

Safety data sheet

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

1.1. Product identifier

Code:
Product name

DECO A 1204
SUPREMA COLOR BLEACHING POWDER BLUE

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

Bleaching powder for hair

1.3. Details of the supplier of the safety data sheet

Name
Full address
District and Country

Farmavita Srl
Via Garibaldi 82/84
Locate Varesino (CO)
Italy
Ph: +39 0331833467

e-mail address of the competent person
responsible for the Safety Data Sheet

tecnico@farmavita.it; info@farmavita.it; marketing@farmavita.it

1.4. Emergency telephone number
For urgent inquiries refer to

Ospedale Niguarda Ca' Granda - Milano - 02/66101029
Azienda Ospedaliera S.G.Battista - Molinette - Torino - 011/6637637
Clinica Del Lavoro E Della Riabilitazione- Pavia - 0382/24444
Università Degli Studi Di Padova - Padova - 049/8275078 04
Istituto Scientifico G. Gaslini - Genova - 010/5636245
Azienda Ospedaliera Careggi - Firenze - 055/4277238
Policlinico A.Gemelli - Univ. Cattolica Del Sacro Cuore - Roma - 06/3054343
Centro Antiveleni - Università La Sapienza - Roma - 06/49970698
Centro Antiveleni Azienda Ospedaliera A. Cardarelli - Napoli - 081/7472870

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 EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Ox. Sol. 3	H272
Acute Tox. 4	H302
Skin Corr. 1B	H314
Eye Dam. 1	H318
STOT SE 3	H335
Resp. Sens. 1	H334
Skin Sens. 1	H317

2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols:

Xn

R phrases:

22-36/37/38-42/43

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

2.2. Label elements.

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

Hazard pictograms:



Signal words: Danger

Hazard statements:

H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.

Precautionary statements:

P210 Keep away from heat / sparks / open flames / hot surfaces. No smoking.
P220 Keep / Store away from clothing / . . . / combustible materials.
P264 Wash . . . thoroughly after handling.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P370+P378 In case of fire: Use . . . for extinction.

Contains: DISODIUM METASILICATE
 SODIUM SILICATE

 Dipotassium peroxodisulphate
 SODIUM PERSULFATE
 AMMONIUM PEROXYDISULPHATE

2.3. Other hazards.

Information not available.

SECTION 3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification.	Conc. %.	Classification 67/548/EEC.	Classification 1272/2008 (CLP).
Dipotassium peroxodisulphate			
CAS. 7727-21-1	25 - 50	O R 8, Xn R22, Xn R42/43, Xi R38/37/38	Ox. Sol. 3 H272, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317
EC. 231-781-8			

INDEX. 016-061-00-1			
Reg. no. 01-2119495676-19-0000			
SODIUM SILICATE			
CAS. 1344-09-8	10 - 25		Eye Dam. 1 H318, Eye Irrit. 2 H319, Eye Irrit. 2A H319, Skin Irrit. 2 H315, STOT SE 3 H335
EC. 215-687-4			
INDEX. -			
Reg. no. 01-2119448725-31-0011			
DISODIUM METASILICATE			
CAS. 6834-92-0	1 - 5	C R34, Xi R37	Met. Corr. 1 H290, Skin Corr. 1B H314, STOT SE 3 H335
EC. 229-912-9			
INDEX. 014-010-00-8			
Reg. no. 01-2119449811-37-xxxx			
SODIUM PERSULFATE			
CAS. 7775-27-1	1 - 5	O R 8, Xn R22, Xn R42/43, Xi R36/37/38	Ox. Sol. 3 H272, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317
EC. 231-892-1			
INDEX. -			
Reg. no. 01-2119495975-15-0000			
AMMONIUM PEROXYDISULPHATE			
CAS. 7727-54-0	1 - 5	O R 8, Xn R22, Xn R42/43, Xi R36/37/38	Ox. Sol. 3 H272, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317
EC. 231-786-5			
INDEX. 016-060-00-6			
Reg. no. 01-2119495973-19-0000			

Note: Upper limit is not included into the range.

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

T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

SECTION 4. First aid measures.

4.1. Description of first aid measures.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

SECTION 5. Firefighting measures.

5.1. Extinguishing media.

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide and chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water.

Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

If large quantities of the product are involved in a fire, they can make it considerably worse. Do not breathe combustion products.

5.3. Advice for firefighters.

GENERAL INFORMATION

In the case of fire, use jets of water to cool the containers to prevent the risk of explosions (product decomposition and excess pressure) and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Remove all containers containing the product from the fire, if it is safe to do so.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures.

If there are no contraindications, spray powder with water to prevent the formation of dust. Avoid breathing vapours/mists/gases.

