Revision n. 04

Degreaser for dishwasher



SAFETY DATA SHEET

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

1.1. Product identifier

Trade code: [DDG125] 484000008873 - [DDG305] 484000008872 - [DDG123] 484000008870

[DDG114] 484000008864 - [DDG115] 484000008863 - [DDG119] 484000008867

[DDG118] 484000008866 - [DDG116] 484000008861 - [DDG122] 484000008869

[DDG120] 484000008868 - [KDDG224] 484000008871 - [KDDG218] 484000008865

[KDDG219] 484000008874 - [DDG208] 484000008875

Trade name:

DEGREASER DW

Mixture identification:

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

Recommended use:

Dishwasher care cleaner.

CONSUMER USE.

Uses advised against:

Do not use for purposes other than those listed.

1.3. Details of the supplier of the safety data sheet

Company:

Synt Chemical S.r.l.

Via Armando Gagliani, 5

40069 Zola Predosa (BO) - ITALY

Tel. +39 051 752332 - Fax +39 051 754945

Competent person responsible for the safety data sheet:

laboratorio@syntchemical.it

1.4. Emergency telephone number

For urgent safety information call the Anti-Poison Center of your country. Check the emergency list on page 14.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Skin Irrit. 2, H315 Causes skin irritation.

Eye Dam. 1, H318 Causes serious eye damage.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H315 Causes skin irritation.

H318 Causes serious eye damage.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P264 Wash hands thoroughly after handling.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or a doctor.

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or a doctor.

P332+P313 If skin irritation occurs: Get medical advice/attention.

Special Provisions:

None

Contains

DISODIUM METASILICATE

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

Ingredients (Reg. EC n.648/2004):

15-30%: oxygen-based bleaching agents.

<5%: anionic surfactants, non-ionic surfactants, polycarboxylates.

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
50 - 60 %	SODIUM CARBONATE	Index number: 011-005-00-2 CAS: 497-19-8 EC: 207-838-8 REACH No.: 01-2119485498-19	① 3.3/2 Eye Irrit. 2 H319
10 - 16 %	SODIUM PERCARBONATE	CAS: 15630-89-4 EC: 239-707-6 REACH No.: 01-2119457268-30	② 2.14/3 Ox. Sol. 3 H272 ③ 3.1/4/Oral Acute Tox. 4 H302 ③ 3.3/1 Eye Dam. 1 H318
3 - 5 %	DISODIUM METASILICATE	Index number: 014-010-00-8 CAS: 6834-92-0 EC: 229-912-9 REACH No.: 01-2119449811-37	2.16/1 Met. Corr. 1 H290 3.2/1B Skin Corr. 1B H314 3.8/3 STOT SE 3 H335
1 - 2 %	ALCOHOLS, C12-14, ETHOXYLATED PROPOXYLATED	CAS: 68439-51-0	4.1/C3 Aquatic Chronic 3 H412
0.5 - 1.5 %	REACTION PRODUCT OF BENZENESULFONIC ACID, 4-C10- 13-SEC-ALKYL DERIVS. AND BENZENESULFONIC ACID, 4-METHYL- AND SODIUM HYDROXIDE	EC: 932-051-8 REACH No.: 01-2119565112-48	① 3.2/2 Skin Irrit. 2 H315 ② 3.3/1 Eye Dam. 1 H318 4.1/C3 Aquatic Chronic 3 H412

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

After contact with skin, wash immediately with soap and plenty of water.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

No data available for the mixture. See section 11 for symptoms and effects of the substances.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray jet.

Carbon dioxide (CO2).

Powder.

Foam.

Extinguishing media which must not be used for safety reasons:

Water jets.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhaltion of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from open flames, sparks, hot surfaces. Avoid direct exposure to sunlight.

Store in tightly closed original container in a dry and cool place.

Keep away from food, drink and feed.

Incompatible materials:

See paragraph 10 below.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SODIUM CARBONATE - CAS: 497-19-8

TLV TWA - 10 mg/m3

SODIUM PERCARBONATE - CAS: 15630-89-4

TLV TWA - 3 mg/m3 (breathable) /10 mg/m3 (inhalable)

DISODIUM METASILICATE - CAS: 6834-92-0

- OEL Type: EU - TWA: 3 mg/m3

- OEL Type: EU - TWA: 10 mg/m3

DNEL Exposure Limit Values

SODIUM PERCARBONATE - CAS: 15630-89-4

Worker Industry: 12.8 05 - Consumer: 6.4 05 - Exposure: Human Dermal - Frequency: Short Term, local effects Worker Industry: 12.8 05 - Consumer: 6.4 05 - Exposure: Human Dermal - Frequency: Long Term, local effects

