

**Sicherheitsdatenblatt  
EISEN(II)-SULFAT**

**Material Safety Data Sheet  
IRON(II)-SULFATE**

**Fiche de Données de Sécurité / Fiche Signalétique  
SULFATE FERREUX**

**Hersteller/Lieferant  
Manufacturer/Supplier  
Producteur/Fournisseur**

**Brenntag Schweizerhall AG**  
Elsässerstrasse 231  
CH-4002 Basel

Montag – Freitag / Monday – Friday / Lundi – Vendredi  
8:00 – 12:00 H 13:00H – 17:00H

Telefon: +41 (0)58 344 80 00  
Fax: +41 (0) 58 344 82 08  
Email-Adresse : [doku@brenntag.ch](mailto:doku@brenntag.ch)

Notrufnummer, Schweizerisches Toxikologisches Informationszentrum  
Emergency telephone number, Swiss Toxicological Information Centre  
Numéro d'appel d'urgence, Centre Suisse d'Information Toxicologique

Tel. +41 (0) 44251 51 51

Nationale Notrufnummer  
National Emergency Telephone Number  
Numéro National d'Appel en cas d'Urgence

Tel. 145

8. **Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen**  
**Exposure controls/personal protection**  
**Contrôles de l'exposition/ protection individuelle**

<b>Inhaltsstoff:</b>	<b>Schwefelsäure</b>	<b>CAS-Nr.:</b>	<b>7664-93-9</b>
----------------------	----------------------	-----------------	------------------

**Arbeitsplatzgrenzwerte**

EU ELV, Zeitlich gewichteter Mittelwert (TWA);, Nebel  
0,05 mg/m<sup>3</sup>  
Indikativ

SUVA, Zeitgewichteter Durchschnitt, Inhalierbare Fraktion.  
0,1 mg/m<sup>3</sup>

SUVA, Kurzzeitiger Expositionsgrenzwert (STEL);, Inhalierbare Fraktion.  
0,2 mg/m<sup>3</sup>

SUVA, Inhalierbare Fraktion.  
Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden.

<b>Component:</b>	<b>sulphuric acid</b>	<b>CAS-No.:</b>	<b>7664-93-9</b>
-------------------	-----------------------	-----------------	------------------

**Occupational Exposure Limits**

EU ELV, Time Weighted Average (TWA);, Mist.  
0,05 mg/m<sup>3</sup>  
Indicative

SUVA, Time Weighted Average (TWA);, Inhalable fraction.  
0,1 mg/m<sup>3</sup>

SUVA, Short Term Exposure Limit (STEL);, Inhalable fraction.  
0,2 mg/m<sup>3</sup>

SUVA, Inhalable fraction.  
If in compliance with the OEL and BEL values, then there should be no risk of reproductive damage.

<b>Composant:</b>	<b>acide sulfurique</b>	<b>No.-CAS:</b>	<b>7664-93-9</b>
-------------------	-------------------------	-----------------	------------------

**Limites d'exposition professionnelle**

EU ELV, Limite d'exposition pondérée dans le temps (TWA);, Brouillard

0,05 mg/m<sup>3</sup>  
Indicatif

SUVA, Limite d'exposition pondérée dans le temps (VME);, Fraction inhalable.  
0,1 mg/m<sup>3</sup>

SUVA, Seuil limite d'exposition à court terme (STEL), Fraction inhalable.  
0,2 mg/m<sup>3</sup>

SUVA, Fraction inhalable.  
Aucun risque pour l'embryon si les valeurs de AGW et de BGW sont respectées.

<b>Inhaltsstoff:</b>	<b>Nickelsulfat</b>	<b>CAS-Nr.:</b>	<b>7786-81-4</b>
----------------------	---------------------	-----------------	------------------

### Biologische Grenzwerte

CH BAT, Nickel, Urin  
40 µg/l, Probenahmezeit: c) Langzeitexposition nach mehreren (4-5) Arbeitsschichten. b) Ende der Exposition/Schichtende.  
Unspezifizierter Parameter  
EU BLV/BGV, Nickel, Urin  
3 µg/l

<b>Component:</b>	<b>nickel sulphate</b>	<b>CAS-No.:</b>	<b>7786-81-4</b>
-------------------	------------------------	-----------------	------------------

### Biological Exposure Indices

CH BAT, Nickel, Urine  
40 µg/l, Sampling time: c) Long term exposure after several (4-5) work shifts. b) End of exposure / end of shift.  
Unspecified parameter  
EU BLV/BGV, Nickel, Urine  
3 µg/l

<b>Composant:</b>	<b>sulfate de nickel</b>	<b>No.-CAS:</b>	<b>7786-81-4</b>
-------------------	--------------------------	-----------------	------------------

