Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Product name **SANITER® 415**

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

Intended use **Biocide for industrial water**

Identified Uses	Industrial	Professional	Consumer
Additive for biocidal effect	**SU: 1, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 23, 24, 4, 5, 6a, 6b, 7, 8, 9. ERC: 2, 3, 6b, 7. PROC: 1, 15, 19, 2, 3, 5, 8b, 9. PC: 8.**	**SU: 1, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 23, 24, 4, 5, 6a, 6b, 7, 8, 9. ERC: 2, 3, 6b, 7. PROC: 1, 15, 19, 2, 3, 5, 8b, 9. PC: 8.**	-
Uses Advised Against			
Any use non-professional Any use not included among those recommended			

1.3. Details of the supplier of the safety data sheet

Name **N.C.R. BIOCHEMICAL S.p.A.**
Full address **Headquarter Via dei Carpentieri, 8 - Zona Industriale il Prato**
District and Country **40050 Castello d'Argile (BO)**
Italia
Tel. +39 051 6869611 Mon-Fri 8.30-13.00/14.00-16.30
Fax +39 051 6869617

e-mail address of the competent person responsible for the Safety Data Sheet **regulatory@ncr-biochemical.it**

1.4. Emergency telephone number

For urgent inquiries refer to **Italy:**
CAV ospedale Niguarda Ca Granda - Milano 0266101029
CAV Az. Osp. Papa Giovanni XXIII - Bergamo 800 883300
CAV Centro Nazionale di Informazione Tossicologica - Pavia 038224444
CAV Az. Osp. Careggi U.O. Tossicologia Medica - Firenze 0557947819
CAV Policlinico A. Gemelli - Roma 063054343
CAV Az. Osp. A. Cardarelli - Napoli 0817472870
CAV Az. Osp. Univ. Foggia - Foggia 0881732326

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1	H410	Very toxic to aquatic life with long lasting effects.

SECTION 2. Hazards identification ... / >>

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Warning

Hazard statements:
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:
P273 Avoid release to the environment.
P391 Collect spillage.

Product not intended for uses provided for by Dir. 2004/42/CE.

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
Sodium dimethyldithiocarbamate		
CAS *128-04-1*	25 ≤ x < 50	**Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=1**
EC *204-876-7*		
INDEX		
Reg. no. *01-2119543694-32-XXXX*		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

INHALATION: Remove the person to open air and keep at rest in a position that encourages breathing. In case of lack of breathing, irregular breathing or respiratory arrest, perform artificial respiration or have oxygen administered by trained rescuers. Mouth-to-mouth breathing can be dangerous to the rescuer. If the harmful effects persist or are very serious, get medical advice/attention. If the person is not conscious, put him in a safe side position and get medical advice/attention immediately. Ensure good air circulation. Loosen tight clothing such as collars, ties, belts or straps. In case of inhalation of decomposed products in a fire, the symptoms may be delayed. If necessary keep the exposed person under medical supervision for 48 hours.
INGESTION: Rinse the mouth with water. Remove any dental prosthesis. Transport the person in the open air and keep him at rest in a position that favors breathing. If the exposed person is conscious, give him water to drink in small quantities. Discontinue administration if the person claims to vomit, as vomiting may be dangerous. Do not induce vomiting unless directed by a doctor. In case of vomiting, the head should be kept low so that the vomit does not enter the lungs. If the harmful effects persist or are very serious get medical advice/attention. If the person is unconscious, do not give anything by mouth, but put him in a safe side position and get medical advice/attention immediately.
Ensure good air circulation. Loosen tight clothing such as collars, ties, belts or straps.
SKIN: Rinse the exposed area with plenty of water. Take off contaminated clothes. Get medical advice/attention if symptoms occur. Wash the contaminated clothes before reusing them.
EYES: Remove any contact lenses. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids well. Get medical advice/attention in case of irritation.

SECTION 4. First aid measures ... / >>

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

See section 11.

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

See section 11.

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
Nothing known.

5.2. Special hazards arising from the substance or mixture

In the event of fire or overheating, the product container may break due to pressure increase. The product is highly toxic to aquatic organisms with long-term effects. Contaminated extinguishing water must be contained and must be kept away from waterways, sewers or drains.

