

according to Regulation (EC) No. 1907/2006

Revision Date 17-Feb-2024 Revision Number 3

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

### 1.1. Product identifier

Product Description: Sodium hexafluorosilicate

 Cat No.:
 \$55490

 Index No
 009-012-00-0

 CAS No
 16893-85-9

 Molecular Formula
 F6 Na2 Si

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

Recommended Use Laboratory chemicals.
Uses advised against Laboratory chemicals.
No Information available

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

Company

Thermo Fisher (Kandel) GmbH

Erlenbachweg 2, 76870 Kandel, Germany

Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300

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

Tel: +41 (0) 56 618 41 11

https://www.fishersci.ch/ch/en/customer-help-

support/forms/email-us.html

**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

CLP Classification - Regulation (EC) No 1272/2008

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#### Sodium hexafluorosilicate

### **Physical hazards**

Based on available data, the classification criteria are not met

### **Health hazards**

Acute oral toxicity

Acute dermal toxicity

Acute Inhalation Toxicity - Dusts and Mists

Category 3 (H301)

Category 3 (H311)

Category 3 (H331)

#### **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**

H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled

#### **Precautionary Statements**

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P280 - Wear protective gloves/protective clothing

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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

P311 - Call a POISON CENTER or doctor/physician

### 2.3. Other hazards

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

Toxic to terrestrial vertebrates

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
Silicate(2-), hexafluoro-, disodium	16893-85-9	EEC No. 240-934-8	<=100	Acute Tox. 3 (H301)
				Acute Tox. 3 (H311)
				Acute Tox. 3 (H331)

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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** Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Eye Contact In the case of contact with eyes, rinse immediately with plenty of water and seek medical

advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15

minutes.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical

attention is required.

**Ingestion** Do NOT induce vomiting. Call a physician or poison control center immediately.

**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth

method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Immediate medical attention is required.

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

None reasonably foreseeable.

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

Notes to Physician Treat symptomatically.

### **SECTION 5: FIREFIGHTING MEASURES**

### 5.1. Extinguishing media

### Suitable Extinguishing Media

Not combustible.

#### 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**

Hydrogen fluoride, Silicon dioxide, Sodium 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. Thermal decomposition can lead to release of irritating gases and vapors.

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

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Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

#### 6.2. Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system.

#### 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**

#### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

#### **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 container tightly closed in a dry and well-ventilated place.

Technical Rules for Hazardous Substances (TRGS) 510

Storage Class (LGK) (Germany)

Storage Class/LGK 6.1D

Switzerland - Storage of hazardous substances Storage class - SC 6.1

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

#### 7.3. Specific end use(s)

Use in laboratories

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

#### 8.1. Control parameters

#### **Exposure limits**

List source(s): UK - EH40/2005 Work Exposure Limits, Forth edition. Published 2020.

Component	European Union	The United Kingdom	France	Belgium	Spain
Silicate(2-),		STEL: 7.5 mg/m <sup>3</sup> 15 min	TWA / VME: 2.5 mg/m <sup>3</sup>		TWA / VLA-ED: 2.5
hexafluoro-, disodium		TWA: 2.5 mg/m <sup>3</sup> 8 hr	(8 heures). indicative		mg/m³ (8 horas)
			limit		

Component	Italy	Germany	Portugal	The Netherlands	Finland
Silicate(2-),		TWA: 1 mg/m <sup>3</sup> (8	TWA: 2.5 mg/m <sup>3</sup> 8 horas		
hexafluoro-, disodium		Stunden). AGW -	_		
		exposure factor 4			
		TWA: 1 mg/m <sup>3</sup> (8			

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	Stunden). MAK Haut		

L	Component	Austria	Denmark	Switzerland	Poland	Norway
Γ	Silicate(2-),					TWA: 0.5 mg/m <sup>3</sup> 8 timer
ŀ	nexafluoro-, disodium					

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Silicate(2-),	TWA: 0.2 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup> IPRD			
hexafluoro-, disodium		F			

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Silicate(2-),	MAC: 0.2 mg/m <sup>3</sup>				
hexafluoro-, disodium	_				

### **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	Acute effects	Chronic effects local	Chronic effects
	(Inhalation)	systemic (Inhalation)	(Inhalation)	systemic (Inhalation)
Silicate(2-), hexafluoro-,		$DNEL = 2.5 mg/m^3$	$DNEL = 2.5 mg/m^3$	DNEL = $2.5 \text{mg/m}^3$
disodium				
16893-85-9 ( <=100 )				

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

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Silicate(2-), hexafluoro-,	PNEC = 0.9mg/L			PNEC = 51mg/L	PNEC = 11mg/kg
disodium					soil dw
16893-85-9 ( <=100 )					

Component	Marine water	Marine water sediment	Marine water Intermittent	Food chain	Air
Silicate(2-), hexafluoro-,	PNEC = 0.9mg/L				
disodium	_				
16893-85-9 ( <=100 )					

#### 8.2. Exposure controls

### **Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

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

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control hazardous materials at source

Personal protective equipment

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

**Hand Protection** Protective gloves

Glove materia	I Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber	480 minutes	0.11mm	EN 374	(minimum requirement)

Skin and body protection Long sleeved clothing.

