Safety Data Sheet MULTIFUNZIONE 200 GRAMMI

Safety Data Sheet dated 28/8/2017, version 3

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

1.1. Product identifier

Mixture identification:

Trade name: MULTIFUNZIONE 200 GRAMMI

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

Chlorinator agent stabilized with flocculant and antialgae.

Uses advised against:

Any other use different from the identified uses.

1.3. Details of the supplier of the safety data sheet

Company:

BARCHEMICALS SRL

VIA S.ALLENDE 14

CASTELNUOVO RANGONE (MO)

ITALY

PHONE. +39 059/536502

FAX. +39 059/536742

www.barchemicals.it

Competent person responsible for the safety data sheet:

barani.corrado@barchemicals.it

1.4. Emergency telephone number

Barani Dr. Corrado - MOBILE PHONE. +39 335/6109383

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria n°1272/2008 (CLP)

- Danger, Ox. Sol. 2, May intensify fire oxidiser...
- Warning, Acute Tox. 4, Harmful if swallowed.
- Warning, Eye Irrit. 2, Causes serious eye irritation.
- Warning, STOT SE 3, May cause respiratory irritation.
- Warning, Aquatic Acute 1, Very toxic to aquatic life.
- Warning, Aquatic Chronic 1, Very toxic to aquatic life with long lasting effects.

EUH031 Contact with acids liberates toxic gas.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:







Danger

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Hazard statements:

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P102 Keep out of reach of children.

P210 Keep away from heat - No smoking.

P260 Do not breathe dust or mist.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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.

Special Provisions:

EUH031 Contact with acids liberates toxic gas.

Contains

symclosene; trichloroisocyanuric acid; trichloro-1,3,5-triazinetrion

copper sulphate Aluminum sulphate

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

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

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

Qty	Name	Ident. Numb	er	Classification
>= 90%	symclosene; trichloroisocyanuric	Index number:	613-031-00-5	2.14/2 UX. SOI. 2 H2/2
	acid; trichloro-1,3,5-	CAS:	87-90-1	3.3/2 Eye Irrit. 2 H319
	triazinetrion	EC:	201-782-8	3.8/3 STOT SE 3 H335
				4.1/A1 Aquatic Acute 1 H400
				4.1/C1 Aquatic Chronic 1 H410
				3.1/4/Oral Acute Tox. 4 H302
>= 5% - < 7%	copper sulphate	Index number:	029-004-00-0	3.1/4/Oral Acute Tox. 4 H302
7 70		CAS:	7758-98-7	3.2/2 Skin Irrit. 2 H315
		EC:	231-847-6	3.3/2 Eye Irrit. 2 H319
		REACH No.:	2119520566-	4.1/A1 Aquatic Acute 1 H400
			40	4.1/C1 Aquatic Chronic 1 H410
>= 5% - < 7%	Aluminum sulphate	CAS: EC:	10043-01-3 233-135-0	2.16/1 Met. Corr. 1 H290
1 /0		REACH No.:		3.3/1 Eye Dam. 1 H318
			2119531538-	

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SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

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

Remove contaminated clothing immediatley and dispose off safely.

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:

Rinse well your mouth

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.

In case of breathing difficult, bring the injured person into the open air and store it in a comfortable position for breathing. Consult a physician.

If breathing is irregular or stopped, administer artificial respiration.

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

None

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:

In case of contact with eyes, rinse immediately for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

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

If inhaled, move the victim to fresh air and keep warm and at rest.

If swallowed, rinse mouth and drink water. Consult a doctor as soon as possible.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide (CO2).

Water spray, heavy alcohol foam, dry chemical or carbon dioxide.

Extinguishing media which must not be used for safety reasons:

Full jet water.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Combustion of the product produces chlorine gas.

In case of fire or overheating, a pressure increase will occur with the possibility of breaking the container. This material is highly toxic to aquatic life with long-term effects. Contaminated water with this material must be contained and must be prevented from accessing waterways, sewers or drains.

5.3. Advice for firefighters

Move undamaged containers from immediate hazard area if it can be done safely. Immediately isolate the area by removing all persons from the area of the accident in the event of a fire. No action shall be taken involving any personal risk or without proper training. Firefighters must wear protective equipment and self-contained breathing apparatus (SCBA) with a full-face mask on the working face at positive pressure. Fire extinguishers (including

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helmets, protective boots and gloves) conforming to European Standard EN469 will provide basic protection for chemical accidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate the surrounding areas.