Worker Industry: 5 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects

DISODIUM METASILICATE - CAS: 6834-92-0

Worker Industry: 1.49 mg/kg - Consumer: 0.74 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic

effects

Worker Industry: 6.22 mg/m3 - Consumer: 1.55 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term,

systemic effects

Consumer: 0.74 mg/m3 - Exposure: Human Oral - Frequency: Long Term, systemic effects

REACTION PRODUCT OF BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS. AND BENZENESULFONIC ACID,

4-METHYL- AND SODIUM HYDROXIDE

Worker Industry: 170 mg/kg/g - Consumer: 85 mg/kg/g - Exposure: Human Dermal - Frequency: Long Term,

systemic effects

Worker Industry: 12 mg/m3 - Consumer: 3 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic

effects

Consumer: 0.85 mg/kg/g - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

SODIUM PERCARBONATE - CAS: 15630-89-4

Target: Microorganisms in sewage treatments - Value: 16.24 mg/l

Target: Fresh Water - Value: 0.035 mg/l Target: Marine water - Value: 0.035 mg/l

Target: Intermittent releases - Value: 0.035 mg/l DISODIUM METASILICATE - CAS: 6834-92-0

Target: Intermittent releases - Value: 7.5 mg/l

Target: Microorganisms in sewage treatments - Value: 1000 mg/l

Target: Fresh Water - Value: 7.5 mg/l Target: Marine water - Value: 1 mg/l

REACTION PRODUCT OF BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS. AND BENZENESULFONIC ACID,

4-METHYL- AND SODIUM HYDROXIDE Target: Marine water - Value: 0.0268 mg/l Target: Fresh Water - Value: 0.268 mg/l

Target: Microorganisms in sewage treatments - Value: 5.6 mg/l

Target: Soil (agricultural) - Value: 35 mg/kg

Target: Marine water sediments - Value: 8.1 mg/kg

8.2. Exposure controls

Eye protection:

Wear safety goggles with side shields (EN 166).

Protection for skin:

Wear work clothes with long sleeves and safety footwear for professional use in category I (refer to Directive 89/686/ EEC and standard EN 344). After removing protective clothing, wash affected skin with soap and water.

Protection for hands:

Protect your hands with gloves, category I (Directive 89/686/EEC and EN 374) such as latex, nitrile rubber, butyl rubber PVC or equivalent. For the definitive selection of the material used for the gloves, the following factors should be considered: degradation, breakage time and permeation. In the case of preparations, glove resistance should be tested before use because it is not foreseeable. The gloves have a durability that depends on the duration of exposure.

Respiratory protection:

Wear a semi-facial mask equipped with FFP2 filter (EN 141).

Thermal Hazards:

None

Environmental exposure controls:

See section 7 and 13.

Appropriate engineering controls:

None.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Appearance and colour:	white powder		
Odour:	characteristic		
Odour threshold:	Not Relevant		
pH:	Not applicable		
Melting point / freezing point:	Not Relevant		
Initial boiling point and boiling range:	Not applicable		
Flash point:	Not applicable		
Evaporation rate:	Not applicable		
Solid/gas flammability:	not flammable		
Upper/lower flammability or explosive limits:	Not applicable		
Vapour pressure:	Not applicable		
Vapour density:	Not applicable		
Relative density:	1 - 1.1 g/ml		

Solubility in water:	Not applicable	
Solubility in oil:	Not Relevant	
Partition coefficient (n-octanol/water):	Not applicable	
Auto-ignition temperature:	Not applicable	
Decomposition temperature:	Not Relevant	
Viscosity:	Not applicable	
Explosive properties:	not explosive	
Oxidizing properties:	non-oxidizing	

9.2. Other information

Properties	Value	Method:	Notes
Miscibility:	Not Relevant		
Fat Solubility:	Not Relevant		

SECTION 10: Stability and reactivity

10.1. Reactivity

In normal condition of use and storage (see section 7) dangerous reactions are not expected.

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

In normal condition of use and storage dangerous reactions are not expected . Avoid contact with incompatible substances.

10.4. Conditions to avoid

Avoid overheating, electrostatic discharge and all sources of ignition.

Avoid humidity.

10.5. Incompatible materials

Reducing agents, acids, bases, heavy metal salts, organic materials, combustible materials

10.6. Hazardous decomposition products

In case of fire or decomposition may spread gas and vapors potentially harmful for health as CO2, carbon mono-oxide and other irritating fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

b) skin corrosion/irritation

The product is classified: Skin Irrit. 2 H315

c) serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

f) carcinogenicity

Not classified

Based on available data, the classification criteria are not met

g) reproductive toxicity

Not classified

Based on available data, the classification criteria are not met

h) STOT-single exposure

Not classified

Based on available data, the classification criteria are not met

i) STOT-repeated exposure

Not classified

Based on available data, the classification criteria are not met

j) aspiration hazard

Not classified

Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

SODIUM CARBONATE - CAS: 497-19-8

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 4090 mg/kg Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

b) skin corrosion/irritation: Test: Skin Irritant Positive

c) serious eye damage/irritation:

