HALLIBURTON

SAFETY DATA SHEET STARCIDE®

according to Regulation (EC) No. 2015/830

Revision Date: 07-Jan-2020 Revision Number: 10
Preparation Date 07-Jan-2020 Internal ID Code HB003388

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

1.1. Product Identifier

Product Name STARCIDE® Internal ID Code HB003388

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

Recommended Use Bactericide

Sector of uses SU2 - Mining, (including offshore industries)

Product category(ies) PC8 - Biocidal Products (e.g. Disinfectants, pest control)

Process categories PROC4 - Use in batch and other process (synthesis) where opportunity for exposure

arises

Uses advised against Consumer use

1.3. Details of the supplier of the safety data sheet

Halliburton Energy Services

Halliburton House, Howemoss Place

Kirkhill Industrial Estate

Dyce

Aberdeen, AB21 0GN United Kingdom +44 1224 776888

www.halliburton.com

For further information, please contact

E-mail Address: fdunexchem@halliburton.com

1.4. Emergency telephone number

+44 8 08 189 0979 / 1-760-476-3961

Global Incident Response Access Code: 334305

Contract Number: 14012

Emergency telephone - Article 45 -	(EC)1272/2008
Austria	Poison Information Centre (AT): +43-(0)1-406 43 43
Belgium	Poison center (BE): +32 70 245 245
Bulgaria	Bulgarian poison centre: +359 2 915-44-09 or +359 2 915-43-46
Croatia	Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health)
Cyprus	1401; +357 22 88 7171
Czech Republic	+420 224 919 293; +420 224 915 402
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
Estonia	16662 (Local Poison Information Centre); (+372) 626 93 90 (International Poison Information Centre)
Europe	112
Finland	Poison Information Centre (FI):+358 9 471 977
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Greece	+30 210 779 3777
Hungary	+36 (06) 80 201-199
Latvia	(+371) 67042473 (International number for the National Toxicology Centre)
Ireland	National Poisons Information Centre (IE): +353 1 8379964
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only

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	available to health professionals)
Norway	Poisons Information (NO):+ 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Portugal	CIAV - Centro de Informação Antivenenos (Portuguese Poison Centre): + 351 213 303 271
Romania	+40 21 318 36 06
Spain	Poison Information Service (ES): +34 91 562 04 20
Sweden	Poisons Information Center (SV):+46 8 33 12 31
Switzerland	Poison Center: Tel 145; +41 44 251 51 51
Turkey	Ulusal Zehir Danisma Merkezi (UZEM) :114 Acil Saglik Hizmetleri : 112
United Kingdom	NHS Direct (UK): +44 0845 46 47

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Category 4 - H302
Category 3 - H311
Category 4 - H332
Category 1 B - H314
Category 1 A - H317
Category 2 - H341
Category 1B - H350
Category 2 - H373
Category 2 - H411

2.2. Label Elements

Hazard Pictograms



Signal Word: Danger

Hazard Statements:

H302 - Harmful if swallowed

H311 - Toxic in contact with skin

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H332 - Harmful if inhaled

H341 - Suspected of causing genetic defects

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

EUH071 - Corrosive to the respiratory tract

Precautionary Statements:

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

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

P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 - Immediately call a POISON CENTER or doctor/physician

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Contains

Substances reaction products of paraformal-dehyde and 2-hydroxypropylamine (ratio 3:2); [MBO]

CAS Number

Proprietary

Special Labelling of certain

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mixtures

Use biocides safely. Always read the label and product information before use.

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2.3. Other Hazards

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1. Substances Substance

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH Reg. No
reaction products of paraformal-dehyde and 2-hydroxypropylamine (ratio 3:2); [MBO]	EC No		60 - 100%	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 4 (H332) Skin Corr. 1B (H314) Skin Sens. 1A (H317) Muta. 2 (H341) Carc. 1B (H350) STOT RE 2 (H373) Aquatic Chronic 2 (H411) EUH071	No data available

For the full text of the H-phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation If inhaled, move victim to fresh air and seek medical attention.

Eyes Immediately flush eyes with large amounts of water for at least 30 minutes.

Seek prompt medical attention.

