

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 24-Nov-2010 Revision Date 09-Sep-2024 **Revision Number** 9

# SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE **COMPANY/UNDERTAKING**

#### 1.1. Product identifier

**Product Description: Sodium Persulfate** 

Cat No.: BP2637-1

**Svnonvms** Sodium peroxydisulfate

**CAS No** 7775-27-1 EC No 231-892-1 Molecular Formula Na2 O8 S2

**REACH** registration number

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

**Recommended Use** Laboratory chemicals.

Sector of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

PC21 - Laboratory chemicals **Product category** 

PROC15 - Use as a laboratory reagent **Process categories** 

ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) **Environmental release category** 

Uses advised against No Information available

## 1.3. Details of the supplier of the safety data sheet

Company

UK entity/business name

Fisher Scientific UK Bishop Meadow Road.

Loughborough, Leicestershire LE11 5RG,

United Kingdom

EU entity/business name

Thermo Fisher Scientific

Janssen Pharmaceuticalaan 3a, 2440 Geel,

Belgium

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

CHEMTREC®, Inside the USA: 800-424-9300 CHEMTREC®, Outside the USA: 001-703-527-3887

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number US:001-201-796-7100 / Europe: +32 14 57 52 99 CHEMTREC Tel. No. US:001-800-424-9300 / Europe:001-703-527-3887

# **SECTION 2: HAZARDS IDENTIFICATION**

# 2.1. Classification of the substance or mixture

#### **Sodium Persulfate**

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#### GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

#### **Physical hazards**

Oxidizing solids Category 3 (H272)

#### **Health hazards**

Acute oral toxicityCategory 4 (H302)Skin Corrosion/IrritationCategory 2 (H315)Respiratory SensitizationCategory 1 (H334)Skin SensitizationCategory 1 (H317)Specific target organ toxicity - (single exposure)Category 3 (H335)

#### **Environmental hazards**

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

#### 2.2. Label elements



#### Signal Word

Danger

#### **Hazard Statements**

- H272 May intensify fire; oxidizer
- H302 Harmful if swallowed
- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H335 May cause respiratory irritation

#### **Precautionary Statements**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P220 - Keep away from clothing and other combustible materials

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

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

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

P371 + P380 + P375 - In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion

### 2.3. Other hazards

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment

Toxicity to Soil Dwelling Organisms
Toxic to terrestrial vertebrates

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This product does not contain any known or suspected endocrine disruptors

# **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

# 3.1. Substances

Component	CAS No	EC No	Weight %	GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Sodium persulfate	7775-27-1	EEC No. 231-892-1	>95	Ox. Sol. 3 (H272) STOT SE 3 (H335) Skin Irrit. 2 (H315) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Acute Tox. 4 (H302)

REACH registration number	•
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Full text of Hazard Statements: see section 16

# **SECTION 4: FIRST AID MEASURES**

# 4.1. Description of first aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists,

call a physician.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Get medical attention if

symptoms occur.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

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

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

#### 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

#### Sodium Persulfate

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#### **Suitable Extinguishing Media**

Flooding quantities of water.

### Extinguishing media which must not be used for safety reasons

Do not use halon type extinguisher.

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

Oxidizer: Contact with combustible/organic material may cause fire. Containers may explode when heated or if contaminated with water. Decomposes violently at elevated temperatures. May ignite combustibles (wood paper, oil, clothing, etc.).

#### **Hazardous Combustion Products**

Sulfur oxides, Oxygen.

#### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

# **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.

#### 6.2. Environmental precautions

Should not be released into the environment.

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

Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

# **SECTION 7: HANDLING AND STORAGE**

#### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Avoid dust formation. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from clothing and other combustible materials.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

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

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Keep away from acids. Protect from moisture.

