HypoThermosol® FRS

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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

1.1. Product identifier

Product Form : Mixture

Product Name : HypoThermosol® FRS

Synonyms HTS-FRS

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Hypothermic storage of biological material.

DX21478-SDS_3_0_0_EU

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Company

BioLife Solutions
3303 Monte Villa Parkway
Suite 310
Bothell, WA 98021
425-402-1400
www.biolifesolutions.com

1.4. Emergency telephone number

Emergency number : 425-402-1400

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification According to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

Other hazards not contributing to the classification : Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification According to Regulation (EC) No. 1272/2008 [CLP]
Sucrose	(CAS-No.) 57-50-1 (EC-No.) 200-334-9	1	Not classified
Sodium hydroxide**	(CAS-No.) 1310-73-2 (EC-No.) 215-185-5 (EC Index-No.) 011-002-00-6	0,6	Met. Corr. 1, H290 Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314 Eye Dam. 1, H318
Potassium hydroxide**	(CAS-No.) 1310-58-3 (EC-No.) 215-181-3 (EC Index-No.) 019-002-00-8	0,168	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Eye Dam. 1, H318
Potassium chloride	(CAS-No.) 7447-40-7 (EC-No.) 231-211-8	0,1	Not classified
Monopotassium carbonate	(CAS-No.) 298-14-6 (EC-No.) 206-059-0	0,1	Not classified

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Sodium hydroxide**	(CAS-No.) 1310-73-2 (EC-No.) 215-185-5 (EC Index-No.) 011-002-00-6	(0,5 =<C < 2) Skin Irrit. 2, H315 (0,5 =<C < 2) Eye Irrit. 2, H319 (2 =<C < 5) Skin Corr. 1B, H314 (C >= 5) Skin Corr. 1A, H314
Potassium hydroxide**	(CAS-No.) 1310-58-3 (EC-No.) 215-181-3 (EC Index-No.) 019-002-00-8	(0,5 =<C < 2) Skin Irrit. 2, H315 (0,5 =<C < 2) Eye Irrit. 2, H319 (2 =<C < 5) Skin Corr. 1B, H314 (C >= 5) Skin Corr. 1A, H314

Full text of H-statements: see section 16

** Components are added to adjust pH, are neutralized, and do not contribute to the overall hazard classification.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid measures after skin contact : Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid measures after eye contact : Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : Prolonged exposure may cause irritation.

Symptoms/effects after skin contact : Prolonged exposure may cause skin irritation.

Symptoms/effects after eye contact : May cause slight irritation to eyes.

Symptoms/effects after ingestion : Ingestion may cause adverse effects.

Chronic symptoms : None known.

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

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not considered flammable but may burn at high temperatures.

Explosion hazard : Product is not explosive.

Reactivity : Hazardous reactions will not occur under normal conditions. Hazardous reactions may occur on contact with certain chemicals. Refer to incompatible materials.

Hazardous decomposition products in case of fire : Irritating or toxic vapours. Carbon oxides (CO, CO_2). Nitrogen oxides. Methylmercaptan. Sulphur oxides. Sodium oxides. Hydrogen chloride. Potassium oxides. Phosphorus oxides. Calcium oxides. Magnesium oxides. Formaldehyde. Formaldehyde is a potential carcinogen and can act as a skin and respiratory sensitizer. Formaldehyde can also cause respiratory and eye irritation.

5.3. Advice for firefighters

Precautionary measures fire : Exercise caution when fighting any chemical fire.

Firefighting instructions : Use water spray or fog for cooling exposed containers. Remove containers from fire area if this can be done without risk. Do not breathe fumes from fires or vapours from decomposition.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid breathing (vapour, mist, spray). Avoid all contact with skin, eyes, or clothing.

6.1.1. For non-emergency personnel

Protective equipment : Use appropriate personal protective equipment (PPE).