Eliminate all free flames and possible sources of ignition.

Not smoking.

Provide adequate ventilation.

Prevent entry of foreign and unprotected personnel.

Wear personal protection equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Stop the escape if there is no risk. Move the containers from the spill area. Get closer to the source of overwhelming emission. Prevent spills in sewage systems, waterways, basements or restricted areas. Wash and convey the spilled amounts in a waste treatment plant.

Collect with the shovel and place in suitable containers for disposal. Avoid dust formation.

After cleaning each trace with water. Eliminate in compliance with the applicable standard.

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, inhalation of vapours and mists.

Use localized ventilation system.

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 container tightly closed in a cool, dry place.

Do not eat, drink or smoke at the workplace. Foods and beverages should be consumed only in areas specifically identified after removing contaminated clothing and protective equipment and after washing your hands. Wash in any case hands after handling the substance / mixture.

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

Keep away from acids.

Keep away from combustible materials.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

copper sulphate - CAS: 7758-98-7 ACGIH - TWA(8h): 1 mg/m3 Aluminum sulphate - CAS: 10043-01-3

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ACGIH - TWA(8h): 2 mg/m3

DNEL Exposure Limit Values

Aluminum sulphate - CAS: 10043-01-3

Worker Professional: 10 03 - Consumer: 5 03 - Exposure: Human Inhalation -

Frequency: Short Term, systemic effects

Worker Professional: 3 03 - Exposure: Human Oral - Frequency: Long Term, systemic

effects

Worker Professional: 3 03 - Exposure: Human Inhalation - Frequency: Long Term, local

effects

Worker Professional: 10 03 - Exposure: Human Inhalation - Frequency: Short Term,

local effects

Worker Professional: 2.72 mg/kg - Exposure: Human Dermal - Frequency: Long Term,

systemic effects

Worker Professional: 46.7 mg/kg - Exposure: Human Dermal - Frequency: Short Term,

systemic effects

Worker Professional: 9.2 04 - Exposure: Human Dermal - Frequency: Long Term, local

effects

Worker Professional: 9.2 04 - Exposure: Human Dermal - Frequency: Short Term, local

effects

Consumer: 1.5 03 - Exposure: Human Inhalation - Frequency: Long Term, systemic

effects

Consumer: 5 03 - Exposure: Human Inhalation - Frequency: Short Term, systemic

effects

PNEC Exposure Limit Values

copper sulphate - CAS: 7758-98-7

Target: Fresh Water - Value: 0.0078 mg/l Target: Marine water - Value: 0.0052 mg/l

Target: Microorganisms in sewage treatments - Value: 0.23 mg/l

Target: Freshwater sediments - Value: 87 mg/kg

Target: Soil (agricultural) - Value: 65 mg/kg

Aluminum sulphate - CAS: 10043-01-3

Target: Fresh Water - Value: 4.50 mg/l Target: Marine water - Value: 64.0 mg/l

Target: Microorganisms in sewage treatments - Value: 60.2 mg/l

Target: Freshwater sediments - Value: 10 mg/l
Target: Marine water sediments - Value: 31.4 mg/l

Target: Soil (agricultural) - Value: 58 mg/kg

8.2. Exposure controls

Eve/face protection:

Eye glasses with side protection. EN166

Protection for skin:

Clothing resistant to corrosive products CLASS I, EN 340

Protection for hands:

Gloves resistant to chemicals. EN 374

Respiratory protection:

Full facial mask with chlorine filter (EN14387).

Where ventilation is insufficient or exposure is prolonged use a protective breathing equipment, es.CEN / FFP-2 or CEN / FFP-3.

Thermal Hazards:

Not applicable (the product is handled at room temperature)

Environmental exposure controls:

Do not allow the product to be absorbed from the soil or from entering waterways or sewers.

Do not let product enter drains. Discharge into the environment must be avoided.

The product is toxic to the aquatic environment.

