming part of articles

## Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

#### Jysk Kemi Service A/S

Gl. Struervej 50 7500 Holstebro Denmark +45 9740 3133 +45 9740 4846 www.jyskkemi.dk

#### Contact person

Rikke Hunskjær

E-mail

rikke@jyskkemi.dk Revision

#### 15/08/2023

SDS Version

1.0

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 "First aid measures".

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.



Eye Dam. 1; H318, Caus STOT SE 3; H335, May co Aquatic Chronic 3; H412 2.2. Label elements Hazard pictogram(s) Signal word	uses severe skin burns and eye	-		
May cause respirato	ife with long lasting effects. (H4	112)		
IF IN EYES: Rinse of Continue rinsing. Storage Store in a well-ver Disposal Dispose of conten Hazardous substances disodium metasilicat sodium hypochlorite Additional labelling EUH031, Contact wit UFI: WSPE-27PQ-H00 2.3. Other hazards Additional warnings This mixture/product and/or vPvB. This product does no	ir): Take off immediately all con cautiously with water for severa (P305+P351+P338) ntilated place. Keep container ti ts/container in accordance with te e	Il minutes. Remove ghtly closed. (P403 n local regulation ( ces considered to idered to be endoo	e contact lenses, if present an 8+P233) P501) meet the criteria classifying t crine disruptors in accordance	hem as PBT e with the
SECTION 3: Composition/	information on ingredients			
3.1. Substances Not applicable. This pro 3.2. Mixtures	oduct is a mixture.			
Product/substance	Identifiers	% w/w	Classification	Note
disodium metasilicate	CAS No.: 10213-79-3 EC No.: 600-279-4 UK-REACH: Index No.:	15-25%	Met. Corr. 1, H290 Skin Corr. 1B, H314 STOT SE 3, H335	
pentapotassium triphosphate	CAS No.: 13845-36-8 EC No.: 237-574-9 UK-REACH: Index No.:	5-10%		
2-phosphonobutane-1,2,4- tricarboxylic acid	CAS No.: 037971-36-1 EC No.: 253-733-5 UK-REACH:	1-3%	Met. Corr. 1, H290 Eye Irrit. 2, H319	



	Index No.:		
sodium hypochlorite	CAS No.: 7681-52-9 EC No.: 231-668-3 UK-REACH: Index No.: 017-011-00-1	1-3%	EUH031 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

## Other information

Labelling of contents according to Detergents Regulation (EC) No 648/2004 as retained and amended in UK law

- 5% 15%
- · Phosphates
- < 5%
- $\cdot$  Chlorine-based bleaching Agents
- Phosphonates

#### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

#### **General** information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Flush exposed area with water for a long time - at least 30 minutes. It may be necessary to flush for several hours. Use a comfortable water temperature (20-30 °C). Contact Poison Information/doctor/hospital for further advice on follow-up and treatment.

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

#### Eye contact

If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

#### Ingestion

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit from returning to the mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

Burns

Not applicable.

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

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

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

IF exposed or concerned:

Get immediate medical advice/attention.

## Information to medics

Bring this safety data sheet or the label from this product.

#### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media



## Not applicable.

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

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds Carbon oxides (CO / CO2) Some metal oxides

Oxygen, hypochlorous acid, chlorine.

#### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice. Hazchem Code: 2X

## SECTION 6: Accidental release measures

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

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas. Avoid inhalation of vapours from spilled material. Contaminated areas may be slippery.

#### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

## 6.3. Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

#### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.

Avoid direct contact with the product.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

#### 7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material

Keep only in original packaging.

Storage temperature

> 0°C

Incompatible materials

Strong acids, alkali metals, metal powders, oxidizing materials and amines. Contact with metals can result in decomposition with the formation of oxygen.

#### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

potassium hydroxide



## Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 2

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

## DNEL

Duration:	Route of exposure:	DNEL:
Long term	Dermal	1,49 mg/kg uge/dag
Long term	Inhalation	6,22 mg/m3
potassium hydroxide		
Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Inhalation	1 mg/m³
Long term – Local effects - General population	Inhalation	1 mg/m³
Long term – Local effects - Workers	Inhalation	1 mg/m³
Long term – Local effects - Workers	Inhalation	1 mg/m³
sodium hypochlorite		
Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Dermal	0,5%
Long term – Local effects - General population	Inhalation	1.55 mg/m³
Long term – Local effects - Workers	Inhalation	1.55 mg/m³
Long term – Systemic effects - General population	Inhalation	1,55 mg/m³
Long term – Systemic effects - General population	Inhalation	1.55 mg/m³
Long term – Systemic effects - Workers	Inhalation	1,55 mg/m³
Long term – Systemic effects - Workers	Inhalation	1.55 mg/m³
Short term – Local effects - General population	Inhalation	3,1 mg/m³
Short term – Local effects - General population	Inhalation	3.1 mg/m <sup>3</sup>
Short term – Local effects - Workers	Inhalation	3.1 mg/m³
Short term – Systemic effects - General population	Inhalation	3.1 mg/m³
Short term – Systemic effects - Workers	Inhalation	3,1 mg/m³
Short term – Systemic effects - Workers	Inhalation	3.1 mg/m <sup>3</sup>
ong term – Systemic effects - General population	Oral	0,26 mg/kg legemsvægt/dag
Long term – Systemic effects - General population	Oral	260 µg/kgbw/day

#### PNEC

sodium hypochlorite		
Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		0,21 µg/l
Freshwater		210 ng/L
Intermittent release		0,26 µg/l
Intermittent release (freshwater)		260 ng/L
Marine water		0,042 µg/l
Marine water		42 ng/L
Predators		11.1 mg/kg
Sewage treatment plant		0,03 mg/l
Sewage treatment plant		4.69 mg/L

#### 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.



#### General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

#### Exposure scenarios

There are no exposure scenarios implemented for this product.

#### **Exposure limits**

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

#### Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Ensure that eyewash stations and safety showers are located within easy reach.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

#### Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

#### Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

#### Individual protection measures, such as personal protective equipment

#### Generally

Use only UKCA marked protective equipment.

#### Respiratory Equipment

No specific requirements

#### Skin protection

Recommended	Type/Category	Standards		
No special when used as intended.	-	-		
land protection				
Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile - Discard immediately after use	0.2	> 240	EN374-2, EN374-3, EN388	

#### Eye protection

Туре	Standards	
In the likelihood of direct or incidental exposure, use face protection.	EN166	Es

SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties Physical state Liquid

Colour Pale yellow Odour / Odour threshold Characteristic pH 13,5 pH in solution 11 (0,2%) Density (g/cm<sup>3</sup>) 1.2 Kinematic viscosity No data available Particle characteristics



Not applicable - product is a liquid Phase changes Melting point/Freezing point (°C) Not applicable - product is a liquid Softening point/range (waxes and pastes) (°C) Does not apply to liquids. Boiling point (°C) 100 Vapour pressure No data available Relative vapour density No data available Decomposition temperature (°C) Not applicable Data on fire and explosion hazards Flash point (°C) Not applicable - flash point > 200°C Flammability (°C) The material is not combustible. Auto-ignition temperature (°C) Testing not relevant or not possible due to the nature of the product. Lower and upper explosion limit (% v/v) Testing not relevant or not possible due to the nature of the product. Solubility Solubility in water Completely soluble n-octanol/water coefficient Testing not relevant or not possible due to the nature of the product. Solubility in fat (q/L) Testing not relevant or not possible due to the nature of the product. 9.2. Other information **Oxidizing properties** Testing not relevant or not possible due to the nature of the product. Other physical and chemical parameters No data available. SECTION 10: Stability and reactivity 10.1. Reactivity Contact with acids liberates toxic gas. Reacts violently with alkali metals, metal powders, oxidizing materials and amines. 10.2. Chemical stability The product is stable under the conditions, noted in section 7 "Handling and storage". 10.3. Possibility of hazardous reactions Contact with acids liberates toxic gas. 10.4. Conditions to avoid Protect from sunlight. Do no expose to temperatures exceeding 20 °C/68 °F. 10.5. Incompatible materials Strong acids, alkali metals, metal powders, oxidizing materials and amines. Contact with metals can result in decomposition with the formation of oxygen. 10.6. Hazardous decomposition products Oxygen, hypochlorous acid, chlorine. Thermal decomposition may produce corrosive vapours. SECTION 11: Toxicological information 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