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures	:	Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.
Methods for cleaning up	:	Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to other sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	:	Contains substances that are combustible dusts. If dried and allowed to accumulate, may form combustible dust concentrations in air that could ignite and cause an explosion. Take appropriate precautions.
Precautions for safe handling	:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapours, mist, spray. Use appropriate personal protective equipment (PPE).
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Comply with applicable regulations.
Storage conditions	:	Store in a dry, cool and well-ventilated place. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.
Incompatible materials	:	Strong acids, strong bases, strong oxidizers. Strong reducing agents. Halogenated organic and mineral acids. Halides. Metal salts. Zinc. Steel. Some plastics. Acid chlorides. Maleic anhydride. Water reactive materials.
Storage temperature	:	2 - 8 °C

7.3. Specific end use(s)

Hypothermic storage of biological material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium chloride (7447-40-7)		
Bulgaria	OEL TWA (mg/m³)	5 mg/m³
Latvia	OEL TWA (mg/m³)	5 mg/m³
Lithuania	IPRV (mg/m³)	5 mg/m³
Monopotassium carbonate (298-14-6)		
Czech Republic	Expoziční limity (PEL) (mg/m³)	5 mg/m³
Sucrose (57-50-1)		
Belgium	Limit value (mg/m³)	10 mg/m³
Bulgaria	OEL TWA (mg/m³)	10 mg/m³ (dust, inhalable fraction)
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	10 mg/m³

Sucrose (57-50-1)		
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	20 mg/m³
France	VME (mg/m³)	10 mg/m³
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
Latvia	OEL TWA (mg/m³)	5 mg/m³ (dust)
Spain	VLA-ED (mg/m³)	10 mg/m³
United Kingdom	WEL TWA (mg/m³)	10 mg/m³
United Kingdom	WEL STEL (mg/m³)	20 mg/m³
Estonia	OEL TWA (mg/m³)	10 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³
Ireland	OEL (15 min ref) (mg/m3)	20 mg/m³
Lithuania	IPRV (mg/m³)	10 mg/m³
Slovakia	NPHV (priemerná) (mg/m³)	6 mg/m³ (total aerosol)
Portugal	OEL TWA (mg/m³)	10 mg/m³
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human Carcinogen
Sodium hydroxide (1310-73-2)		
Austria	MAK (mg/m³)	2 mg/m³ (inhalable fraction)
Austria	MAK Short time value (mg/m³)	4 mg/m³ (inhalable fraction)
Bulgaria	OEL TWA (mg/m³)	2 mg/m³ (alkaline aerosols)
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	2 mg/m³
France	VME (mg/m³)	2 mg/m³
Greece	OEL TWA (mg/m³)	2 mg/m³
Greece	OEL STEL (mg/m³)	2 mg/m³
USA ACGIH	ACGIH Ceiling (mg/m³)	2 mg/m³
Latvia	OEL TWA (mg/m³)	0,5 mg/m³
Spain	VLA-EC (mg/m³)	2 mg/m³
Switzerland	KZGW (mg/m³)	2 mg/m³ (inhalable dust)
Switzerland	MAK (mg/m³)	2 mg/m³ (inhalable dust)
United Kingdom	WEL STEL (mg/m³)	2 mg/m³
Czech Republic	Expoziční limity (PEL) (mg/m³)	1 mg/m³
Denmark	Grænseværdie (ceiling) (mg/m³)	2 mg/m³
Estonia	OEL TWA (mg/m³)	1 mg/m³
Estonia	OEL Ceiling (mg/m³)	2 mg/m³
Finland	HTP-arvo (15 min)	2 mg/m³
Finland	OEL Ceiling (mg/m³)	2 mg/m³
Hungary	AK-érték	2 mg/m³
Hungary	CK-érték	2 mg/m³
Ireland	OEL (15 min ref) (mg/m3)	2 mg/m³
Lithuania	NRV (mg/m³)	2 mg/m³
Norway	Grenseverdier (Takverdi) (mg/m³)	2 mg/m³
Poland	NDS (mg/m³)	0,5 mg/m³
Poland	NDSCh (mg/m³)	1 mg/m³
Slovakia	NPHV (priemerná) (mg/m³)	2 mg/m³