Technical Rules for Hazardous Substances (TRGS) 510 Class 5.1B Storage Class (LGK) (Germany)

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# 7.3. Specific end use(s)

Use in laboratories

# **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### 8.1. Control parameters

### **Exposure limits**

List source(s): IRE - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Sodium persulfate			TWA: 0.1 mg/m <sup>3</sup> 8 hr.
			STFI: 0.3 mg/m <sup>3</sup> 15 min

#### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)	
Sodium persulfate	DNEL = 2.248mg/cm2	DNEL = 400mg/kg	DNEL = 0.102mg/cm2	DNEL = 18.2mg/kg	
7775-27-1 ( >95 )		bw/day		bw/day	

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Sodium persulfate 7775-27-1 ( >95 )		DNEL = 590mg/m <sup>3</sup>	DNEL = 2.06mg/m <sup>3</sup>	$DNEL = 2.06 mg/m^3$

#### **Predicted No Effect Concentration (PNEC)**

See values below.

Γ	Component	Fresh water	Fresh water	Water Intermittent Microorganisms in		Soil (Agriculture)
			sediment		sewage treatment	
Γ	Sodium persulfate	PNEC =	PNEC =	PNEC = 0.763mg/L	PNEC = 3.6mg/L	PNEC =
	7775-27-1 ( >95 )	0.0763mg/L	0.275mg/kg			0.015mg/kg soil dw
L			sediment dw			

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Sodium persulfate	PNEC = 0.011mg/L	PNEC =			
7775-27-1 (>95)	1	0.0396mg/kg			
,		sediment dw			

# 8.2. Exposure controls

#### **Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

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Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber Nitrile rubber Neoprene PVC	See manufacturers recommendations	-	EN 374	(minimum requirement)

Skin and body protection Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used

and maintained properly

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits Large scale/emergency use

are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Particulates filter conforming to EN 143

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure Small scale/Laboratory use

limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Particle filtering: EN149:2001 When RPE is used a face piece Fit Test should be conducted

No information available. **Environmental exposure controls** 

# **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

#### 9.1. Information on basic physical and chemical properties

Powder Solid **Physical State** 

**Appearance** White Odor Odorless

**Odor Threshold** No data available Melting Point/Range 100 °C / 212 °F **Softening Point** No data available **Boiling Point/Range** No information available

Flammability (liquid) Not applicable Solid

No information available Flammability (solid,gas)

No data available **Explosion Limits** 

**Flash Point** No information available Method - No information available

No data available **Autoignition Temperature** 

**Decomposition Temperature** 180 °C

pН 5 - 7 550 g/I H2O **Viscosity** Not applicable Solid

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Water Solubility 550 g/L (20°C)

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Vapor Pressure No data available

Density / Specific Gravity 2.6

Bulk Density

No data available

Vapor Density

Not applicable

Particle characteristics No data available

9.2. Other information

Molecular FormulaNa2 O8 S2Molecular Weight238.09Oxidizing PropertiesOxidizer

Evaporation Rate Not applicable - Solid

# **SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity

Yes

10.2. Chemical stability

Oxidizer: Contact with combustible/organic material may cause fire.

10.3. Possibility of hazardous reactions

**Hazardous Polymerization** Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat. Avoid dust formation. Exposure to moisture.

Solid

Combustible material. Exposure to moist air or water.

10.5. Incompatible materials

Strong oxidizing agents. Acids. Strong reducing agents. Combustible material.

10.6. Hazardous decomposition products

Sulfur oxides. Oxygen.

# **SECTION 11: TOXICOLOGICAL INFORMATION**

## 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### **Product Information**

(a) acute toxicity;

Oral Category 4

DermalBased on available data, the classification criteria are not metInhalationBased on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation		
Sodium persulfate	LD50 = 895 mg/kg (Rat)	LD50 > 10000 mg/kg ( Rabbit )	LC50 > 21.6 mg/L (Rat) 4 h		

(b) skin corrosion/irritation; Category 2

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(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;

Respiratory Category 1 Skin Category 1

May cause sensitization by inhalation and skin contact

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

Based on available data, the classification criteria are not met (f) carcinogenicity;

There are no known carcinogenic chemicals in this product

Based on available data, the classification criteria are not met (g) reproductive toxicity;

(h) STOT-single exposure; Category 3

Results / Target organs Respiratory system.