Product/substance disodium metasilicate



Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	1152-1349 mg/kg ·
Product/substance	disodium metasilicate
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50
Result:	> 2,06 g/m3 ·
Product/substance	disodium metasilicate
Species:	Rat
Route of exposure:	Dermal
Test:	LD50
Result:	> 5000 mg/kg ·
Product/substance	sadium hypochlarita
Species:	sodium hypochlorite Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	> 20000 mg/kg ·
Product/substance	sodium hypochlorite
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50
Result:	> 10,5 mg/l ·
Product/substance	potassium hydroxide
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	333-388 mg/kgbw
Skin corrosion/irritation	
Product/substance	sodium hypochlorite
Test method:	OECD 404
Species:	Rabbit
Duration:	No data available.
Result:	Adverse effect observed (Highly irritating)
	urns and eye damage.
Serious eye damage/irri Causes serious eye d	
Respiratory sensitisation	-
Based on available da	ata, the classification criteria are not met.
Skin sensitisation	the electification exiteria are not mot
Germ cell mutagenicity	ata, the classification criteria are not met.
	ata, the classification criteria are not met.
Carcinogenicity Based on available da	ata, the classification criteria are not met.
Reproductive toxicity	
	ata, the classification criteria are not met.
STOT-single exposure	
May cause respirator	
STOT-repeated exposur	
	ata, the classification criteria are not met.
Aspiration hazard	ata, the classification criteria are not met
11.2. Information on oth	ata, the classification criteria are not met.
Long term effects	
	ects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols



may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

# Endocrine disrupting properties Not applicable.

Other information

None known.

## SECTION 12: Ecological information

12.1. Toxicity Product/substance Species: Duration: Test: Result:	disodium metasilicate Fish 7 days LC50 210 mg/l ·
Product/substance	disodium metasilicate
Species:	Daphnia
Duration:	7 days
Test:	EC50
Result:	1700 mg/l ·
Product/substance	disodium metasilicate
Species:	Algae
Duration:	72 hours
Test:	EC50
Result:	> 345,4 mg/l ·
Product/substance	2-phosphonobutane-1,2,4-tricarboxylic acid
Species:	Fish
Duration:	48 hours
Test:	LC50
Result:	> 500 mg/l ·
Product/substance	2-phosphonobutane-1,2,4-tricarboxylic acid
Species:	Daphnia
Duration:	24 hours
Test:	LC50
Result:	265 mg/l ·
Product/substance	2-phosphonobutane-1,2,4-tricarboxylic acid
Species:	Algae
Duration:	72 hours
Test:	EC50
Result:	140 mg/l ·
Product/substance	sodium hypochlorite
Species:	Fish
Duration:	7 days
Test:	LC50
Result:	0,03-0,6 mg/l ·
Product/substance	sodium hypochlorite
Species:	Daphnia
Duration:	48 hours
Test:	EC50
Result:	0,141 mg/l ·
Product/substance	potassium hydroxide
Species:	Fish
Duration:	7 days
Test:	LC50
Result:	80 mg/l ·



Product/substance	potassium hydroxide
Species:	Fish
Duration:	24 hours
Test:	LC50
Result:	165 mg/l ·

Product/substance	potassium hydroxide
Species:	Crustacean
Duration:	15 min
Test:	EC50
Result:	22 mg/l ·

Harmful to aquatic life with long lasting effects.

## 12.2. Persistence and degradability

## No data available.

2	.3. Bioaccumulative pote	ntial
	Product/substance	disodium metasilicate
	Test method:	
	Potential bioaccumulation:	No
	LogPow:	No data available.
	BCF:	No data available.
	Other information:	

Product/substance	sodium hypochlorite
Test method:	
Potential bioaccumulation:	No
LogPow:	No data available.
BCF:	No data available.
Other information:	

## 12.4. Mobility in soil

No data available.

## 12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

## 12.6. Endocrine disrupting properties

Not applicable.

#### 12.7. Other adverse effects

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

SECTION 13: Disposal considerations

#### Waste treatment methods

Product is covered by the regulations on hazardous waste. HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity HP 8 - Corrosive HP 12 - Release of an acute toxic gas HP 14 - Ecotoxic Dispose of contents/container to an approved waste disposal plant. Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law. EWC code 20 01 15\* Alkalines Waste group H Waste group H Specific labelling

#### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information



<ul> <li>IMDG UN1760 CORROS metasili</li> <li>IATA UN1760 CORROS metasili</li> <li>IATA UN1760 CORROS metasili</li> <li>* Packing group</li> <li>** Environmental hazards</li> <li>Additional information ADR / See Table A, Sec with transport. See se accidents during trans IMDG / See section 3.2 transport. IATA / See Table 4.2 fo transport. IATA / See Table 4.2 fo transport.</li> <li>IATA / See Table 4.2 fo transport.</li> </ul>	DRROSIVE LIQUID, N.O.S. (disodium etasilicate)	Hazard class(es)	PG*	14.5 Env**	information:
<ul> <li>* Packing group</li> <li>** Environmental hazards Additional information ADR / See Table A, Sec with transport. See se accidents during trans IMDG / See section 3.2 transport. IATA / See Table 4.2 fo transport. This product is within Hazchem Code: 2X</li> <li>14.6. Special precautions Not applicable.</li> <li>14.7. Maritime transport Not applicable.</li> <li>14.7. Maritime transport No data available.</li> <li>SECTION 15: Regulatory</li> <li>15.1. Safety, health and e Restricted to profe People under the a Demands for specific No specific require SEVESO - Categories / Not applicable.</li> </ul>		Transport hazard class: 8 Label: 8 Classification code: C9	Π	No	Limited quantities: 1 L Tunnel restriction code: (E) See below for additional information.
<ul> <li>** Packing group</li> <li>** Environmental hazards</li> <li>Additional information</li> <li>ADR / See Table A, Sec with transport. See se accidents during trans IMDG / See section 3.2 transport.</li> <li>IATA / See Table 4.2 for transport.</li> <li>This product is within Hazchem Code: 2X</li> <li>14.6. Special precautions Not applicable.</li> <li>14.7. Maritime transport No data available.</li> <li>SECTION 15: Regulatory</li> <li>15.1. Safety, health and e Restricted to profe People under the a Demands for specific No specific require SEVESO - Categories / Not applicable.</li> <li>Additional information</li> </ul>	DRROSIVE LIQUID, N.O.S. (disodium etasilicate)	Transport hazard class: 8 Label: 8 Classification code: C9	Ш	No	Limited quantities: 1 L EmS: F-A S-B See below for additional information.
<ul> <li>** Environmental hazards Additional information ADR / See Table A, See with transport. See see accidents during trans IMDG / See section 3.2 transport. IATA / See Table 4.2 for transport. This product is within Hazchem Code: 2X</li> <li>14.6. Special precautions Not applicable.</li> <li>14.7. Maritime transport No data available.</li> <li>SECTION 15: Regulatory</li> <li>15.1. Safety, health and e Restrictions for applic Restricted to profe People under the a Demands for specific No specific require SEVESO - Categories / Not applicable.</li> <li>Additional information</li> </ul>	DRROSIVE LIQUID, N.O.S. (disodium etasilicate)	Transport hazard class: 8 Label: 8 Classification code: C9	П	No	See below for additional information.
15.1. Safety, health and e Restrictions for applic Restricted to profe People under the a Demands for specific No specific require SEVESO - Categories / Not applicable. Additional information	4.2 for any information on special vithin scope of the regulations of tr		arnings in co	nnection	i with
Restricted to profe People under the a Demands for specific No specific require SEVESO - Categories / Not applicable. Additional information	utions for user sport in bulk according to IMO ins <sup>.</sup>	truments			
	utions for user sport in bulk according to IMO ins e. latory information and environmental regulations/le		nce or mixtur	re	
Sources The Management of Regulation (EC) No Regulation (EU) No Regulation (EC) No	utions for user sport in bulk according to IMO inste atory information and environmental regulations/le- application professional users. the age of 18 shall not be exposed ecific education equirements. ries / dangerous substances e.	gislation specific for the substar	nce or mixtur	-e	



#### (REACH) as retained and amended in UK law.

#### 15.2. Chemical safety assessment

No

#### SECTION 16: Other information

## Full text of H-phrases as mentioned in section 3

EUH031, Contact with acids liberates toxic gas.

- H290, May be corrosive to metals.
- H314, Causes severe skin burns and eye damage.

H318, Causes serious eye damage.

H319, Causes serious eye irritation.

H335, May cause respiratory irritation.

H400, Very toxic to aquatic life.

H410, Very toxic to aquatic life with long lasting effects.

#### The full text of identified uses as mentioned in section 1

LCS "PW" = Professional uses: Public domain (administration, education, entertainment, services, craftsmen) PROC 2 = Use in closed, continuous PROC ess with occasional controlled exposure

PC 35 = Washing and Cleaning Products (including solvent based products)

ERC 4 = Industrial use of processing aids in processes and products, not becoming part of articles

## Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of

1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

The classification of the substance/mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.



The safety data sheet is validated by

RH Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en