Wear 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. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up.

Use spark-proof mechanical equipment to collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

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.

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities.

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s).

Information not available.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Regulatory References:

United Kingdom	EH40/2005 Workplace exposure limits. Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations (as amended).
Éire	Code of Practice Chemical Agent Regulations 2011.
OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
TLV-ACGIH	ACGIH 2012

SODIUM SILICATE								
Predicted no-effect concentration - PNEC.								
Normal value in fresh water				7,5				mg/l
Normal value for water, intermittent release				7,5				mg/l
Normal value for marine water sediment				1				mg/l
Normal value of STP microorganisms				348				mg/l
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	0,80 mg/kg bw/d				
Inhalation.			VND	1,38 mg/m3			VND	5,61 mg/m3
Skin.			VND	0,8 mg/kg bw/d			VND	1,59 mg/kg bw/d

AMMONIUM PEROXYDISULPHATE					
Threshold Limit Value.					
Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
OEL	IRL	0,1			
TLV-ACGIH		0,1			

SODIUM PERSULFATE					
Threshold Limit Value.					
Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
OEL	IRL	0,1			
TLV-ACGIH		0,1			

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

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

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate otherwise classified (PNOC respirable fraction: 3 mg/m3; PNOC inhalable fraction: 10 mg/m3). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment.

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).

Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

Use a type P filtering facemask (see standard EN 149) or equivalent device, whose class (1, 2 or 3) and effective need, must be defined according to the outcome of risk assessment.

ENVIRONMENTAL EXPOSURE CONTROLS.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	powder
Colour	blue
Odour	characteristic
Odour threshold.	Not available.
pH.	10,3-11,3
Melting point / freezing point.	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.
Flash point.	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	Not available.
Solubility	partially soluble
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

SECTION 10. Stability and reactivity.

10.1. Reactivity.

DISODIUM METASILICATE: the aqueous solutions behave like strong bases.

SODIUM PERSULFATE: decomposes at temperatures above 145°C. With water it reduces to bisulphate with the development of oxygen.

10.2. Chemical stability.

Information not available.

10.3. Possibility of hazardous reactions.

The product may react violently with water.

DISODIUM METASILICATE: may react dangerously with fluorine and lithium.

SODIUM PERSULFATE: reacts violently with combustible materials and reducing agents with risk of fire and explosion.

10.4. Conditions to avoid.

Avoid overheating. Prevent moisture or water from penetrating inside the containers.

10.5. Incompatible materials.

DISODIUM METASILICATE: in aqueous solution it is incompatible with acids, organic anhydrides, acrilates, alcohols, aldehydes, alkyl oxides, cresoles, caprolactam solutions, epichlorohydrin, ethylene dichloride; glycols, isocyanates, ketones, nitrates, phenols and vinyl acetate.

10.6. Hazardous decomposition products.

SODIUM PERSULFATE: sulphur oxide and oxygen.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

Acute effects: ingestion of this product is harmful. Even small amounts of product may cause serious health problems (stomach pain, nausea, sickness, diarrhoea).

This product is corrosive and causes serious burns and vesicles on the skin, which can arise even after exposure. Burns are very stinging and painful. Upon contact with eyes, it may cause serious harm, such as cornea opacity, iris lesions, irreversible eye coloration. Possible vapours are caustic for the respiratory system and may cause pulmonary edema, whose symptoms sometimes arise only after some hours.

Exposure symptoms may include: sting, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness.

If swallowed, it may cause mouth, throat and oesophagus burns, sickness, diarrhoea, edema, larynx swelling and, consequently, asphyxia. Perforation of the gastro-intestinal tract is also possible.

This product may cause serious ocular lesions, cornea opacity, iris lesions, irreversible eye coloration.

Acute effects: vapour inhalation may irritate the lower and upper respiratory tract and cause cough and respiratory disorders. At higher concentrations it can also cause pulmonary edema. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

Inhalation of this product causes sensitization, which may then give rise to a series of inflammatory episodes, most of all characterized by obstruction and affecting the respiratory system. Sometimes, sensitization phenomena arise together with evident rhinitis and asthma. Damages to the respiratory system depend on the inhaled quantity, on the product concentration in the working environment and on the exposure time.

Upon contact with skin, this product causes sensitization (dermatitis). Dermatitis derives from skin irritation on the areas which repeatedly come into contact with the sensitizing agent. Cutaneous lesions may include: erythemas, edemas, papules, vesicles, pustules, scurries, ulcerations and exudative phenomena, whose intensity varies according to illness seriousness and affected areas. Erythemas, edemas and exudative phenomena prevail during the acute phase. Scurfy skin, dryness, ulcerations and skin thickening prevail during the chronic phase.