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** 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

Solid

and maintained properly

In case of insufficient ventilation, wear suitable respiratory equipment Large scale/emergency use

Recommended Filter type: Particulates filter conforming to EN 143

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

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

When RPE is used a face piece Fit Test should be conducted

Prevent product from entering drains. **Environmental exposure controls** 

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

**Physical State** Solid Crystalline

**Appearance** 

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

Flammability (liquid) Not applicable

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 No data available

**Decomposition Temperature** No information available

**Viscosity** Not applicable

Solid

**Water Solubility** No information available Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

**Vapor Pressure** No data available

Density / Specific Gravity 2.679 g/cm3 @ 20 °C

**Bulk Density** No data available Not applicable **Vapor Density** 

Solid Particle characteristics No data available

9.2. Other information

F6 Na2 Si Molecular Formula

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Molecular Weight 188.06

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 PolymerizationNo information available.Hazardous ReactionsNone under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Hydrogen fluoride. Silicon dioxide. Sodium oxides.

### **SECTION 11: TOXICOLOGICAL INFORMATION**

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

### **Product Information**

(a) acute toxicity;

OralCategory 3DermalCategory 3InhalationCategory 3

	Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
ſ	Silicate(2-), hexafluoro-, disodium	LD50 = 125 mg/kg (Rat)	-	LC50 = 2.021 mg/L (Rat) 4 h
-				LC50 = 1.673 mg/L (Rat) 4 h
-1				

(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

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

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(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

No information available. **Target Organs** 

(j) aspiration hazard; Not applicable

Solid

Symptoms / effects,both acute and No information available.

delayed

11.2. Information on other hazards

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

known or suspected endocrine disruptors.

### **SECTION 12: ECOLOGICAL INFORMATION**

12.1. Toxicity

**Ecotoxicity effects** Contains a substance which is:. Harmful to aquatic organisms. The product contains

following substances which are hazardous for the environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Silicate(2-), hexafluoro-, disodium	LC50: = 65 mg/L, 96h static (Poecilia reticulata)		

**12.2. Persistence and degradability** No information available

Degradation in sewage

treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste

water treatment plants.

12.3. Bioaccumulative potential No information available

12.4. Mobility in soil No information available

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**

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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 Do not flush to sewer. Waste codes should be assigned by the user based on the

application for which the product was used. Do not empty into drains.

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

<u>14.1. UN number</u> UN2674

14.2. UN proper shipping name SODIUM FLUOROSILICATE

14.3. Transport hazard class(es) 6.1 14.4. Packing group III

#### ADR

**14.1. UN number** UN2674

14.2. UN proper shipping name SODIUM FLUOROSILICATE

**14.3. Transport hazard class(es)** 6.1 **14.4. Packing group** III

### <u>IATA</u>

**14.1. UN number** UN2674

14.2. UN proper shipping name SODIUM FLUOROSILICATE

14.3. Transport hazard class(es) 6.1 14.4. Packing group

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
Silicate(2-), hexafluoro-, disodium	16893-85-9	240-934-8	ı	-	X	X	KE-12334	Χ	X

Component	CAS No	TSCA	TSCA Inventory notification -	DSL	NDSL	AICS	NZIoC	PICCS

#### Sodium hexafluorosilicate

			Active-Inactive					
Silicate(2-), hexafluoro-, disodium	16893-85-9	X	ACTIVE	X	-	X	X	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

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Component	CAS No	REACH (1907/2006) -	REACH (1907/2006) -	REACH Regulation (EC
		Annex XIV - Substances	Annex XVII - Restrictions	1907/2006) article 59 -
		Subject to Authorization	on Certain Dangerous	Candidate List of
			Substances	Substances of Very High
				Concern (SVHC)
Silicate(2-), hexafluoro-, disodium	16893-85-9	-	-	-

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

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Silicate(2-), hexafluoro-, disodium	16893-85-9	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 .

### **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
Silicate(2-), hexafluoro-,	WGK2	
disodium		

### **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

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

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H331 - Toxic if inhaled

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#### Legend

**CAS** - Chemical Abstracts Service

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

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

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

**Training Advice** 

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

Health, Safety and Environmental Department Prepared By

**Revision Date** 17-Feb-2024

New emergency telephone response service provider. **Revision Summary** 

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**