### Indices d'exposition biologique

CH BAT, Nickel, Urine  
40 µg/l, Durée de prélèvement: c) L'exposition à long terme après plusieurs (4-5) quarts de travail. b) Fin de l'exposition / fin d'un quart de travail.  
Paramètre non spécifié  
EU BLV/BGV, Nickel, Urine

3 µg/l

**15. Rechtsvorschriften**  
**Regulatory information**  
**Informations relatives à la réglementation**

CPID	:	274026-95
Mengenschwelle nach StFV	:	20.000 kg
Threshold quantity MAO		
Seuil quantitatif OPAM		

## Melstar S

Version number: 4.2  
Replaces version of: 2016-10-27 (3)

Revision: 2016-11-07  
First version: 07.06.2011

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

#### 1.1 Product identifier

<b>Trade name</b>	<u>Melstar S</u>
<b>Registration number (REACH)</b>	not relevant (mixture)
<b>CAS number</b>	not relevant (mixture)

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

<b>Relevant identified uses</b>	Wastewater treatment Chromate reduction in cement Precipitant Fertiliser
---------------------------------	---

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

Melspring International B.V. Arnhemsestraatweg 8 NL-6881 NG Velp Netherlands	Telephone: ++31 (0) 26 - 38420 - 00 Telefax: ++31 (0) 26 - 38420 - 11
---	--

**e-mail (competent person)** sdb@csb-online.de

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Melspring International B.V.

#### 1.4 Emergency telephone number

As above or next toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 (CLP)**

Classification acc. to GHS				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.10	acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319

# Melstar S

for full text of abbreviations: see SECTION 16

## Additional information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008 (CLP) Labelling:**

**Signal word** warning

### Pictograms

**GHS07**



### Hazard statements

**H302** Harmful if swallowed.  
**H315** Causes skin irritation.  
**H319** Causes serious eye irritation.

### Precautionary statements

**P280** Wear protective gloves/protective clothing/eye protection/face protection.  
**P301+P330+P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
**P303+P361+P353** IF ON SKIN (or hair): take off immediately all contaminated clothing. Rinse skin with water/shower.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P311** Call a POISON CENTER/doctor.

### Supplemental hazard information

**EUH208** Contains Nickel Sulphate. May produce an allergic reaction.

**Hazardous ingredients for labelling** Iron(II) sulfate heptahydrate

## 2.3 Other hazards

There is no additional information.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

# Melstar S




## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Hazardous ingredients acc. to GHS				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Iron(II) sulfate heptahydrate	CAS No 7782-63-0  EC No 231-753-5  Index No 026-003-01-4  REACH Reg. No 01-2119513203-57- xxxx	> 97	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	
sulfuric acid	CAS No 7664-93-9  EC No 231-639-5  Index No 016-020-00-8  REACH Reg. No 01-2119458838-20- xxxx	< 1.5	Met. Corr. 1 / H290 Skin Corr. 1A / H314 Eye Dam. 1 / H318	
Nickel Sulphate	CAS No 7786-81-4  EC No 232-104-9  Index No 028-009-00-5  REACH Reg. No 01-2119439361-44- xxxx	0.001 - < 0.01	Acute Tox. 3 / H301 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Resp. Sens. 1 / H334 Skin Sens. 1 / H317 Muta. 2 / H341 Carc. 1A / H350i Repr. 1B / H360D STOT RE 1 / H372 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	

# Melstar S

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

#### Following skin contact

Rinse skin with water/shower.

Wash with plenty of soap and water.

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

#### Following eye contact

Rinse cautiously with water for several minutes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Remove contact lenses, if present and easy to do. Continue rinsing.

#### Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

#### Notes for the doctor

none

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

These information are not available.

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

water, foam, alcohol resistant foam, fire extinguishing powder

#### Unsuitable extinguishing media

water jet



# Melstar S

## 5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Deposited combustible dust has considerable explosion potential.

### Hazardous combustion products

sulphur oxides (SO<sub>x</sub>)

## 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

### Special protective equipment for firefighters

use suitable breathing apparatus

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

#### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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

#### Advices on how to contain a spill

take up mechanically

#### Advices on how to clean up a spill

Take up mechanically.

Collect spillage.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

## 6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

#### Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

#### Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

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

#### Explosive atmospheres

Removal of dust deposits.

#### Flammability hazards

None.

#### Incompatible substances or mixtures

Incompatible materials: see section 10.

#### Protect against external exposure, such as

heat

#### Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

#### Ventilation requirements

Provision of sufficient ventilation.

#### Packaging compatibilities

Keep only in original container.