Dipotassium peroxodisulphate

LD50 (Oral). > 700 mg/kg (ratto)

LD50 (Dermal). > 2000 mg/kg (ratto)

LC50 (Inhalation). > 2,95 mg/l (ratto)

DISODIUM METASILICATE

LD50 (Oral). 1152 mg/kg bw (Ratto)

LD50 (Dermal). > 5000 mg/kg bw (Ratto)

LC50 (Inhalation). > 2,06 g/m³ (Ratto)

SODIUM PERSULFATE

LD50 (Oral). 700 mg/kg Rat

LD50 (Dermal). > 2000 mg/kg Rat

LC50 (Inhalation). > 2,95 mg/l/4h Rat

SODIUM STEARATE

LD50 (Oral). > 2000 mg/kg (ratto)

AMMONIUM PEROXYDISULPHATE

LD50 (Oral). > 700 mg/kg Rat

LD50 (Dermal). 2000 mg/kg Rat

LC50 (Inhalation). 2,95 mg/l/4h Rat

SODIUM SILICATE

LD50 (Oral). 3400 mg/kg (rat)

LD50 (Dermal). > 5000 mg/kg (rat)

LC50 (Inhalation). > 2,06 g/m³ (rat)

SECTION 12. Ecological information.

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation.

12.1. Toxicity.

Dipotassium peroxodisulphate

LC50 - for Fish.

> 76,3 mg/l/96h (trout iridea)

EC50 - for Crustacea.

> 120 mg/l/48h (daphnia)

EC50 - for Algae / Aquatic Plants.

> 83,7 mg/l/72h (pseudokirchneriella subcapitata)

AMMONIUM PEROXYDISULPHATE

LC50 - for Fish.

76,3 mg/l/96h (trout iridea)

EC50 - for Crustacea.

120 mg/l/48h (Daphnia magna)

SODIUM SILICATE
LC50 - for Fish.
1108 mg/l/96h (Brachydanio rerio)
EC50 - for Crustacea.
1700 mg/l/48h (Daphnia magna)

12.2. Persistence and degradability.

DISODIUM METASILICATE
Rapidly biodegradable.
12.3. Bioaccumulative potential.

Information not available.

12.4. Mobility in soil.

Information not available.

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.

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Avoid littering. Do not contaminate soil, sewers and waterways.

Waste transportation may be subject to ADR restrictions.


CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.


SECTION 14. Transport information.

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:

	ADR/RID Class:	5.1	UN:	1479
	Packing Group:	III		
	Label:	5.1		
	Nr. Kemler:	50		
	Limited Quantity:	5 kg		
	Tunnel restriction code:	(E)		
	Proper Shipping Name:	OXIDIZING SOLID, N.O.S. MIXTURE		

Carriage by sea (shipping):

	IMO Class:	5.1	UN:	1479
	Packing Group:	III		
	Label:	5.1		
	EMS:	F-A, S-Q		
	Marine Pollutant:	NO		
	Proper Shipping Name:	OXIDIZING SOLID, N.O.S. MIXTURE		

Transport by air:

IATA:	5.1	UN:	1479
Packing Group:	III		
Label:	5.1		
Cargo:			
Packaging instructions:	563	Maximum quantity:	100 Kg
Pass.:			
Packaging instructions:	559	Maximum quantity:	25 Kg
Special Instructions:	A3		
Proper Shipping Name:	OXIDIZING SOLID, N.O.S. MIXTURE		

SECTION 15. Regulatory information.**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.**

Seveso category. None.

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

Contained substance.

Point.	Decision 2013/505/UE - AMMONIUM PEROXYDISULPHA TE Reg. no.: 01- 2119495973-19-0000
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Substances in Candidate List (Art. 59 REACH).

None.

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.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

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:

Ox. Sol. 3	Oxidising solid, category 3
Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Eye Irrit. 2A	Eye irritation, category 2A
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R 8	CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
R22	HARMFUL IF SWALLOWED.
R34	CAUSES BURNS.
R36/37/38	IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
R37	IRRITATING TO RESPIRATORY SYSTEM.
R42/43	MAY CAUSE SENSITIZATION BY INHALATION AND SKIN CONTACT.

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

GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
8. Regulation (EC) 618/2012 (III Atp. CLP) of the European Parliament
9. The Merck Index. - 10th Edition
10. Handling Chemical Safety
11. Niosh - Registry of Toxic Effects of Chemical Substances
12. INRS - Fiche Toxicologique (toxicological sheet)
13. Patty - Industrial Hygiene and Toxicology
14. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
15. ECHA website

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.

Rev.1
Dated 09/06/2015