

# **Safety Data Sheet**

according to Regulation (EC) No. 1907/2006 (REACH)

# **Melstar S**

Version number: 4.2 Revision: 2016-11-07 Replaces version of: 2016-10-27 (3) First version: 07.06.2011

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

#### 1.1 Product identifier

Trade name Melstar S

**Registration number (REACH)** not relevant (mixture)

**CAS number** not relevant (mixture)

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

**Relevant identified uses**Wastewater treatment

Chromate reduction in cement

Precipitant Fertiliser

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

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

NL-6881 NG Velp Netherlands

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 state- ment
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

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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.

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# 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 heptahy- drate	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	<u>.</u>				
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					

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### **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

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### 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 (SOx)

## 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.

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#### 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.

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# 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)**

Coun- try	Name of agent	CAS No	Nota- tion	Identi- fier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Source
EU	sulphuric acid	7664-93-9	t, mist	IOELV		0.05			2009/161/E U
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 sub- stance	CAS No	End- point	Threshold level	Protection goal, route of expos- ure	Used in	Exposure time
Iron(II) sulfate hep- tahydrate	7782-63-0	DNEL	2.8 mg/kg	human, dermal	worker (in- dustry)	chronic - sys- temic effects
sulfuric acid	7664-93-9	DNEL	0.05 mg/m³	human, inhalatory	worker (in- dustry)	chronic - local effects
sulfuric acid	7664-93-9	DNEL	0.1 mg/m <sup>3</sup>	human, inhalatory	worker (in- dustry)	acute - local ef- fects
Nickel Sulphate	7786-81-4	DNEL	0.7 mg/m³	human, inhalatory	worker (in- dustry)	acute - local ef- fects

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# Relevant DNELs of components of the mixture

Name of sub- stance	CAS No	End- point	Threshold level	Protection goal, route of expos- ure	Used in	Exposure time
Nickel Sulphate	7786-81-4	DNEL	16 mg/m³	human, inhalatory	worker (in- dustry)	acute - systemic effects
Nickel Sulphate	7786-81-4	DNEL	0.05 mg/m³	human, inhalatory	worker (in- dustry)	chronic - local effects
Nickel Sulphate	7786-81-4	DNEL	0.05 mg/m³	human, inhalatory	worker (in- dustry)	chronic - sys- temic 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/cm³	soil	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	0.25 mg/cm³	marine water	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	2.5 mg/cm³	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.

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# 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 <sup>g</sup>/<sub>I</sub>, 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

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Density 1.9 g/<sub>cm³</sub>

Vapour density these information are not available

Relative density these information are not available

Solubility(ies)

Water solubility 400 g/l at 20 °C

**Partition coefficient** 

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

(FeSO4)

Viscosity

**Kinematic viscosity** not relevant

(solid matter)

**Dynamic viscosity** 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.

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#### 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 (SOx).

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**  $507.1 \, \text{mg/}_{kg}$ 

### 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 <sup>mg</sup> / <sub>kg</sub>
Nickel Sulphate	7786-81-4	oral	264 <sup>mg</sup> / <sub>kg</sub>
Nickel Sulphate	7786-81-4	inhalation: dust/mist	1.5 <sup>mg</sup> / <sub>l</sub> /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 <sup>mg</sup> / <sub>kg</sub>	rat
sulfuric acid	7664-93-9	oral	LD50	2,140 <sup>mg</sup> / <sub>kg</sub>	rat
Nickel Sulphate	7786-81-4	oral	LD50	264 <sup>mg</sup> / <sub>kg</sub>	rat

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#### 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 <sup>mg</sup> / <sub>l</sub>	aquatic invertebrates	48 h
sulfuric acid	7664-93-9	ErC50	>100 <sup>mg</sup> / <sub>I</sub>	algae	72 h

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# 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 <sup>mg</sup> / <sub>l</sub>	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 <sup>μg</sup> / <sub>Ι</sub>	fish	28 d
Nickel Sulphate	7786-81-4	ErC50	8,363 <sup>µg</sup> / <sub>l</sub>	fish	40 d
Nickel Sulphate	7786-81-4	NOEC	108.9 <sup>µg</sup> / <sub>l</sub>	fish	30 d
Nickel Sulphate	7786-81-4	LOEC	433.5 <sup>µg</sup> / <sub>I</sub>	fish	30 d
Nickel Sulphate	7786-81-4	growth rate (Er- Cx) 10%	3,599 <sup>µg</sup> / <sub>l</sub>	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.

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### 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
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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

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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

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# SECTION 16: Other information

# Indication of changes (revised safety data sheet)

Indication of changes: Section 3

# **Abbreviations and acronyms**

# Abbreviations and acronyms

Abbieviation	Appreviations and acronyms	
Abbr.	Descriptions of used abbreviations	
2009/161/EU	Comission 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 (http://www.nationalarchives.gov.uk/doc/open-government-li- cence/)	
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	

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# **Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
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 Regula- tion (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 (Regula- tions 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.

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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 Telephone: +49 (0) 2151 - 652086 - 0

Düsseldorfer Str. 113 Telefax: +49 (0) 2151 - 652086 - 9

47809 Krefeld E-mail: info@csb-online.de

Website: www.csb-online.de

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

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