# Melstar S

## 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Source
EU	sulphuric acid	7664-93-9	t, mist	IOELV		0.05			2009/161/EU
GB	dust		i	WEL		10			EH40/2005
GB	dust		r	WEL		4			EH40/2005
GB	sulphuric acid	7664-93-9	t, mist	WEL		0.05			EH40/2005
GB	nickel, inorganic compounds	7786-81-4	Ni	WEL		0.1			EH40/2005
GB	nickel, insoluble compounds	7786-81-4	Ni	WEL		0.5			EH40/2005

#### Notation

i inhalable fraction

mist as mists

Ni calculated as Ni (nickel)

r respirable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

t thoracic fraction

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

Relevant DNELs of components of the mixture							
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time	
Iron(II) sulfate heptahydrate	7782-63-0	DNEL	2.8 mg/kg	human, dermal	worker (industry)	chronic - systemic effects	
sulfuric acid	7664-93-9	DNEL	0.05 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects	
sulfuric acid	7664-93-9	DNEL	0.1 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects	
Nickel Sulphate	7786-81-4	DNEL	0.7 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects	

# Melstar S

## Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Nickel Sulphate	7786-81-4	DNEL	16 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
Nickel Sulphate	7786-81-4	DNEL	0.05 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
Nickel Sulphate	7786-81-4	DNEL	0.05 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects

## Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment	Exposure time
sulfuric acid	7664-93-9	PNEC	2 mg/cm <sup>3</sup>	soil	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	0.25 mg/cm <sup>3</sup>	marine water	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	2.5 mg/cm <sup>3</sup>	freshwater	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	8.8 mg/cm <sup>3</sup>	sewage treatment plant (STP)	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	0.003 mg/l	freshwater	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	0 mg/l	marine water	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	8.8 mg/l	sewage treatment plant (STP)	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	0.002 mg/kg	freshwater sediment	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	0.002 mg/kg	marine sediment	short-term (single instance)

## 8.2 Exposure controls

### Appropriate engineering controls

General ventilation.

# Melstar S

## Individual protection measures (personal protective equipment)

### Eye/face protection

Wear eye/face protection.

### Hand protection

Material	Material thickness	Breakthrough times of the glove material
NBR: acrylonitrile-butadiene rubber	≥ 0,11 mm	>480 minutes (permeation: level 6)

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Particulate filter device (EN 143).

### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	solid
Form	powder, crystalline
Colour	light green
Odour	stinging
Odour threshold	these information are not available

#### Other safety parameters

pH (value)	2.7 (100 g/l, 20 °C)
Melting point/freezing point	64 - 90 °C
Initial boiling point and boiling range	>300 °C
Flash point	not applicable
Evaporation rate	these information are not available
Flammability (solid, gas)	non-combustible
Explosion limits of dust clouds	not determined
Vapour pressure	these information are not available

## Melstar S

Density	1.9 g/cm <sup>3</sup>
Vapour density	these information are not available
Relative density	these information are not available
<b>Solubility(ies)</b>	
<b>Water solubility</b>	400 g/l at 20 °C
<b>Partition coefficient</b>	
n-octanol/water (log KOW)	these information are not available
Auto-ignition temperature	not relevant (Solid matter)
Relative self-ignition temperature for solids	these information are not available
Decomposition temperature	>400 °C (FeSO <sub>4</sub> )
<b>Viscosity</b>	
<b>Kinematic viscosity</b>	not relevant (solid matter)
<b>Dynamic viscosity</b>	not relevant (solid matter)
Explosive properties	not explosive
Oxidising properties	shall not be classified as oxidising

### 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

# Melstar S

## 10.4 Conditions to avoid

Store away from oxidizing agents.

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

## 10.5 Incompatible materials

oxidisers

## 10.6 Hazardous decomposition products

Sulphur oxides (SO<sub>x</sub>).

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Harmful if swallowed.

#### Acute toxicity estimate (ATE)

Oral 507.1 mg/kg

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
Iron(II) sulfate heptahydrate	7782-63-0	oral	500 mg/kg
Nickel Sulphate	7786-81-4	oral	264 mg/kg
Nickel Sulphate	7786-81-4	inhalation: dust/mist	1.5 mg/l/4h

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Iron(II) sulfate heptahydrate	7782-63-0	oral	LD50	2,625 mg/kg	rat
sulfuric acid	7664-93-9	oral	LD50	2,140 mg/kg	rat
Nickel Sulphate	7786-81-4	oral	LD50	264 mg/kg	rat

# Melstar S

## Skin corrosion/irritation

Causes skin irritation.

## Serious eye damage/eye irritation

Causes serious eye irritation.