5.3. Advice for firefighters

In case of fire, promptly isolate the area by removing all persons from the area of the accident. Do not take any action that involves any personal risk or without appropriate training.
The basic protection for fire fighting personnel includes helmets, protective boots and gloves that comply with the European standard EN 469.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not take any action that involves any personal risk or without appropriate training. Prevent entry of unprotected people. Do not touch or walk on spilled material. Avoid breathing vapors or mists. Provide adequate ventilation. In the absence of adequate ventilation, wear a suitable respirator. Wear appropriate personal protective equipment.

6.2. Environmental precautions

Prevent the material from coming in contact with soil, waterways, drains and sewers. Notify the competent authorities if the product enters the sewers, surface water, ground water. Collect the leaked material.

6.3. Methods and material for containment and cleaning up

Contain spills if there are no risks to people. Contact an authorized waste disposal company. A contaminated absorbent material can cause the same danger of the poured product.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid exposure to the product. Please refer to section 8 for the selection of personal protective equipment. Do not disperse in the environment. Store in the original container or a compatible one and keep it tightly closed when not in use. Do not reuse empty containers. Do not eat, drink or smoke during use. Wash hands after use.

7.2. Conditions for safe storage, including any incompatibilities

Storage temperature: 5-35 ° C. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from other incompatible materials (see Section 10) and from food and drink.
Once opened, reseal the container and keep it upright to prevent accidental spillage of the product. The container must always be labeled. Provide adequate containment systems to avoid environmental pollution.

Storage class TRGS 510 (Germany): 12

SECTION 7. Handling and storage ... / >>

7.3. Specific end use(s)

The exhaust air should be directed outdoors only through suitable separation or washing devices.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Exposure limits are listed below when they exist.

Sodium dimethyldithiocarbamate		
Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,00061	mg/l
Normal value in marine water	0,00006	mg/l
	1	
Normal value for fresh water sediment	0,0022	mg/kg/dw
Normal value for marine water sediment	0,0002	mg/kg/dw
Normal value of STP microorganisms	0,0365	mg/l
Normal value for the food chain (secondary poisoning)	1,72	mg/kg
Normal value for the terrestrial compartment	0,4053	mg/kg/dw

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		VND		0,1 mg/kg bw/d				
Inhalation	VND	VND	VND	0,35 mg/m3	VND	VND	VND	1,41 mg/m3
Skin	NPI	VND	VND	12,34 mg/kg bw/d	NPI	VND	NPI	24,69 mg/kg bw/d

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

Considering that the use of adequate technical measures should always take priority over personal protection equipment, ensure good ventilation in the workplace through effective local aspiration.
The individual protection devices must bear the CE marking attesting their compliance with the regulations in force.
HAND PROTECTION
The use of protective gloves is recommended (reference EN 374). For the final choice of the work glove material, the process of using the products and any other products deriving from them must also be evaluated. It is also recalled that latex gloves can give rise to sensitization phenomena.
PROTECTION OF EYES
It is advisable to wear safety glasses (ref EN 166).
PROTECTION OF THE SKIN AND BODY
Wear protective clothing and safety shoes (see Directive 89/686 / EEC and EN ISO 20344).
RESPIRATORY PROTECTION
In case of insufficient ventilation use adequate respiratory protection.
ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.
Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.
For information on controlling environmental exposure, see the exposure scenarios attached to this safety datasheet.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties		Value	Information
Appearance		liquid	
Colour		light yellow	
Odour		amino	
Odour threshold		Not available	
pH		9,5 ÷ 10,5 sol. 1%	
Melting point / freezing point		Not available	
Initial boiling point	>	100 °C	

SECTION 9. Physical and chemical properties ... / >>

Boiling range		Not available
Flash point	>	60 °C
Evaporation Rate		Not available
Flammability of solids and gases		not applicable because the product is liquid
Lower inflammability limit		Not available
Upper inflammability limit		Not available
Lower explosive limit		Not applicable
Upper explosive limit		Not applicable
Vapour pressure		Not available
Vapour density		Not available
Relative density		1,14 ÷ 1,18
Solubility		soluble in water
Partition coefficient: n-octanol/water		Not available
Auto-ignition temperature		Not applicable
Decomposition temperature		Not available
Viscosity		< 100 cPs (25°C/LCP/100 RPM)
Explosive properties		not applicable because it does not contain any explosives functional groups
Oxidising properties		not applicable because it does not contain any oxidizing functional groups

9.2. Other information

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

No available information.

Sodium dimethyldithiocarbamate
Reacts with: strong acids,metals.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

Avoid contact with strong acids and metals.