Appropriate engineering controls:

Ensure adequate ventilation. Comply with the maximum concentration values in the workplace.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	White pads with blue dots		
Odour:	Pungente		
Odour threshold:	N.A.		
pH:	3		10 g/l at 10 °C
Melting point / freezing point:	225-240°C		
Initial boiling point and boiling range:	N.A.		
Flash point:	Not Available		
Evaporation rate:	N.A.		
Solid/gas flammability:	N.A.		
Upper/lower flammability or explosive limits:	N.A.		
Vapour pressure:	N.A.		
Vapour density:	N.A.		
Relative density:	Not Available		
Solubility in water:	12 g/l		at 20 °C
Solubility in oil:	N.A.		
Partition coefficient (noctanol/water):	N.A.		
Auto-ignition temperature:	N.A.		
Decomposition temperature:	230 °C		
Viscosity:	N.A.		
Explosive properties:	N.A.		
Oxidizing properties:	N.A.		

9.2. Other information

Properties	Value	Method:	Notes:	
Miscibility:	N.A.			
Fat Solubility:	N.A.			
Conductivity:	N.A.			
Substance Groups	N.A.			
relevant properties				

SECTION 10: Stability and reactivity

10.1. Reactivity

oxidising substance: it enhances combustion of other substances

10.2. Chemical stability

Stable under recommended storage and handling. Please refer to section 7 of the MSDS.

10.3. Possibility of hazardous reactions

Avoid heat, flames and other sources of ignition.

Acids.

10.4. Conditions to avoid

Do not mix with acids. It can be produced toxic gases (chlorine).

Humidity.

Keep away from heat sources.

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10.5. Incompatible materials

Products containing nitrogen (ammonia, urea etc.)

Concentrated acids.

organic substances.

10.6. Hazardous decomposition products

Chlorine.

Sulfur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the product:

symclosene; trichloroisocyanuric acid; trichloro-1,3,5-triazinetrion - CAS: 87-90-1

a) acute toxicity:

Test: LD50 - Route: Oral = 532 mg/kg

copper sulphate - CAS: 7758-98-7

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 300 mg/kg - Source: FRESNO, THOMSON PUBLICATIONS GESTIS - Notes: OECD GUIDELINE 401 (ACUTE ORAL TOXICITY) Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg - Source: STUDY REPORT

1993 (ECHA) - Notes: OECD GUIDELINE 402 (ACUTE DERMAL TOXICITY)

b) skin corrosion/irritation:

Test: Skin Irritant Yes - Source: GESTIS

c) serious eye damage/irritation:

Test: Eye Irritant Yes - Source: GESTIS

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: .porc No - Source: STUDY REPORT 1994 (ECHA) - Notes: OECD GUIDELINE 406 (SKIN SENSITISATION)

e) germ cell mutagenicity:

Test: Mutagenesis No - Source: STUDY REPORT 1994 (ECHA) - Notes: BACTERIAL REVERSE MUTATION ASSAY OECD GUIDELINE 471

f) carcinogenicity:

Test: Carcinogenicity No - Source: CARLTON AND PRICE 1973 (ECHA)

g) reproductive toxicity:

Test: Reproductive Toxicity No - Source: STUDY REPORT 2005 (ECHA) - Notes: EPA OPPTS 870.3800 (REPRODUCTION AND FERTILITY EFFECTS)

Aluminum sulphate - CAS: 10043-01-3

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 6207 mg/kg - Source: STUDY REPORT 1996 (ECHA) - Notes: ALUMINIUM IN THE URINE, FAECES, AND TISSUES WAS ESTIMATED BY NIKITINA'S (1956)

Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg - Source: STUDY REPORT 1973 (ECHA) - Notes: OECD GUIDELINE 402 (ACUTE DERMAL TOXICITY)

b) skin corrosion/irritation:

Test: Skin Irritant - Species: Rabbit No - Source: STUDY REPORT 1973 (ECHA) - Notes: OECD GUIDELINE 404 (ACUTE DERMAL IRRITATION / CORROSION)

c) serious eye damage/irritation:

Test: Eye Corrosive - Species: Rabbit Yes - Source: STUDY REPORT 1994 (ECHA) - Notes: OECD GUIDELINE 405 (ACUTE EYE IRRITATION / CORROSION)

d) respiratory or skin sensitisation:

Test: Skin Sensitization No - Source: STUDY REPORT 2006 (ECHA) - Notes: SKIN PRICK TEST

e) germ cell mutagenicity:

Test: Mutagenesis No - Source: STUDY REPORT 1991 (ECHA) - Notes: EPA OTS 798.5550

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f) carcinogenicity:

