Fragment Specific

Safety Data Sheet

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



Date of issue: 23/04/2024

Version: 3.1

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

1.1. **Product identifier** Product Form : Mixture Product Name : Biotin-SP-conjugated AffiniPure[™] Goat Anti-Rabbit IgG, F(ab')₂ Fragment Specific Product Code : 111-065-006 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 : For in vitro research use only. Not for diagnostic or therapeutic use. This is not a medical device. Contact supplier for specific applications. 1.2.2. Uses advised against No additional information available 1.3. Details of the supplier of the safety data sheet Manufacturer **European Contact** Jackson ImmunoResearch Laboratories, Inc. Jackson ImmunoResearch Europe LTD 872 West Baltimore Pike **Cambridge House** West Grove, PA 19390 St Thomas' Place T: 800-367-5296, 610-869-4024 Ely, Cambridgeshire CB7 4EX, UK F: 610-869-0171 T: +44 (0) 1638 782616 tech@jacksonimmuno.com F: +44 (0) 1353 664675 www.jacksonimmuno.com info@jacksonimmuno.com help@jacksonimmuno.com Email address for the person responsible for this SDS: tech@jacksonimmuno.com 1.4. **Emergency telephone number** : +1-610-869-4024 (USA) **Emergency** number SECTION 2: Hazards identification 2.1. Classification of the substance or mixture Classification According to Regulation (EC) No. 1272/2008 [CLP] Aquatic Chronic3 H412 Full text of hazard classes and H-statements: see section 16 Adverse physicochemical, human health and environmental effects No additional information available 2.2. Label elements Labelling According to Regulation (EC) No. 1272/2008 [CLP] Hazard statements (CLP) H412 - Harmful to aquatic life with long lasting effects. Precautionary statements (CLP) P273 - Avoid release to the environment. P501 - Dispose of contents/container to hazardous or special waste collection

EUH-statements

2.3. Other hazards

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

point, in accordance with local, regional, national and/or international

EUH032 - Contact with acids liberates very toxic gas.

regulation.

Fragment Specific

Safety Data Sheet

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



classification

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]
Sodium azide	(CAS-No.) 26628-22-8	0.54	Acute Tox. 2 (Oral), H300
	(EC-No.) 247-852-1		Aquatic Acute 1, H400
	(EC Index-No.)		Aquatic Chronic 1, H410
	011-004-00-7		
Sodium phosphate dibasic	(CAS-No.) 7558-79-4	1.5	Not classified
	(EC-No.) 231-448-7		
Biotin-SP-conjugated AffiniPure™	(CAS-No.) Not assigned	1.68	Not classified
Goat Anti-Rabbit IgG, F(ab') ₂			
Fragment Specific			
Sodium chloride	(CAS-No.) 7647-14-5	15.69	Not classified
	(EC-No.) 231-598-3		
Albumins, blood serum	(CAS-No.) 9048-46-8	16.12	Not classified
	(EC-No.) 232-936-2		

Full text of H-statements: see section 16

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	: Using proper respiratory protection, move the exposed person to fresh air at once. Immediately call a poison center, physician, or emergency medical service.
First-aid measures after skin contact	: Remove contaminated clothing. Drench affected area with water for at least 5 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 if irritation develops or persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.
4.2. Most important symptoms ar	d effects, both acute and delayed
Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	: May be harmful or 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. May be harmful if swallowed.
Chronic symptoms	: None expected under normal conditions of use.
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

Fragment Specific

Safety Data Sheet

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



Suitable extinguishing media	: Water spray, fog, carbon dioxide (CO ₂), alcohol-resistant foam, or dry chemical. 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 fro	om the substance or mixture
Fire hazard	: Not Assigned
Reactivity	: Sodium azide in water is a weak base. Reacts with copper, lead, silver, mercury, and carbon disulfide to form shock-sensitive compounds. Reacts with acids, forming toxic and explosive hydrogen azide. Contact with acids liberates toxic gas.
Hazardous decomposition products in case of fire	: Hydrogen chloride. Sodium oxides. Nitrogen oxides.
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.
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	ve equipment and emergency procedures
Genera	al measures	: Avoid prolonged contact with eyes, skin and clothing.
6.1.1.	For non-emergency personnel	
Protec	tive equipment	: Use appropriate personal protective equipment (PPE).
Emerg	ency procedures	: Evacuate unnecessary personnel.
6.1.2.	For emergency responders	
Protec	tive equipment	: Equip cleanup crew with proper protection.
Emerg	ency procedures	: 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. Ventilate area.
6.2.	Environmental precautions	
		: Prevent entry to sewers and public waters. Avoid release to the environment.
6.3.	Methods and material for cont	ainment and cleaning up
For co	ntainment	: Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams.
Metho	ds for cleaning up	: Clean up spills immediately and dispose of waste safely. 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 stor	age
7.1. Precautions for safe handling	
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.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety procedures.
7.2. Conditions for safe storage, inc	luding any incompatibilities
Technical measures	: Comply with applicable regulations.
Storage conditions	: Keep container closed when not in use. Store at 2-8°C (35°F - 46.4°F). Keep/Store away from extremely high temperatures and incompatible materials.

