

according to Regulation (EC) No. 1907/2006

Creation Date 03-Jun-2010 Revision Date 29-Sep-2023 Revision Number 8

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

#### 1.1. Product identifier

Product Description: <u>Calcium sulfate dihydrate</u>

Cat No.: 315250000; 315250025; 315251000; 315255000

**Synonyms** Alabaster; Annaline; Gypsum

 CAS No
 10101-41-4

 Molecular Formula
 Ca O4 S . 2 H2 O

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

Recommended Use Laboratory chemicals.
Uses advised against No Information available

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

Company

EU entity/business name

Thermo Fisher Scientific

Janssen Pharmaceuticalaan 3a, 2440 Geel, Belgium

UK entity/business name

Fisher Scientific UK Bishop Meadow Road,

Loughborough, Leicestershire LE11 5RG, United Kingdom

**Swiss distributor -** Fisher Scientific AG Neuhofstrasse 11, CH 4153 Reinach

Tel: +41 (0) 56 618 41 11

e-mail - infoch@thermofisher.com

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

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

customers in Switzerland:

Tox Info Suisse Emergency Number: 145 (24hr)

Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)

Chemtrec (24h) Toll-Free: 0800 564 402 Chemtrec Local: +41-43 508 20 11 (Zurich)

# **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

#### Calcium sulfate dihydrate

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# CLP Classification - Regulation (EC) No 1272/2008

#### **Physical hazards**

Based on available data, the classification criteria are not met

# Health hazards

Based on available data, the classification criteria are not met

#### **Environmental hazards**

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

# 2.2. Label elements

None required

#### 2.3. Other hazards

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 %	CLP Classification - Regulation (EC) No 1272/2008
Calcium sulfate dihydrate	10101-41-4		> 95	-
Sulfuric acid, calcium salt (1:1)	7778-18-9	EEC No. 231-900-3	ī	-

Full text of Hazard Statements: see section 16

# **SECTION 4: FIRST AID MEASURES**

#### 4.1. Description of first aid measures

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. Get medical attention

immediately if symptoms occur.

**Ingestion** Do NOT induce vomiting. Get medical attention.

ingestion bottom and induce vorniting. Get medical attention

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Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

**Self-Protection of the First Aider** No special precautions required.

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

No information available.

#### 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

Inhalation

#### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

# Extinguishing media which must not be used for safety reasons

No information available.

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

Thermal decomposition can lead to release of irritating gases and vapors.

#### **Hazardous Combustion Products**

Sulfur oxides.

#### 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. See Section 12 for additional Ecological Information.

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

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

# **SECTION 7: HANDLING AND STORAGE**

#### Calcium sulfate dihydrate

#### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes or clothing.

#### **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.

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

Storage Class/LGK 13

Switzerland - Storage of hazardous substances

Storage class - SC 11/13 https://www.kvu.ch/de/themen/stoffe-und-produkte https://www.kvu.ch/fr/themes/substances-et-produits https://www.kvu.ch/it/temi/sostanze-e-prodotti

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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 - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. CH - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

Component	European Union	The United Kingdom	France	Belgium	Spain
Calcium sulfate				TWA: 10 mg/m <sup>3</sup> 8 uren	TWA / VLA-ED: 10
dihydrate				_	mg/m³ (8 horas)
Sulfuric acid, calcium			TWA / VME: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> 8 uren	TWA / VLA-ED: 10
salt (1:1)			(8 heures).		mg/m³ (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Calcium sulfate dihydrate			TWA: 10 mg/m <sup>3</sup> 8 horas		
Sulfuric acid, calcium salt (1:1)		TWA: 6 mg/m³ (8 Stunden). AGW -	TWA: 10 mg/m <sup>3</sup> 8 horas		

Component	Austria	Denmark	Switzerland	Poland	Norway
Calcium sulfate			TWA: 3 mg/m <sup>3</sup> 8		
dihydrate			Stunden		
Sulfuric acid, calcium	MAK-KZGW: 10 mg/m <sup>3</sup>		TWA: 3 mg/m <sup>3</sup> 8	TWA: 10 mg/m <sup>3</sup> 8	
salt (1:1)	15 Minuten		Stunden	godzinach	
	MAK-TMW: 5 mg/m <sup>3</sup> 8		TWA: 10 mg/m <sup>3</sup> 8	_	
	Stunden		Stunden		

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Calcium sulfate		TWA-GVI: 4 mg/m <sup>3</sup> 8			
dihydrate		satima. respirable dust			
		TWA-GVI: 10 mg/m <sup>3</sup> 8			

#### Calcium sulfate dihydrate

		satima. total dust, inhalable particles		
Sulfuric acid, calcium	TWA: 10.0 mg/m <sup>3</sup>		TWA: 10 mg/m <sup>3</sup> 8 hr.	
salt (1:1)	_		STEL: 30 mg/m <sup>3</sup> 15 min	

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Sulfuric acid, calcium				TWA: 4 mg/m <sup>3</sup> 8	
salt (1:1)				órában. AK	
				TWA: 1.5 mg/m <sup>3</sup> 8	
				órában. AK	

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Sulfuric acid, calcium	TWA: 4 mg/m <sup>3</sup>				
salt (1:1)					

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Calcium sulfate	MAC: 2 mg/m <sup>3</sup>	TWA: 1.5 mg/m <sup>3</sup>			
dihydrate					
Sulfuric acid, calcium		TWA: 4 mg/m <sup>3</sup>	TWA: 6 mg/m <sup>3</sup> 8 urah		
salt (1:1)		inhalable fraction	respirable fraction		
		TWA: 1.5 mg/m <sup>3</sup>			

# **Biological limit values**

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

# **Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

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

See table for values

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Sulfuric acid, calcium salt (1:1) 7778-18-9 ( - )		DNEL = 5082mg/m <sup>3</sup>		DNEL = 21.17mg/m <sup>3</sup>

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

See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	,
Sulfuric acid, calcium salt				PNEC = 100mg/L	
(1:1)				-	
7778-18-9 ( - )					

#### 8.2. Exposure controls

# **Engineering Measures**

None under normal use conditions.