Skin In case of contact, immediately flush skin with plenty of soap and water for at

least 30 minutes and remove contaminated clothing, shoes and leather goods

immediately. Get medical attention immediately.

Ingestion Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical

attention.

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

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. May cause allergic skin reaction. Harmful if swallowed. Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure. Toxic in contact with skin.

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

Notes to Physician Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

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5.2. Special hazards arising from the substance or mixture

Special exposure hazards in a fire

Decomposition in fire may produce harmful gases.

5.3. Advice for firefighters

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation. Evacuate all persons from the area.

See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas. Consult local authorities.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

6.4. Reference to other sections

See Section 8 and 13 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Avoid breathing mist. Ensure adequate ventilation. Do NOT consume food, drink, or tobacco in contaminated areas. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container. Store away from oxidizers. Store away from acids. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 12 months. Keep Away From Food

7.3. Specific end use(s)

Exposure scenario No information available Other Guidelines No information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Substances	CAS Number	EU	UK	Netherlands	France
reaction products of paraformal-dehyde and 2-hydroxypropylamine (ratio 3:2); [MBO]	Proprietary	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Germany	Spain	Portugal	Finland
reaction products of	Proprietary	Not applicable	Not applicable	Not applicable	Not applicable
paraformal-dehyde and					
2-hydroxypropylamine (ratio					
3:2); [MBO]					

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
reaction products of	Proprietary	Not applicable	Not applicable	Not applicable	Not applicable

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paraformal-dehyde and 2-hydroxypropylamine (r 3:2); [MBO]	atio				
Substances	CAS Number	Italy	Poland	Hungary	Czech Republic

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
reaction products of	Proprietary	Not applicable	Not applicable	Not applicable	Not applicable
paraformal-dehyde and					
2-hydroxypropylamine (ratio					
3:2); [MBO]					

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
reaction products of paraformal-dehyde and 2-hydroxypropylamine (ratio 3:2); [MBO]	Proprietary	Not applicable	Not applicable	Not applicable	Not applicable

Hazardous Decomposition Products	Formaldehyde
EU	Not applicable
UK	STEL: 2 ppm
OIX	STEL: 2.5 mg/m ³
	TWA: 2 ppm
	TWA: 2.5 mg/m ³
Netherlands	TWA: 0.15 mg/m ³
Hetherlands	STEL: 0.5 mg/m ³
France	TWA [VME]: 0.5 ppm
Germany	MAK: 0.3 ppm
	MAK: 0.37 mg/m ³
Spain	0.3 ppm VLA-EC
Opum	0.37 mg/m³ VLA-EC
Portugal	0.3 ppm Ceiling
Bulgaria	TWA: 1,0 mg/m ³
	STEL: 2,0 mg/m³
Finland	STEL: 1 ppm
i illiana	STEL: 1.2 mg/m ³
	TWA: 0.3 ppm
	TWA: 0.37 mg/m ³
Austria	TWA [TMW]: 0.5 ppm
7.001.10	TWA [TMW]: 0.6 mg/m ³
	STEL [KZW]: 0.5 ppm
	STEL [KZW]: 0.6 mg/m ³
Ireland	TWA: 2 ppm
	TWA: 2.5 mg/m ³
	STEL: 2 ppm
	STEL: 2.5 mg/m ³
Switzerland	TWA [MAK]: 0.3 ppm
	TWA [MAK]: 0.37 mg/m ³
	STEL [KZW]: 0.6 ppm
	STEL [KZW]: 0.74 mg/m ³
Norway	STEL: 1.5 ppm
	STEL: 1.8 mg/m ³
	TWA: 0.5 ppm
	TWA: 0.6 mg/m ³
Italy	0.3 ppm Ceiling
	0.37 mg/m³ Ceiling
Romania	TWA: 1.2 mg/m ³
	TWA: 1 ppm
	STEL: 3 mg/m ³
	STEL: 1 ppm
Poland	NDSCh: 1 mg/m ³
	NDS: 0.5 mg/m ³
Hungary	TWA: 0.6 mg/m ³
	STEL: 0.6 mg/m ³
Czech Republic	TWA: 0.5 mg/m ³
Denmark	0.3 ppm Ceiling
	0.4 mg/m³ Ceiling

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Derived No Effect Level (DNEL)

Worker

No information available

General Population

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Boiling Point / Range

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Engineering Controls Use in a well ventilated area.