Sodium hydroxide (1310-73-2)		
Slovenia	OEL TWA (mg/m³)	2 mg/m³ (inhalable fraction)
Slovenia	OEL STEL (mg/m³)	2 mg/m³ (inhalable fraction)
Sweden	nivågränsvärde (NVG) (mg/m³)	1 mg/m³ (inhalable dust)
Sweden	kortidsvärde (KTV) (mg/m³)	2 mg/m³ (inhalable dust)
Portugal	OEL - Ceilings (mg/m³)	2 mg/m³
Potassium hydroxide (1310-58-3)		
Austria	MAK (mg/m³)	2 mg/m³ (inhalable fraction)
Bulgaria	OEL TWA (mg/m³)	2 mg/m³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	2 mg/m³
France	VLE (mg/m³)	2 mg/m³
Greece	OEL TWA (mg/m³)	2 mg/m³
Greece	OEL STEL (mg/m³)	2 mg/m³
USA ACGIH	ACGIH Ceiling (mg/m³)	2 mg/m³
Spain	VLA-EC (mg/m³)	2 mg/m³
Switzerland	MAK (mg/m³)	2 mg/m³ (inhalable dust)
United Kingdom	WEL STEL (mg/m³)	2 mg/m³
Czech Republic	Expoziční limity (PEL) (mg/m³)	1 mg/m³
Denmark	Grænseværdie (ceiling) (mg/m³)	2 mg/m³
Estonia	OEL TWA (mg/m³)	2 mg/m³
Finland	HTP-arvo (15 min)	2 mg/m³
Finland	OEL Ceiling (mg/m³)	2 mg/m³
Hungary	AK-érték	2 mg/m³
Hungary	CK-érték	2 mg/m³
Ireland	OEL (15 min ref) (mg/m3)	2 mg/m³
Norway	Grenseverdier (Takverdi) (mg/m³)	2 mg/m³
Poland	NDS (mg/m³)	0,5 mg/m³
Poland	NDSCh (mg/m³)	1 mg/m³
Sweden	nivågränsvärde (NVG) (mg/m³)	1 mg/m³ (inhalable dust)
Sweden	kortidsvärde (KTV) (mg/m³)	2 mg/m³ (inhalable dust)
Portugal	OEL - Ceilings (mg/m³)	2 mg/m³

8.2. Exposure controls

Appropriate engineering controls	:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.
Personal protective equipment	:	Gloves. Protective clothing. Protective goggles.

Materials for protective clothing	:	Chemically resistant materials and fabrics.
Hand protection	:	Wear protective gloves.
Eye and Face Protection	:	Chemical safety goggles.
Skin and body protection	:	In laboratory, medical or industrial settings, impervious disposable gloves and protective clothing are recommended if skin contact with the product is possible.
Respiratory protection	:	If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.
Other information	:	When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Clear/colourless to slightly yellow.
Odour	:	Odourless
Odour threshold	:	No data available
pH	:	7,5 - 7,7
Evaporation rate	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Not applicable
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	1,05 (Water=1)
Solubility	:	Soluble in water
Partition coefficient: n-octanol/water	:	No data available
Viscosity	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Hazardous reactions will not occur under normal conditions. Hazardous reactions may occur on contact with certain chemicals. Refer to incompatible materials.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizers. Strong reducing agents. Halogenated organic and mineral acids. Halides. Metal salts. Zinc. Steel. Some plastics. Acid chlorides. Maleic anhydride. Water reactive materials.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

Potassium chloride (7447-40-7)	
LD50 oral rat	2600 mg/kg

Monopotassium carbonate (298-14-6)	
LD50 oral rat	> 2000 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg bodyweight

Sucrose (57-50-1)	
LD50 oral rat	29700 mg/kg

Sodium hydroxide (1310-73-2)	
LD50 oral rat	140 - 340 mg/kg

Potassium hydroxide (1310-58-3)	
LD50 oral rat	284 mg/kg

Skin corrosion/irritation : Not classified. (Based on available data, the classification criteria are not met)
pH: 7,5 - 7,7

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 7,5 - 7,7

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Symptoms/Injuries After Inhalation : Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact : Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact : May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion : Ingestion may cause adverse effects.

Chronic Symptoms : None known.

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified.

Potassium chloride (7447-40-7)	
LC50 fish 1	1060 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	825 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	750 (750 - 1020) mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	880 mg/l (Exposure time: 24 h - Species: Daphnia magna)

Sodium hydroxide (1310-73-2)	
LC50 fish 1	45,4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	40 mg/l

12.2. Persistence and degradability

HTS-FRS	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

HTS-FRS	
Bioaccumulative potential	Not established.