Sodium dimethyldithiocarbamate
Keep away from: strong acids,metals.

10.5. Incompatible materials

Strong acids, metals.

10.6. Hazardous decomposition products

Carbon oxides, nitrogen oxides, sulfur oxides.

Sodium dimethyldithiocarbamate
In decomposition develops: sulphurous anhydride,sulphuric anhydride,carbon dioxide,carbon monoxide,nitric oxide.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Sodium dimethyldithiocarbamate
Unless otherwise specified in the following paragraphs, for the involved substance toxicological data in the following list are considered not available: acute toxicity, skin corrosion/irritation, serious eye damage/irritation, respiratory or skin sensitisation, germ cell mutagenicity, carcinogenicity, reproductive toxicity, STOT - single exposure, STOT - repeated exposure, aspiration hazard.

Metabolism, toxicokinetics, mechanism of action and other information

SECTION 11. Toxicological information ... / >>

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sodium dimethyldithiocarbamate
Clinical signs: Increased salivation for a short time for both genders after treatment with 250 mg / kg / day.
Mortality: No mortality detected.
Consumption of water and food: Food consumption is reduced as a function of weight reduction. Food efficiency is reduced by showing impairment of food function. No difference in water consumption.
Hematology: Hemophilia effects for both genders treated with 50 and 250 mg / kg / day accompanied by increased mean hemoglobin content (MCH) and medium corpuscular volume (MCV).
Clinical chemistry: in males treated with 250 mg / kg / day there is an increase in protein, sodium and cholesterol in plasma levels.
Neuro behavior: Hunched posture and tiptoe walk from the fourth week of treatment.
Weight of organs: enlarged kidney, liver and spleen for both genders treated with 250 mg / kg / day.

Chronic potential health effects:
Repeated dose toxicity, oral (subchronic): NOAEL = 24,4 mg/kg bw/day (rat, OECD 408, reliability 1)
Repeated dose toxicity, dermal (subacute): NOAEL = 93,7 mg/kg bw/day (rabbit, 21 days).

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:	Not classified (no significant component)
LD50 (Oral) of the mixture:	Not classified (no significant component)
LD50 (Dermal) of the mixture:	Not classified (no significant component)

Sodium dimethyldithiocarbamate

LD50 (Oral)	> 2500 mg/kg Rat, according to OECD Guideline 423 Reliability 1
LD50 (Dermal)	> 5000 mg/kg Rat, according to OECD Guideline 402 Reliability 1

The following data refer to the product.
Acute oral toxicity: LD50 (rat) > 2500 mg/kg
Acute dermal toxicity: LD50 (rat) > 2000 mg/kg.

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

Sodium dimethyldithiocarbamate
Based on available data, the classification criteria are not met.
During tests in rabbits the substance caused a slight reversible irritation within 4 hours (OECD 404, reliability 1).

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

Sodium dimethyldithiocarbamate
Based on available data, the classification criteria are not met.
During tests in rabbits the substance caused a slight reversible irritation within 7 days or less (OECD 405, reliability 1).

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

Skin sensitization
Sodium dimethyldithiocarbamate
Based on available data, the classification criteria are not met. It does not cause sensitization (study on guinea pig according to OECD 406, reliability 1).

GERM CELL MUTAGENICITY

SECTION 11. Toxicological information ... / >>

Does not meet the classification criteria for this hazard class

Sodium dimethyldithiocarbamate
Based on available data, the classification criteria are not met. Not mutagenic in a standard battery of genetic toxicological tests.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

Sodium dimethyldithiocarbamate
Based on available data, the classification criteria are not met.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Sodium dimethyldithiocarbamate
Based on available data, the classification criteria are not met.

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Sodium dimethyldithiocarbamate
Based on available data, the classification criteria are not met.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Sodium dimethyldithiocarbamate
Based on available data, the classification criteria are not met.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

Sodium dimethyldithiocarbamate
Based on available data, the classification criteria are not met.

SECTION 12. Ecological information

This product is dangerous for the environment and highly toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

Sodium dimethyldithiocarbamate
Toxicity to microorganisms: EC50/3h = 3,65 mg/l (activated sludge, OECD 209, reliability 1).