If engineering controls and work practices cannot prevent excessive exposures, the Personal protective equipment selection and proper use of personal protective equipment should be determined by an

industrial hygienist or other qualified professional based on the specific application of this

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product.

If engineering controls and work practices cannot keep exposure below occupational **Respiratory Protection**

exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators. should be performed by an Industrial Hygienist or other qualified professional. Organic

vapor respirator.

Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct **Hand Protection**

contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. Butyl rubber gloves. (>= 0.7 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be

observed because of great diversity of types.

Wear impervious protective clothing, including boots, gloves, lab coat, apron, rain jacket, **Skin Protection**

pants or coverall, as appropriate, to prevent skin contact.

Eve Protection Chemical goggles; also wear a face shield if splashing hazard exists. Eyewash fountains and safety showers must be easily accessible. Other Precautions

Environmental Exposure Controls Do not flush into surface water or sanitary sewer system Avoid subsoil penetration

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid Color Colorless to slight yellow No information available Sweet amine Odor: Odor

Threshold: Values

Property Remarks/ - Method

10 (0.15%) Freezing Point / Range No data available **Melting Point / Range** <-35 °C / -31 °F <-39 °C / <-38.2 °F Pour Point / Range

204 °C / 399.2 °F > 100 °C / > 212 °F (PMCC) Flash Point

Flammability (solid, gas) No data available **Upper flammability limit** No data available No data available Lower flammability limit **Evaporation rate** No data available

Vapor Pressure 0.014 hPa **Vapor Density** No data available **Specific Gravity** 1.049 - 1.069 **Water Solubility** Soluble in water

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Solubility in other solvents benzene heptane

Partition coefficient: n-octanol/water 1.89

Autoignition TemperatureNo data availableDecomposition TemperatureNo data availableViscosity21 mPas @ 20°CExplosive PropertiesNo information availableOxidizing PropertiesNo information available

9.2. Other information

Molecular Weight 186.25

VOC Content (%) No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Not expected to be reactive.

10.2. Chemical stability

Stable under recommended storage conditions

10.3. Possibility of hazardous reactions

Will Not Occur

10.4. Conditions to avoid

None anticipated

10.5. Incompatible materials

Strong oxidizers. Strong acids. Reducing agents.

10.6. Hazardous decomposition products

Formaldehyde. Oxides of nitrogen. Oxides of sulfur.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

Inhalation Harmful if inhaled. Causes severe respiratory irritation.

Eye Contact Causes eye burns

Skin Contact Causes severe burns. May cause an allergic skin reaction. Toxic in contact with skin.

Ingestion Harmful if swallowed. Causes burns of the mouth, throat and stomach.

Chronic Effects/Carcinogenicity Prolonged or repeated exposure may cause damage to the upper respiratory tract.

Formaldehyde, a suspected carcinogen, is released when heated.

Toxicology data for the components

Substances	CAS	LD50 Oral	LD50 Dermal	LC50 Inhalation
	Number			
reaction products of paraformal-dehyde and 2-hydroxypropylamine (ratio 3:2); [MBO]	Proprietary	630 mg/kg (Rat)	760 mg/kg (Rat)	2 mg/L (Rat, 4 hr, aerosol)

Rat = Rat, Rabbit = Rabbit, dust = dust

o anotalioo	CAS Number	Skin corrosion/irritation
reaction products of		Causes severe irritation and or burns (Rabbit)
paraformal-dehyde and 2-hydroxypropylamine (ratio		
3:2); [MBO]		

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Number	
	Causes severe irritation and or burns (Rabbit)
CAS Number	Skin Sensitization
Tunibo.	May cause sensitization by skin contact (guinea pig)
CAS Number	Respiratory Sensitization
	No information available
CAS	Mutagenic Effects
vumber	In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects.
CAS	Carcinogenic Effects
vumber	Did not show carcinogenic effects in animal experiments
CAS	Reproductive toxicity
Number	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
CAS	STOT - single exposure
vumber	No significant toxicity observed in animal studies at concentration requiring classification.
CAS	STOT - repeated exposure
Number	Causes damage to organs through prolonged or repeated exposure: Gastrointestinal tract (GI) Respiratory system
CAS	Aspiration hazard
<u> Tullibel</u>	Not applicable
	CAS Number CAS Number CAS Number CAS Number

SECTION 12: Ecological information

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12.1. Toxicity
Ecotoxicity effects
Toxic to aquatic life.