Fragment Specific

Safety Data Sheet

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

Jackson ImmunoResearch

Incompatible materials

: Strong acids, strong bases, strong oxidizers. Heavy metals. Halogenated hydrocarbons.

7.3. Specific end use(s)

For in vitro research use only. Not for diagnostic or therapeutic use. This is not a medical device. Contact supplier for specific applications.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium chloride (7647-1	4-5)	
Latvia	OEL TWA (mg/m³)	5 mg/m³
Lithuania	IPRV (mg/m³)	5 mg/m ³
Sodium azide (26628-22-	8)	
EU	IOELV TWA (mg/m ³)	0,1 mg/m ³
EU	IOELV STEL (mg/m ³)	0,3 mg/m ³
EU	Notes	Possibility of significant uptake through the skin
Austria	MAK (mg/m³)	0,1 mg/m ³
Austria	MAK Short time value (mg/m ³)	0,3 mg/m ³
Austria	OEL chemical category (AT)	Skin notation
Belgium	OEL chemical category (BE)	Skin, Skin notation
Bulgaria	OEL TWA (mg/m³)	0,1 mg/m ³
Bulgaria	OEL STEL (mg/m ³)	0,3 mg/m ³
Croatia	GVI (granicna vrijednost izloženosti) (mg/m³)	0,1 mg/m³
Croatia	KGVI (kratkotrajna granicna vrijednost izloženosti) (mg/m³)	0,3 mg/m³
Croatia	OEL chemical category (HR)	Skin notation
Cyprus	OEL TWA (mg/m³)	0,1 mg/m ³
Cyprus	OEL STEL (mg/m ³)	0,3 mg/m ³
Cyprus	OEL chemical category (CY)	Skin-potential for cutaneous absorption
France	VLE (mg/m ³)	0,3 mg/m ³ (restrictive limit)
France	VME (mg/m ³)	0,1 mg/m ³ (restrictive limit)
France	OEL chemical category (FR)	Risk of cutaneous absorption
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	0,2 mg/m ³
Gibraltar	Eight hours mg/m3	0,1 mg/m ³
Gibraltar	Short-term mg/m3	0,3 mg/m ³
Gibraltar	OEL chemical category (GI)	Skin notation
Greece	OEL TWA (mg/m ³)	0,3 mg/m ³
Greece	OEL TWA (ppm)	0,1 ppm
Greece	OEL STEL (mg/m ³)	0,3 mg/m ³
Greece	OEL STEL (ppm)	0,1 ppm

Fragment Specific



Safety Data Sheet

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

Malta	OEL TWA (mg/m³)	0,1 mg/m ³
Luxembourg	OEL chemical category (LU)	Possibility of significant uptake through the skin
Luxembourg	OEL STEL (mg/m ³)	0,3 mg/m³
Luxembourg	OEL TWA (mg/m ³)	0,1 mg/m ³
Lithuania	OEL chemical category (LT)	Skin notation
Lithuania	TPRV (mg/m³)	0,3 mg/m ³
Lithuania	IPRV (mg/m ³)	0,1 mg/m³
Ireland	OEL chemical category (IE)	Potential for cutaneous absorption
Ireland	OEL (15 min ref) (mg/m3)	0,3 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	0,1 mg/m³
Hungary	CK-érték	0,3 mg/m³
Hungary	AK-érték	0,1 mg/m³
Finland	OEL chemical category (FI)	Potential for cutaneous absorption
Finland	HTP-arvo (15 min)	0,3 mg/m ³
Finland	HTP-arvo (8h) (mg/m³)	0,1 mg/m³
Estonia	OEL chemical category (ET)	Sensitizer, Skin notation
Estonia	OEL STEL (mg/m³)	0,3 mg/m³
Estonia	OEL TWA (mg/m³)	0,1 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m ³)	0,1 mg/m³
Czech Republic	OEL chemical category (CZ)	Potential for cutaneous absorption
Czech Republic	Expozicní limity (PEL) (mg/m³)	0,1 mg/m ³
United Kingdom	WEL chemical category	Potential for cutaneous absorption
United Kingdom	WEL STEL (mg/m ³)	0,3 mg/m ³
United Kingdom	WEL TWA (mg/m³)	0,1 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	0,3 mg/m ³
Netherlands	Grenswaarde TGG 8H (mg/m³)	0,1 mg/m ³
Switzerland	MAK (mg/m³)	0,2 mg/m³ (inhalable dust)
Switzerland	KZGW (mg/m³)	0,4 mg/m³ (inhalable dust)
Spain	OEL chemical category (ES)	skin - potential for cutaneous absorption
Spain	VLA-EC (mg/m ³)	0,3 mg/m³
Spain	VLA-ED (mg/m ³)	0,1 mg/m ³ (indicative limit value)
Latvia	OEL chemical category (LV)	skin - potential for cutaneous exposure
Latvia	OEL TWA (mg/m ³)	0,1 mg/m ³
Italy	OEL chemical category (IT)	skin - potential for cutaneous absorption
Italy	OEL STEL (mg/m ³)	0,3 mg/m ³
Italy	OEL TWA (mg/m ³)	0,1 mg/m ³
USA ACGIH	ACGIH Ceiling (ppm)	0,11 ppm