Based on available data, the classification criteria are not met (i) STOT-repeated exposure;

None known. **Target Organs** 

Not applicable (j) aspiration hazard;

Solid

**Other Adverse Effects** The toxicological properties have not been fully investigated.

delayed

Symptoms / effects, both acute and Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

#### 11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any

known or suspected endocrine disruptors.

# SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

**Ecotoxicity effects** Do not empty into drains. .

Component	Freshwater Fish	Water Flea	Freshwater Algae
Sodium persulfate	LC50: = 771 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 771 mg/L, 96h static (Lepomis macrochirus)	EC50: = 133 mg/L, 48h (Daphnia magna)	

12.2. Persistence and degradability

Soluble in water, Persistence is unlikely, based on information available. **Persistence** 

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**Degradability** Not relevant for inorganic substances.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

12.4. Mobility in soil The product is water soluble, and may spread in water systems Will likely be mobile in the

environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB

assessment

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not

require assessment.

12.6. Endocrine disrupting

properties

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

# **SECTION 13: DISPOSAL CONSIDERATIONS**

13.1. Waste treatment methods

Waste from Residues/Unused

**Products** 

Waste is classified as hazardous. Dispose of in accordance with the European Directives

on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

European Waste Catalogue (EWC) According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

Other Information Waste codes should be assigned by the user based on the application for which the product

was used. Do not empty into drains.

#### **SECTION 14: TRANSPORT INFORMATION**

IMDG/IMO

**14.1. UN number** UN1505

14.2. UN proper shipping name SODIUM PERSULPHATE

14.3. Transport hazard class(es) 5.1
14.4. Packing group III

<u>ADR</u>

**14.1. UN number** UN1505

14.2. UN proper shipping name SODIUM PERSULPHATE

14.3. Transport hazard class(es) 5.1
14.4. Packing group III

IATA

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**14.1. UN number** UN1505

14.2. UN proper shipping name SODIUM PERSULPHATE

**14.3. Transport hazard class(es)** 5.1 **14.4. Packing group** III

14.5. Environmental hazards No hazards identified

**14.6. Special precautions for user** No special precautions required.

14.7. Maritime transport in bulk Not

according to IMO instruments

Not applicable, packaged goods

# **SECTION 15: REGULATORY INFORMATION**

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

#### **International Inventories**

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Sodium persulfate	7775-27-1	231-892-1	-	-	Х	X	KE-12369	Х	Х
Component	CAS No	TSCA	TSCA Ir	ventory	DSL	NDSL	AICS	NZIoC	PICCS
•		1	notific	ation -					1

Component	CAS No	TSCA	SCA TSCA Inventory notification - Active-Inactive		NDSL	AICS	NZIoC	PICCS
Sodium persulfate	7775-27-1	X	ACTIVE	X	-	X	Х	Х

**Legend:** X - Listed '-' - Not Listed **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

#### Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization		REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Sodium persulfate	7775-27-1	-	-	-

Not applicable

#### Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -
·		Qualifying Quantities for Major Accident	Qualifying Quantities for Safety Report
		Notification	Requirements
Sodium persulfate	7775-27-1	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

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#### **National Regulations**

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

#### **WGK Classification**

See table for values

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class	
Sodium persulfate	WGK1		

Component	France - INRS (Tables of occupational diseases)
Sodium persulfate	Tableaux des maladies professionnelles (TMP) - RG 65,RG 66

### 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

# **SECTION 16: OTHER INFORMATION**

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

H302 - Harmful if swallowed

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 - May cause respiratory irritation

H272 - May intensify fire; oxidizer

#### Legend

CAS - Chemical Abstracts Service

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

Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

RPE - Respiratory Protective Equipment LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

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

IMO/IMDG - International Maritime Organization/International Maritime

Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

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

MARPOL - International Convention for the Prevention of Pollution from

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

#### Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

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#### **Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Creation Date24-Nov-2010Revision Date09-Sep-2024Revision SummaryNot applicable.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

#### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

# **End of Safety Data Sheet**