	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
reaction products of paraformal-dehyde and 2-hydroxypropylamine (ratio 3:2); [MBO]	Proprietary	EC50(72 h)=5.7 mg/L (Desmodesmus subspicatus) EC50()=3.35 mg/L (Skeletonema costatum)	LC50(96 h)=135.21 mg/L (Scophthalmus maximus)	EC50: 44 mg/L (activated sludge)	EC50(48 h)=37.9 mg/L (Daphnia magna) EC50(48 h)=4.1 mg/L (Acartia tonsa) NOEC(21 d)=1.3 mg/L (Daphnia magna)

growth rate = growth rate, similar substance = similar substance, activated sludge = activated sludge, reproduction = reproduction

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
reaction products of paraformal-dehyde and	Proprietary	Readily biodegradable (69.4% @ 28d)
2-hydroxypropylamine (ratio 3:2); [MBO]		

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
reaction products of paraformal-dehyde and	Proprietary	Log Pow=-0.11
2-hydroxypropylamine (ratio 3:2); [MBO]		

12.4. Mobility in soil

Substances	CAS Number	Mobility	
reaction products of paraformal-dehyde and	Proprietary	No information available	
2-hydroxypropylamine (ratio 3:2): [MBO]			

12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Substances	PBT and vPvB assessment
reaction products of paraformal-dehyde and	Not PBT/vPvB
2-hvdroxypropylamine (ratio 3:2): [MBO]	

12.6. Other adverse effects

Does not contain any organically bound halogen. May not increase the AOX value when discharged from treatment plants or into natural waters.

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methodsDisposal should be made in accordance with federal, state, and local regulations.

Incineration recommended in approved incinerator according to federal, state, and local

regulations. Substance should NOT be deposited into a sewage facility.

Contaminated Packaging Follow all applicable national or local regulations.

SECTION 14: Transport information

IMDG/IMO

UN Number UN2922

according to Regulation (EC) No. 2015/830

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UN proper shipping name: Corrosive Liquid, Toxic, N.O.S. (reaction products of paraformaldehyde and

2-hydroxypropylamine (ratio 3:2); [MBO])

Transport Hazard Class(es): 8 (6.1)Ш

Packing Group:

Revision Date: 07-Jan-2020

Environmental Hazards: Marine Pollutant EMS: EmS F-A, S-B

ADN

UN Number UN2922

UN proper shipping name: Corrosive Liquid, Toxic, N.O.S. (reaction products of paraformaldehyde and

2-hydroxypropylamine (ratio 3:2); [MBO])

Transport Hazard Class(es): (6.1)

Packing Group

Marine Pollutant **Environmental Hazards:**

ADR/RID

UN Number UN2922

UN proper shipping name: Corrosive Liquid, Toxic, N.O.S. (reaction products of paraformaldehyde and

2-hydroxypropylamine (ratio 3:2); [MBO])

Transport Hazard Class(es): 8 (6.1) Ш

Packing Group

Environmental Hazards:

Marine Pollutant

IATA/ICAO

UN Number UN2922

UN proper shipping name: Corrosive Liquid, Toxic, N.O.S. (reaction products of paraformaldehyde and

2-hydroxypropylamine (ratio 3:2); [MBO])

Transport Hazard Class(es): 8 (6.1)

Packing Group: Ш

Environmental Hazards: Marine Pollutant

UN2922 14.1. UN Number

14.2. UN proper shipping name: Corrosive Liquid, Toxic, N.O.S. (reaction products of paraformaldehyde and

2-hydroxypropylamine (ratio 3:2); [MBO])

14.3. Transport Hazard Class(es): 8 (6.1)

14.4. Packing Group

Marine Pollutant 14.5. Environmental Hazards:

14.6. Special Precautions for User None

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

SECTION 15: Regulatory information

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

International Inventories

US TSCA Inventory All components listed on inventory or are exempt. All components listed on inventory or are exempt. **Canadian Domestic Substances**

List (DSL)

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Biodical Products Regulation

(BPR) 528/2012

This product complies with the BPR and has relevant national approval (the active

substance is subject to the EU Review Programme).