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Personal protective equipment

Eye Protection Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection Protective gloves

Glove material Breakthrough time Glove thickness EU standard Glove comments

Natural rubber See manufacturers - EN 374 (minimum requirement)

Nitrile rubber recommendations

Neoprene
PVC

**Skin and body protection**Wear appropriate protective gloves and clothing to prevent skin exposure.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) 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. gloves with care avoiding skin contamination.

**Respiratory Protection** No protective equipment is needed under normal use conditions.

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

are exceeded or if irritation or other symptoms are experienced

Recommended Filter type: Particle filter

Small scale/Laboratory use Maintain adequate ventilation

**Environmental exposure controls** No information available.

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

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

Physical State Powder Solid

Appearance White Odor Odorless

Odor Threshold
Melting Point/Range
Softening Point
Boiling Point/Range
No data available
No data available
No information available

Flammability (liquid) Not applicable Solid

Flammability (solid,gas)

No information available

Explosion Limits No data available

Flash Point No information available Method - No information available

Autoignition Temperature No data available

**Decomposition Temperature** > 140°C

pH 7 5% aq. solution

Viscosity Not applicable Solid

Water Solubility 2 g/l (20°C)

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Component log Pow

Sulfuric acid, calcium salt (1:1) -0.2

Vapor Pressure No data available

Density / Specific Gravity 2.320

Bulk Density No data available

Vapor Density Not applicable Solid

Particle characteristics No data available

# Calcium sulfate dihydrate

9.2. Other information

Molecular Formula Ca O4 S . 2 H2 O

Molecular Weight 172.17

Evaporation Rate Not applicable - Solid

# **SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

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

Hazardous Reactions No information available.

10.4. Conditions to avoid

Avoid dust formation. Incompatible products. Excess heat.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Sulfur oxides.

# **SECTION 11: TOXICOLOGICAL INFORMATION**

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

#### **Product Information**

(a) acute toxicity;

Oral Based on available data, the classification criteria are not met

DermalNo data availableInhalationNo data available

# Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sulfuric acid, calcium salt (1:1)	> 3000 mg/kg ( Rat )	-	LC50 > 3.26 mg/L (Rat) 4 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory No data available Skin No data available

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(e) germ cell mutagenicity; No data available

Not mutagenic in AMES Test

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; Not applicable

Solid

Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for

complete information

Symptoms / effects,both acute and No information available.

delayed

11.2. Information on other hazards

known or suspected endocrine disruptors.

# **SECTION 12: ECOLOGICAL INFORMATION**

12.1. Toxicity

**Ecotoxicity effects** 

Component	Freshwater Fish	Water Flea	Freshwater Algae	
Sulfuric acid, calcium salt (1:1)	Lepomis macrochirus: LC50:	EC50: 3200 mg/L/120H		
	2.98 mg/L/96H			

# 12.2. Persistence and degradability

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

**Degradability** Not relevant for inorganic substances.

**12.3. Bioaccumulative potential** Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Sulfuric acid, calcium salt (1:1)	-0.2	No data available

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

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12.5. Results of PBT and vPvB

assessment

No data available for 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** 

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to

ensure complete and accurate classification.

Contaminated Packaging Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use

empty containers.

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.

Switzerland - Waste Ordinance Disposal should be in accordance with applicable regional, national and local laws and

regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance,

ADWO) SR 814.600

https://www.fedlex.admin.ch/eli/cc/2015/891/en

# **SECTION 14: TRANSPORT INFORMATION**

IMDG/IMO Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

ADR Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

IATA Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

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**14.5. Environmental hazards**No hazards identified

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

14.7. Maritime transport in bulk 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
Calcium sulfate dihydrate	10101-41-4	-	-	-	Х	Х	-	-	-
Sulfuric acid, calcium salt (1:1)	7778-18-9	231-900-3	-	-	Х	X	KE-04614	X	Х

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Calcium sulfate dihydrate	10101-41-4	-	-	-	-	X	X	Х
Sulfuric acid, calcium salt (1:1)	7778-18-9	Х	ACTIVE	Х	-	Х	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

Not applicable

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)
Calcium sulfate dihydrate	10101-41-4	-	-	-
Sulfuric acid, calcium salt (1:1)	7778-18-9	-	-	-

# Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report
		Notification	Requirements
Calcium sulfate dihydrate	10101-41-4	Not applicable	Not applicable
Sulfuric acid, calcium salt (1:1)	7778-18-9	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

See table for values **WGK Classification** 

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class	
Sulfuric acid, calcium salt (1:1)	WGK1		

#### **Swiss Regulations**

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

#### 15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

#### **SECTION 16: OTHER INFORMATION**

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

#### 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

Ships

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

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards On basis of test data **Health Hazards** Calculation method **Environmental hazards** Calculation method

#### **Training Advice**

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

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This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No. 1907/2006

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

#### **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**