## Respiratory or skin sensitisation

### Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Contains Nickel Sulphate. May produce an allergic reaction.

## Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

Test data are not available for the complete mixture.

#### Aquatic toxicity (acute) of components of the mixture

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
sulfuric acid	7664-93-9	EC50	>100 mg/l	aquatic invertebrates	48 h
sulfuric acid	7664-93-9	ErC50	>100 mg/l	algae	72 h



# Melstar S

## Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Nickel Sulphate	7786-81-4	LC50	15.3 mg/l	fish	96 h

## Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

## Aquatic toxicity (chronic) of components of the mixture

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Nickel Sulphate	7786-81-4	LC50	50 µg/l	fish	28 d
Nickel Sulphate	7786-81-4	ErC50	8,363 µg/l	fish	40 d
Nickel Sulphate	7786-81-4	NOEC	108.9 µg/l	fish	30 d
Nickel Sulphate	7786-81-4	LOEC	433.5 µg/l	fish	30 d
Nickel Sulphate	7786-81-4	growth rate (Er-Cx) 10%	3,599 µg/l	fish	40 d

## 12.2 Persistence and degradability

### Biodegradation

Data are not available.

### Persistence

Data are not available.

## 12.3 Bioaccumulative potential

Data are not available.

## Bioaccumulative potential of components of the mixture

Bioaccumulative potential of components of the mixture			
Name of substance	CAS No	BCF	Log KOW
Nickel Sulphate	7786-81-4	172	

## 12.4 Mobility in soil

Data are not available.

# Melstar S

## 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## 12.6 Other adverse effects

Data are not available.

### Endocrine disrupting potential

None of the ingredients are listed.

### Remarks

Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself.

### Remarks

Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

**14.1 UN number** not subject to transport regulations

**14.2 UN proper shipping name** -

**14.3 Transport hazard class(es)**

**Class** -

**14.4 Packing group** -

**14.5 Environmental hazards** -

### 14.6 Special precautions for user

There is no additional information.

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

The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

# Melstar S

## Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

Not subject to ADR, RID and ADN.

## International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

## International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

#### Restrictions according to REACH, Annex XVII

none of the ingredients are listed

#### List of substances subject to authorisation (REACH, Annex XIV)

none of the ingredients are listed

#### Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

none of the ingredients are listed

#### Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

#### Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

none of the ingredients are listed

#### Regulation 98/2013/EU on the marketing and use of explosives precursors

Explosives precursors which are subject to restrictions			
Name of substance	CAS No	Type of registration	Limit value
sulfuric acid	7664-93-9	Annex II	

#### Legend

annex II Substances on their own or in mixtures or in substances for which suspicious transactions shall be reported

# Melstar S

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Indication of changes: Section 3

### Abbreviations and acronyms

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
2009/161/EU	Commission Directive establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
Acute Tox.	acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	hazardous to the aquatic environment - acute hazard
Aquatic Chronic	hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	BioConcentration Factor
Carc.	carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization

# Melstar S

<b>Abbreviations and acronyms</b>	
<b>Abbr.</b>	<b>Descriptions of used abbreviations</b>
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	indicative occupational exposure limit value
log KOW	n-octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Met. Corr.	substance or mixture corrosive to metals
Muta.	germ cell mutagenicity
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Repr.	reproductive toxicity
Resp. Sens.	respiratory sensitisation
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
Skin Sens.	skin sensitisation
STEL	short-term exposure limit
STOT RE	specific target organ toxicity - repeated exposure
TWA	time-weighted average
vPvB	very Persistent and very Bioaccumulative
WEL	workplace exposure limit

## Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.  
Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

# Melstar S

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

## Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

## List of relevant phrases (code and full text as stated in chapter 2 and 3)

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H290	may be corrosive to metals
H301	toxic if swallowed
H302	harmful if swallowed
H314	causes severe skin burns and eye damage
H315	causes skin irritation
H317	may cause an allergic skin reaction
H318	causes serious eye damage
H319	causes serious eye irritation
H332	harmful if inhaled
H334	may cause allergy or asthma symptoms or breathing difficulties if inhaled
H341	suspected of causing genetic defects
H350i	may cause cancer by inhalation
H360D	may damage the unborn child
H372	causes damage to organs through prolonged or repeated exposure
H400	very toxic to aquatic life
H410	very toxic to aquatic life with long lasting effects

## Responsible for the safety data sheet

C.S.B. GmbH  
Düsseldorfer Str. 113  
47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0  
Telefax: +49 (0) 2151 - 652086 - 9  
E-mail: [info@csb-online.de](mailto:info@csb-online.de)  
Website: [www.csb-online.de](http://www.csb-online.de)

# Melstar S

---

## **Disclaimer**

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.