Test: Eye Irritant Positive i) STOT-repeated exposure:

Test: Respiratory Tract Irritant Positive SODIUM PERCARBONATE - CAS: 15630-89-4

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 1034 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg
Test: LD50 - Route: Inhalation - Species: Mouse = 700 mg/m3
Test: LD50 - Route: Oral - Species: Rat male = 1164 mg/kg
Test: LD50 - Route: Oral - Species: Rat female = 893 mg/kg

b) skin corrosion/irritation:

Test: Skin Irritant Positive

c) serious eye damage/irritation:

Test: Eye Irritant Positive

d) respiratory or skin sensitisation: Test: Skin Sensitization Negative

DISODIUM METASILICATE - CAS: 6834-92-0

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 2.06 mg/l - Duration: 4h

Test: LD50 - Route: Oral - Species: Mouse > 1152 mg/kg Test: LD50 - Route: Skin - Species: Rat > 5000 mg/kg

b) skin corrosion/irritation:

Test: Skin Corrosive - Route: Skin - Species: Rat Positive

c) serious eye damage/irritation:

Test: Eye Corrosive - Species: Rabbit Positive

d) respiratory or skin sensitisation: Test: Skin Sensitization Negative ALCOHOLS, C12-14, ETHOXYLATED PROPOXYLATED - CAS: 68439-51-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg Test: LD50 - Route: Skin - Species: Rat > 5000 mg/kg

b) skin corrosion/irritation: Test: Skin Irritant Positive

c) serious eye damage/irritation:

Test: Eye Irritant - Species: Rabbit Negative

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: Guinea pig Negative

e) germ cell mutagenicity:

Test: Mutagenesis - Species: Generic Bacteria Negative

Reaction product of Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs. and Benzenesulfonic acid, 4-methyl- and sodium hydroxide

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg

b) skin corrosion/irritation:

Test: Skin Irritant - Species: Rabbit Positive

c) serious eye damage/irritation:

Test: Eye Irritant - Species: Rabbit Positive

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: Guinea pig Negative

e) germ cell mutagenicity: Test: Genotoxicity Negative

f) carcinogenicity:

Test: Carcinogenicity - Route: Skin - Species: Rat Negative

g) reproductive toxicity:

Test: NOAEL - Species: Rat = 300 mg/kg

h) STOT-single exposure: Test: Acute toxicity Negative i) STOT-repeated exposure:

Test: NOAEL - Species: Rat = 85 mg/kg

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Not classified for environmental hazards

Based on available data, the classification criteria are not met

SODIUM CARBONATE - CAS: 497-19-8

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 320 mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia = 265 mg/l - Duration h: 48

SODIUM PERCARBONATE - CAS: 15630-89-4

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 4.9 mg/l - Duration h: 48 Endpoint: EC50 - Species: Algae = 8 mg/l - Duration h: 140 Endpoint: LC50 - Species: Fish = 70.7 mg/l - Duration h: 96 Endpoint: NOEL - Species: Fish = 7.4 mg/l - Duration h: 96 Endpoint: NOEL - Species: Fish = 2 mg/l - Duration h: 48

DISODIUM METASILICATE - CAS: 6834-92-0

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 1700 mg/l - Duration h: 48 Endpoint: EC50 - Species: Algae = 207 mg/l - Duration h: 72 Endpoint: LC50 - Species: Fish = 2320 mg/l - Duration h: 96

ALCOHOLS, C12-14, ETHOXYLATED PROPOXYLATED - CAS: 68439-51-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Leuciscus idus > 1 mg/l - Duration h: 48 - Notes: DIN 38412 (15)

Endpoint: EC50 - Species: Daphnia > 1 mg/l - Duration h: 24 - Notes: OECD 202 (1)

Endpoint: EC50 - Species: Desmodesmus subspicatus > 1 mg/l - Duration h: 72 - Notes: OECD 201

b) Aquatic chronic toxicity:

Endpoint: EC10 - Species: Desmodesmus subspicatus > 0.1 mg/l - Duration h: 72 - Notes: OECD 201

c) Bacteria toxicity:

Endpoint: ECO - Species: Pseudomonas putida > 100 mg/l - Notes: OECD 209, DIN 38412 (8)

Reaction product of Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs. and Benzenesulfonic acid, 4-methyl- and sodium hydroxide

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 1 mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia > 1 mg/l - Duration h: 48 Endpoint: EC50 - Species: Algae > 10 mg/l - Duration h: 72

c) Bacteria toxicity:

Endpoint: EC50 - Species: MICRORG = 63 mg/l - Duration h: 17

12.2. Persistence and degradability

SODIUM PERCARBONATE - CAS: 15630-89-4

The product can be eliminated by abiotic processes, eg. chemical or photolytic

DISODIUM METASILICATE - CAS: 6834-92-0

The soluble inorganic silicates depolymerize rapidly in molecular species indistinguishable from natural silicas dissolved. They combine to ions Ca, Mg, Fe, Al and others to form insoluble compounds similar to the constituents of natural soils.