CTGB (Board for the Authorisation of Plant Protection Products and Biocides): This

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product is registered under registration number 14584 for use in Product Types 6, 12 &

13.

Denmark PR No.: 1305931

Norway PR No.: 100000

Germany, Water Endangering

WGK 1: Low hazard to waters.

Classes (WGK)

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable. Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

Substances	CAS Number	Seveso III	TA LUFT
reaction products of paraformal-dehyde	@CAS	Not applicable	Not applicable
and 2-hydroxypropylamine (ratio 3:2);			
[MBO]			

Substances	CAS Number	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization
reaction products of paraformal-dehyde and 2-hydroxypropylamine (ratio 3:2); [MBO]	@CAS	Not applicable	Not applicable

15.2. Chemical safety assessment

No information available

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H332 - Harmful if inhaled

H341 - Suspected of causing genetic defects

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

H412 - Harmful to aquatic life with long lasting effects

Key or legend to abbreviations and acronyms used in the safety data sheet

bw - body weight

CAS - Chemical Abstracts Service

CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures

EC - European Commission

EC10 – Effective Concentration 10%

EC50 - Effective Concentration 50%

EEC - European Economic Community

ErC50 – Effective Concentration growth rate 50%

IBC Code - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

LC50 - Lethal Concentration 50%

LD50 - Lethal Dose 50%

LL0 - Lethal Loading 0%

LL50 - Lethal Loading 50%

MARPOL - International Convention for the Prevention of Pollution from Ships

mg/kg – milligram/kilogram

mg/L - milligram/liter

NIOSH - National Institute for Occupational Safety and Health

NOEC - No Observed Effect Concentration

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NTP - National Toxicology Program

OEL - Occupational Exposure Limit

PBT - Persistent Bioaccumulative and Toxic

PC - Chemical Product category

PEL - Permissible Exposure Limit

ppm - parts per million

PROC - Process category

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REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

STEL - Short Term Exposure Limit

SU - Sector of Use category

TWA - Time-Weighted Average

UN - United Nations

VOC - Volatile Organic Carbon

vPvB - very Persistent and very Bioaccumulative

VLA-ED - time-weighted average values for a whole work shift [Spain valores límite ambientales para la exposición diaria]

NDS - najwyisze dopuszczalne stkienie na stanowisku pracy

SZW - Netherlands Ministry of Social Affairs and Employment

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

AS/NZS 1715 - New Zeland Standard on Selection, use and maintenance of respiratory protective equipment

C - Celsius

EN 149 - European standard on filtering halfmasks to protect against particles

EN 374 - European standard on Protective gloves against chemicals and micro-organisms

FFP - Filtering Facepieces

h - hour

IATA/ICAO - International Air Transport Association / International Civil Aviation Organization

IMDG/IMO - International Maritime Dangerous Goods / International Maritime Organization

mg/m3 - milligram/cubic meter

mm - millimeter

mmHg - millimeter mercury

NDS - OEL-TWA [Poland najwyisze dopuszczalne stkienie na stanowisku pracy]

R/H-phrases - Risk/Hazard-phrases

RID - The European Agreement concerning the International Carriage of Dangerous Goods by Rail

UK - United Kingdom

w/w - weight/weight

VLA-EC - short-time excursion limits [Spain valores límite ambientales para la exposición de corta duración]

MAK - Maximum Workplace Concentration

d - day

Key literature references and sources for data

www.ChemADVISOR.com/

NZ CCID

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Revision Note

SDS sections updated:

1/

This safety data sheet complies with the requirements of Regulation (EC) No. 2015/830

Disclaimer Statement

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End of Safety Data Sheet