Fragment Specific



Safety Data Sheet

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

Malta	OEL STEL (mg/m ³)	0,3 mg/m³
Malta	OEL chemical category (MT)	Possibility of significant uptake through the skin
Norway	Grenseverdier (AN) (mg/m ³)	0,1 mg/m³
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	0,3 mg/m ³ (value from the regulation)
Poland	NDS (mg/m ³)	0,1 mg/m ³
Poland	NDSCh (mg/m ³)	0,3 mg/m ³
Romania	OEL TWA (mg/m ³)	0,1 mg/m ³
Romania	OEL STEL (mg/m ³)	0,3 mg/m ³
Romania	OEL chemical category (RO)	Skin notation
Slovakia	NPHV (priemerná) (mg/m³)	0,1 mg/m³ (Sodium azide)
Slovakia	NPHV (Hranicná) (mg/m³)	0,3 mg/m ³
Slovakia	OEL chemical category (SK)	Potential for cutaneous absorption
Slovenia	OEL TWA (mg/m ³)	0,1 mg/m ³
Slovenia	OEL STEL (mg/m ³)	0,3 mg/m ³
Slovenia	OEL chemical category (SL)	Potential for cutaneous absorption
Sweden	nivågränsvärde (NVG) (mg/m³)	0,1 mg/m ³
Sweden	kortidsvärde (KTV) (mg/m³)	0,3 mg/m ³
Portugal	OEL TWA (mg/m ³)	0,1 mg/m ³ (indicative limit value)
Portugal	OEL STEL (mg/m ³)	0,3 mg/m ³ (indicative limit value)
Portugal	OEL - Ceilings (mg/m³)	0,29 mg/m ³
Portugal	OEL - Ceilings (ppm)	0,11 ppm (vapor)
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human
		Carcinogen, skin - potential for cutaneous
		exposure indicative limit value

8.2. Exposure controls

Appropriate engineering controls

Personal protective equipment

Materials for protective clothing Hand protection Eye and Face Protection Skin and body protection Respiratory protection

Other information

- : Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure all national/local regulations are observed.
- : Gloves. Protective clothing. Protective goggles.



- : Chemically resistant materials and fabrics.
- : Wear protective gloves.
- : Chemical safety goggles.
- : Wear suitable protective clothing.
- : 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.
- : When using, do not eat, drink or smoke.

Fragment Specific



Safety Data Sheet

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

SECTION 9: Physical and chemica	l properties
9.1. Information on basic physical and c	chemical properties
Physical state	: Solid
Colour	: Light tan solid
Odour	: Odourless, as water
Odour threshold	: No data available
рН	: 7.6, when rehydrated with indicated volume of H_2O
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 temerature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water
Partition coefficent: 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	

Other information 9.2.

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Sodium azide in water is a weak base. Reacts with copper, lead, silver, mercury, and carbon disulfide to form shock-sensitive compounds. Reacts with acids, forming toxic and explosive hydrogen azide. Contact with acids liberates toxic gas.

10.2. **Chemical stability**

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

Possibility of hazardous reactions 10.3.

Hazardous polymerization will not occur.

10.4. **Conditions to avoid**

Extremely high temperatures, and incompatible materials. Sparks, heat, open flame and other sources of ignition.