Potassium hydroxide (1310-58-3)	
Log Pow	0,65

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with local, regional, national, and international regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated for transport				
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the	Dangerous for the	Dangerous for the	Dangerous for the	Dangerous for the

ADR	IMDG	IATA	ADN	RID
environment : No	environment: No Marine pollutant : No	environment : No	environment : No	environment : No

14.6. Special precautions for user

No additional information available

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Potassium chloride (7447-40-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Monopotassium carbonate (298-14-6)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Sucrose (57-50-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Sodium hydroxide (1310-73-2)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Potassium hydroxide (1310-58-3)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : Information and data obtained and used in the authoring of this safety data sheet could come from database subscriptions, official government regulatory body websites, product/ingredient manufacturer or supplier specific information, and/or resources that include substance specific data and classifications according to GHS or their subsequent adoption of GHS.

Other information : According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Full Text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Abbreviations and Acronyms

ACGIH – American Conference of Governmental Industrial Hygienists
ADN – European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
BEI - Biological Exposure Indices (BEI)
BOD – Biochemical Oxygen Demand
CAS No. - Chemical Abstracts Service Number
CLP – Classification, Labeling and Packaging Regulation (EC) No 1272/2008
COD – Chemical Oxygen Demand
EC – European Community
EC50 - Median Effective Concentration
EEC – European Economic Community
EINECS – European Inventory of Existing Commercial Chemical Substances
EmS-No. (Fire) - IMDG Emergency Schedule Fire
EmS-No. (Spillage) - IMDG Emergency Schedule Spillage
EU – European Union
ErC50 - EC50 in Terms of Reduction Growth Rate
GHS – Globally Harmonized System of Classification and Labeling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC Code - International Bulk Chemical Code
IMDG - International Maritime Dangerous Goods
IPRV - Ilgalaikio Poveikio Ribinis Dydis
IOELV – Indicative Occupational Exposure Limit Value
LC50 - Median Lethal Concentration
LD50 - Median Lethal Dose
LOAEL - Lowest Observed Adverse Effect Level
LOEC - Lowest-Observed-Effect Concentration
Log Koc - Soil Organic Carbon-water Partitioning Coefficient
Log Kow - Octanol/water Partition Coefficient
Log Pow - Ratio of the equilibrium concentration (C) of a dissolved substance in a two-phase system consisting of two largely immiscible solvents, in this case octanol and water
MAK – Maximum Workplace Concentration/Maximum Permissible Concentration
MARPOL - International Convention for the Prevention of Pollution
NDS - Najwyzsze Dopuszczalne Stezenie
NDSCh - Najwyzsze Dopuszczalne Stezenie Chwilowe
NDSP - Najwyzsze Dopuszczalne Stezenie Pulapowe
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
NRD - Nevirsytinas Ribinis Dydis
NTP – National Toxicology Program
OEL - Occupational Exposure Limits
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
pH – Potential Hydrogen
REACH – Registration, Evaluation, Authorisation, and Restriction of Chemicals
RID – Regulations Concerning the International Carriage of Dangerous Goods by Rail
SADT - Self Accelerating Decomposition Temperature
SDS - Safety Data Sheet
STEL - Short Term Exposure Limit
TA-Luft - Technische Anleitung zur Reinhaltung der Luft
TEL TRK – Technical Guidance Concentrations
ThOD – Theoretical Oxygen Demand
TLM - Median Tolerance Limit
TLV - Threshold Limit Value
TPRD - Trumpalaikio Poveikio Ribinis Dydis
TRGS 510 - Technische Regel für Gefahrstoffe 510 - Lagerung von Gefahrstoffen in ortsbeweglichen Behältern
TRGS 552 – Technische Regeln für Gefahrstoffe - N-Nitrosamine
TRGS 900 - Technische Regel für Gefahrstoffe 900 – Arbeitsplatzgrenzwerte
TRGS 903 - Technische Regel für Gefahrstoffe 903 - Biologische Grenzwerte
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
VOC – Volatile Organic Compounds
VLA-EC - Valor Límite Ambiental Exposición de Corta Duración
VLA-ED - Valor Límite Ambiental Exposición Diaria
VLE – Valeur Limite D'exposition
VME – Valeur Limite De Moyenne Exposition
vPvB - Very Persistent and Very Bioaccumulative
WEL – Workplace Exposure Limit
WGK - Wassergefährdungsklasse

EU GHS SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.