Sodium dimethyldithiocarbamate	
LC50 - for Fish	0,76 mg/l/96h Oncorhynchus mykiss, OECD Guideline 203 Reliability 1
EC50 - for Crustacea	0,67 mg/l/48h Daphnia magna, according to OECD Guideline 202, reliability 1
EC50 - for Algae / Aquatic Plants	0,0012 mg/l/96h Pseudokirchneriella subcapitata, according to OECD Guideline 201, Reliability 1
Chronic NOEC for Fish	0,101 mg/l Pimephales promelas 33 d, according to OECD Guideline 210 , Reliability 2
Chronic NOEC for Crustacea	0,039 mg/l Daphnia Magna 21d, according to OECD Guideline 211, Reliability 2
Chronic NOEC for Algae / Aquatic Plants	0,0038 mg/l Pseudokirchneriella subcapitata 96h, according to OECD Guideline 201, Reliability 1

12.2. Persistence and degradability

Sodium dimethyldithiocarbamate	
Rapidly degradable	67%, 28d, OECD 301D

12.3. Bioaccumulative potential

SECTION 12. Ecological information ... / >>

Sodium dimethyldithiocarbamate
Partition coefficient: n-octanol/water -2,41
BCF 0,84

12.4. Mobility in soil

Sodium dimethyldithiocarbamate
Partition coefficient: soil/water < 0,682

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Comply with all local and national regulations. Contact an accredited waste treatment company.
Warning: the product or its container can contaminate the water and the soil; prevent their dispersal.
Empty containers must be cleared and disposed of in an authorized center.

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA: 3082

ADR / RID: In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to ADR provisions.

IMDG: In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to IMDG Code provisions.

IATA: In accordance with SP A197, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to IATA dangerous goods regulations.

14.2. UN proper shipping name

ADR / RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (sodium dimethyldithiocarbamate)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (sodium dimethyldithiocarbamate)
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (sodium dimethyldithiocarbamate)

14.3. Transport hazard class(es)

ADR / RID: Class: 9 Label: 9

IMDG: Class: 9 Label: 9

IATA: Class: 9 Label: 9

14.4. Packing group

ADR / RID, IMDG, IATA: III

SECTION 14. Transport information ... / >>

14.5. Environmental hazards

ADR / RID:	Environmentally Hazardous
IMDG:	Marine Pollutant
IATA:	Environmentally Hazardous

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 90 Special Provision: -	Limited Quantities: 5 L	Tunnel restriction code: -
IMDG:	EMS: F-A, S-F	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 450 L	Packaging instructions: 964
	Pass.:	Maximum quantity: 450 L	Packaging instructions: 964
	Special Instructions:	A97, A158	

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

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: E1

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006
Product
Point 3

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Healthcare controls
Information not available

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)
WGK 3: Severe hazard to waters

15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1

SECTION 16. Other information ... / >>

H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Use descriptor system:

ERC	2	Formulation into mixture
ERC	3	Formulation into solid matrix
ERC	6b	Use of reactive processing aid at industrial site (no inclusion into or onto article)
ERC	7	Use of functional fluid at industrial site
PC	8	Biocidal products
PROC	1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC	15	Use as laboratory reagent
PROC	19	Manual activities involving hand contact
PROC	2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC	3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC	5	Mixing or blending in batch processes
PROC	8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC	9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
SU	1	Agriculture, forestry, fishery
SU	10	Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU	11	Manufacture of rubber products
SU	12	Manufacture of plastics products, including compounding and conversion
SU	13	Manufacture of other non-metallic mineral products, e.g. plasters, cement
SU	14	Manufacture of basic metals, including alloys
SU	15	Manufacture of fabricated metal products, except machinery and equipment
SU	16	Manufacture of computer, electronic and optical products, electrical equipment
SU	17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU	18	Manufacture of furniture
SU	19	Building and construction work
SU	20	Health services
SU	23	Electricity, steam, gas water supply and sewage treatment
SU	24	Scientific research and development
SU	4	Manufacture of food products
SU	5	Manufacture of textiles, leather, fur
SU	6a	Manufacture of wood and wood products
SU	6b	Manufacture of pulp, paper and paper products
SU	7	Printing and reproduction of recorded media
SU	8	Manufacture of bulk,large scale chemicals (including petroleum products)
SU	9	Manufacture of fine chemicals

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds

SECTION 16. Other information ... / >>

- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:
The following sections were modified:
01 / 03 / 11 / 12.

Exposition Scenarios

Substance	Sodium dimethyldithiocarbamate
Scenario Title	SE_SDMC
Revision nr.	5
File	EN_SESDMC_5.pdf