ALCOHOLS, C12-14, ETHOXYLATED PROPOXYLATED - CAS: 68439-51-0

Biodegradability: Readily biodegradable

REACTION PRODUCT OF BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS. AND BENZENESULFONIC ACID,

4-METHYL- AND SODIUM HYDROXIDE

Biodegradability: Readily biodegradable - Duration h: 28 days - %: 70

12.3. Bioaccumulative potential

SODIUM CARBONATE - CAS: 497-19-8

Not bioaccumulative

DISODIUM METASILICATE - CAS: 6834-92-0

Not bioaccumulative

ALCOHOLS, C12-14, ETHOXYLATED PROPOXYLATED - CAS: 68439-51-0

Accumulation in organisms is not to be expected.

REACTION PRODUCT OF BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS. AND BENZENESULFONIC ACID, 4-METHYL- AND SODIUM HYDROXIDE

Not bioaccumulative

12.4. Mobility in soil

ALCOHOLS, C12-14, ETHOXYLATED PROPOXYLATED - CAS: 68439-51-0

Adsorption to solid soil phase is possible.

REACTION PRODUCT OF BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS. AND BENZENESULFONIC ACID, 4-METHYL- AND SODIUM HYDROXIDE

Adsorption to soil is not to be expected.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

ADR-Environmental Pollutant: No

IMDG-Marine pollutant: No

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) 2015/830

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP) Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

No restriction.

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions:

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

None.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

SODIUM CARBONATE

SODIUM PERCARBONATE

DISODIUM METASILICATE

REACTION PRODUCT OF BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS. AND BENZENESULFONIC ACID, 4-METHYL- AND SODIUM HYDROXIDE

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H319 Causes serious eye irritation.

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

H315 Causes skin irritation.

Hazard class and hazard category	Code	Description
Ox. Sol. 3	2.14/3	Oxidising solid, Category 3
Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals, Category 1
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

This safety data sheet has been completely updated in compliance to Regulation 2015/830.

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

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

All sections of this MSDS have been revised.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

PNEC: Predicted No Effect Concentration.

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWA: Time-weighted average
WGK: German Water Hazard Class.

Emergency telephone numbersFor urgent safety information call the Anti-Poison Center of your country:

COUNTRY	CUSTOMER SERVICE NR.	ANTI-POISON CENTER NR.
AUSTRIA	(0043) 050 6700 200	(0043) 01 406 43 43
BELGIUM	(0032) (0)2 263 33 33	(0032) 070 245 245
BULGARIA	(00359) 0700 100 68	
CROAZIA	(00385) 0130 40 333	
CZECK REP.	(00420) 840 111 313	(00420) 224 91 54 02
DENEMARK	(0045) 44880222	(0045) 82121212
FINLAND	(09) 61336 235	(09) 471977
FRANCE	(0033) 0892 700 150	(0033) 01 40 05 48 48
GERMAN	(0049) 0711 93533655	(0049) 0761 19240
GREECE	(0030) 2109946400	(0030) 2107793777
HOLLAND	(0031) (0)76 530 6400	(0031) 030 274 8888
HUNGARY	(0036) 1 999 5000	(0036) 80 20 11 99
IRELAND	(00353) 0844 815 8989	(00353) 1 8092566
ITALY	(0039) 199 580 480	(0039) 02 66101029
KAZAKISTAN	(007) 8 800 100 5731	
NORWAY	(0047) 227 82580	(0047) 22 59 13 00
POLAND	(0048) 801 900 666	Warszawa: (0048) 22 619 66 54 Gdańsk: (0048) 58 682 04 04 Poznań: (0048) 61 847 69 46 Kraków: (0048) 12 411 99 99
PORTUGAL	(00351) 707 203 204	(00351) 808 250143
ROMANIAN	(0040) 0372 117 745	
RUSSIA	(007) 8 800 100 57 31	
SERBIA	(00381) 11 30 65 674	
SLOVAKIA	(00421) 0850 003 007	(00421) 2 54774166
SPAIN	(0034) 902 203 204	(0034) 915 620 420
SWEDEN	(0046) 0771 751570	(0046) 08 331231
SWISS	(0041) 0848 801 005	(0041) 145
UK	(0044) 0844 815 8989	(0044) 0845 46 47 (0044) 020 7188 0600
TURKEY	(0090) 444 5010	
UCRAIN	(00380) 0 800 30 20 30	