10.5. **Incompatible materials**

Strong acids, strong bases, strong oxidizers. Heavy metals. halogenated hydrocarbons.

10.6. Hazardous decomposition products

Sodium oxides. Hydrogen chloride gas. Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

: Not classified Acute toxicity

Sodium chloride (7647-14-5)	
LD50 oral rat	3550 mg/kg (Species: Wistar)

Fragment Specific



Safety Data Sheet

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

LD50 dermal rabbit	>10000 mg/kg (Species: New Zealand White)	
LC50 inhalation rat (mg/l)	> 42 g/m³ (Exposure time: 1 h)	
Sodium azide (26628-22-8)		
LD50 oral rat	27 mg/kg	
LD50 oral	45 mg/kg	
LD50 dermal rabbit	20 mg/kg	
Sodium phosphate dibasic (7558-79-4)		
LD50 oral rat	17 g/kg	
LD50 dermal rat	>500 mg/kg (50% solution)	
Skin corrosion/irritation	: Not classified pH: 7,6 when rehydrated with indicated volume of H ₂ O	
Serious eye damage/irritation	 Not classified pH: 7,6 when rehydrated with indicated volume of H₂O 	
Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity	 Not classified Not classified Not classified 	
Reproductive toxicity STOT-single exposure	 Not classified Not classified Not classified 	
Aspiration hazard	: Not classified	
Symptoms/Injuries After Inhalation Symptoms/Injuries After Skin Contact Symptoms/Injuries After Eye Contact Symptoms/Injuries After Ingestion Chronic Symptoms	 May be harmful or cause irritation. Prolonged exposure may cause skin irritation. May cause slight irritation to eyes. Ingestion may cause adverse effects. May be harmful if swallowed. None expected under normal conditions of use. 	
SECTION 12: Ecological inform		
12.1. Toxicity		
Ecology - general	: Harmful to aquatic life with long lasting effects.	
Sodium chloride (7647-14-5)		
LC50 fish 1	5560 (5560 - 6080) mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])	
EC50 Daphnia 1	1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)	
LC50 fish 2	12946 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])	
EC50 Daphnia 2	340,7 (340,7 - 469,2) mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])	
NOEC chronic fish	252 mg/l (Species: Pimephales promelas)	
Sodium azide (26628-22-8)		
LC50 fish 1	0,8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)	
LC50 fish 2	0,7 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)	
ErC50 (algae)	0,348 mg/l	

Fragment Specific

Safety Data Sheet

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



12.2. Persistence and degradability

12.2. Persistence and degradad	liity
Biotin-SP-conjugated AffiniPure™ Go	at Anti-Rabbit IgG, F(ab') ₂ Fragment Specific
Persistence and degradability	Not established.
12.3. Bioaccumulative potentia	1
Biotin-SP-conjugated AffiniPure™ Go	at Anti-Rabbit IgG, F(ab') ₂ Fragment Specific
Bioaccumulative potential	Not established.
Sodium chloride (7647-14-5)	
BCF fish 1	(no bioaccumulation)
12.4. Mobility in soil No additional information available	
12.5. Results of PBT and vPvB a No additional information available	ssessment
12.6. Other adverse effects	
Other information : Avoid release to the environment.	
SECTION 13: Disposal con	siderations
13.1. Waste treatment method	S
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. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

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	ΙΑΤΑ	ADN	RID
14.1. UN number				
Not regulated for tran	sport			
14.2. UN proper s	shipping name			
Notapplicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport h	azard class(es)			
Notapplicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing gro	up			
Notapplicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environme	ntal hazards			
Dangerous for the	Dangerous for the	Dangerous for the	Dangerous for the	Dangerous for the
environment : No	environment : No	environment : No	environment : No	environment : No
	Marine pollutant : No			
1.6 Special proce	utions for usor			

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

Fragment Specific



Safety Data Sheet

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

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

Sodium phosphate dibasic (7558-79-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Sodium chloride (7647-14-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Sodium azide (26628-22-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Albumins, blood serum (9048-46-8)

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 informationDate of Preparation or Latest Revision: 23/04/2024Data 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. 2 (Oral)	Acute toxicity (oral), Category 2	
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1	
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1	
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3	
H300	Fatal if swallowed.	
H400	Very toxic to aquatic life.	
H410	Very toxic to aquatic life with long lasting effects.	
H412	Harmful to aquatic life with long lasting effects.	
EUH032 Contact with acids liberates very toxic gas.		

Indication of Changes No additional information available

Abbreviations and Acronyms

Fragment Specific

Safety Data Sheet

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

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