Test: Carcinogenicity No - Source: STUDY REPORT 1975 (ECHA) - Notes: EPA OPP 83-5 (COMBINED CHRONIC TOXICITY / CARCINOGENICITY)

g) reproductive toxicity:

Test: Reproductive Toxicity No - Source: STUDY REPORT 1994 (ECHA) - Notes: EPA OPP 83-6 (DEVELOPMENTAL NEUROTOXICITY STUDY)

symclosene; trichloroisocyanuric acid; trichloro-1,3,5-triazinetrion - CAS: 87-90-1

LD50 (RAT) ORAL: 406 MG/KG LD50 (RABBIT) SKIN: 20000 MG/KG

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- a) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure:
- i) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

No information is available on the mixture as a whole. This is the information on ecotoxicological effects of the individual components.

symclosene; trichloroisocyanuric acid; trichloro-1,3,5-triazinetrion - CAS: 87-90-1

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 0.08 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 0.17 mg/l - Duration h: 48

copper sulphate - CAS: 7758-98-7

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 0.032 mg/l - Duration h: 96 - Notes: ECHA

Endpoint: EC50 - Species: Daphnia = 0.18 mg/l - Duration h: 48 - Notes: ECHA

Endpoint: EC50 - Species: Algae = 2.5 mg/l - Duration h: 72 - Notes: ECHA

Aluminum sulphate - CAS: 10043-01-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 235 mg/l - Duration h: 96 - Notes: ECHA

Endpoint: EC50 - Species: Daphnia = 160 mg/l - Duration h: 48 - Notes: ECHA

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A

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.

Additional disposal information:

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Retrieve if possible. Send to authorized disposal plants or incineration under controlled conditions. Work according to local and national regulations. Recover if possible. Send to authorized disposal plants or for incineration under controlled conditions. Operate according to local and national regulations.

SECTION 14: Transport information





14.1. UN number

ADR-UN Number: 2468 IATA-UN Number: 2468 IMDG-UN Number: 2468

14.2. UN proper shipping name

ADR-Shipping Name: TRICHLOROISOCYANURIC ACID, DRY IATA-Shipping Name: TRICHLOROISOCYANURIC ACID, DRY IMDG-Shipping Name: TRICHLOROISOCYANURIC ACID, DRY

14.3. Transport hazard class(es)

ADR-Class: 5.1
ADR - Hazard identification number: 50
IATA-Class: 5.1
IMDG-Class: 5.1

14.4. Packing group

ADR-Packing Group: II IATA-Packing group: II IMDG-Packing group: II

14.5. Environmental hazards

ADR-Environmental Pollutant: Yes

IMDG-Marine pollutant: Marine Pollutant

14.6. Special precautions for user

ADR-Subsidiary risks: - ADR-S.P.: -

ADR-Transport category (Tunnel restriction code): 2 (E)

IATA-Passenger Aircraft: 558
IATA-Subsidiary risks: IATA-Cargo Aircraft: 562
IATA-S.P.: IATA-ERG: 5L

IMDG-EmS: F-A , S-Q

IMDG-Subsidiary risks: -

IMDG-Stowage and handling: Category A

IMDG-Segregation: Keep as dry as reasonably practicable.

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

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

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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):

Seveso III category according to Annex 1, part 1

Product belongs to category: E1

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:

None

SECTION 16: Other information

For professional use.

Full text of phrases referred to in Section 3:

H272 May intensify fire; oxidiser.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H290 May be corrosive to metals.

H318 Causes serious eye damage.

Hazard class and hazard category	Code	Description
Ox. Sol. 2	2.14/2	Oxidising solid, Category 2
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 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 Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1

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Paragraphs modified from the previous revision:

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

SECTION 2: Hazards identification

SECTION 3: Composition/information on ingredients

SECTION 4: First aid measures SECTION 5: Firefighting measures

SECTION 6: Accidental release measures

SECTION 7: Handling and storage

SECTION 8: Exposure controls/personal protection

SECTION 9: Physical and chemical properties

SECTION 10: Stability and reactivity
SECTION 11: Toxicological information
SECTION 12: Ecological information
SECTION 15: Regulatory information
SECTION 16: Other information

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.

For professional use.

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.

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TLV: Threshold Limiting Value.
TWA: Time-weighted average
WGK: German Water Hazard Class.