

Safety Data Sheet

In accordance with the regulation (CE) No 1907/2006 e and Regulation 830/2015

ARMAL BLUE PEARL (BUBBLE MTF00030)

Safety Data Sheet dated 01/07/2016, revision n° 4 dated 19/11/2018

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

1.1 Product identification

Commercial name: **ARMAL BLUE PEARL (BUBBLE MTF00030)**

Commercial Code: **D19003**

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

Product for professional use only, industrial sector and sanitation

1.3. Information of the supplier of the safety data sheet:

Testing and formulation laboratory

MTF BIOCHEMICAL SRL

Registered Office

Via Tucci 40 - 04100 Latina

Operational Headquarters

via Migliara 45, traversa Circe 250

04100 Borgo San Michele (LT)

Tel. 0773 – 176.24.14

1.4. Emergency telephone number

MTF BIOCHEMICAL SRL + 039 0773 – 176.24.14 (call during office hours)

Legal person responsible for the composition of the formulation of the safety data sheet:

Dr. STEFANO MANNA

E-mail: ricerca@mtfbiochemical.com

SECTION 2: Hazards identification ****

2.1. *Classification of the substance or mixture*

Classification according to Regulation (EC) No 1272/2008:

Acute toxicity - oral (category 4)

Skin irritation (category 2)

Skin sensitization (category 1)

Eye irritation (category 2)

Respiratory sensitization (category 1)

Specific target organ toxicity – single exposure (category 3)

Hazard statement Code(s):

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 - May cause respiratory irritation.

2.2. *Label elements:*

Pictogram, Signal Word Code(s):

Danger



Hazard statement Code(s):

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

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Registered Office Via Tucci, 40 - 04100 Latina (LT)

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C.f. e P.Iva : 02941910594

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H319 - Causes serious eye irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 - May cause respiratory irritation.

Precautionary statements:

Prevention

P261 - Avoid breathing dust.

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

P284 - [In case of inadequate ventilation] wear respiratory protection.

Response

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 - Call a POISON CENTER/doctor/... if you feel unwell.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...

P363 - Wash contaminated clothing before reuse.

Disposal

P501 - Dispose of contents/container to the rules.

Contains:

Disodium peroxodisulphate

2.3. Other hazards:

None information

SECTION 3. Composition/information of ingredients ****

3.1 Substances

N.A.

3.2 Mixtures

Name	Concentration (C) %	Classification Regulation CE/1272/2008	
Disodium peroxodisulphate	55 < C ≤ 65	Ox. Sol. 3	H272
Cas No 7775-27-1		Acute Tox. 4	H302
Ce No 231-892-1		Skin Irrit. 2	H315
Reg No 01-2119495975-15-XXXX		Skin Sens. 1	H317
		Resp. Sens. 1	H334
		STOT SE 3	H335
		Eye Irrit. 2	H319
Sulfuric acid, mono-C12-18-alkyl esters, sodium salts*	17 < C < 20	Skin Irrit. 2	H315
Cas No 68955-19-1		Eye Dam. 1	H318
Ce No 273-257-1		Aquatic Chronic 3	H412
Reg No 01-2119490225-39-XXXX			
Citric acid	7 < C < 11	Eye Irrit. 2	H319
Cas No 5949-29-1			
CE No 201-060-1			
Reg No exempt: Art. 2 1907/2006			
methylthioninium chloride**	1 < C < 4	Acute Tox. 4	H302
Cas No 61-73-4			

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CE No 200-515-2			
ethyl 2,3-epoxy-3-phenylbutyrate	1 < C < 3	Skin Sens. 1B	H317
CAS No 77-83-8		Aquatic Chronic 2	H411
CE No 201-061-8			
Reg No 01-2119967770-28-XXXX			
isopentyl acetate***	0.5 < C < 1	Flam. Liq. 3	H226
Cas No 123-92-2		EUH066	
CE No 204-662-3			
Index No 607-130-00-2			
Reg No 01-2119548408-32-XXXX			
Methyl cinnamate	0.1 < C < 0.5	Skin Sens. 1B	H317
CAS No 103-26-4			
CE No 203-093-8			
Reg No 01-2119979458-16-XXX			
(R)-p-mentha-1,8-diene	0.1 < C < 0.5	Flam. Liq. 3	H226
Cas No 5989-27-5		Asp. Tox. 1	H304
CE No 227-813-5		Skin Irrit. 2	H315
Index No 601-029-00-7		Skin Sens. 1	H317
		Aquatic Acute 1	H400
		Aquatic Chronic 3	H412
Butanedione***	0.01 < C < 0.1	Flam. Liq. 2	H225
Cas No 431-03-8		Acute Tox. 4	H302
CE No 207-069-8		Skin Irrit. 2	H315
		Skin Sens. 1	H317
		Eye Dam. 1	H318
		Acute Tox. 3	H331
		STOT RE 2	H373

The full text of hazard statements is specified in section 16.

*Substance with specific concentration limits

Eye Irrit. 2: ≥ 10 - < 20

Eye Damage 1: ≥ 20

**Art. 6(1) REACH - Substance produced or imported under 1 tonn. - exempt to registration

***Substances with an occupational exposure limit.

SECTION 4. First aid measures****

4.1 Description of first aid measures

Inhalation

Bring the patient to the open air. If breathing is difficult, consult your doctor.

In case of skin contact

Remove contaminated clothing and wash thoroughly with soap and water. If skin irritation or rash occurs consult a doctor. Wash contaminated clothing before putting it on again.

In case of contact with eyes:

Wash with plenty of water for at least 15 minutes, keeping the eyelids wide open. Consult your doctor.

If ingested:

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Consult your doctor. Induce vomiting only as directed by your doctor. Do not give anything by mouth if the subject is unconscious and if not authorized by the doctor.

4.2 Most important symptoms and effects, both acute and delayed:
No information available

4.3 Indication of any immediate medical attention and special treatment needed

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

SECTION 5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray.

CO2 Carbon dioxide.

Dry powder.

Synthetic foam.

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

The product under fire condition may develop irritant/toxic gas (COx, NOx, SOx, HCl).

5.3 Advice for firefighters:

Use suitable breathing apparatus.

Collect separately contaminated water used to extinguish the fire. Do not discard into drains.

If feasible in terms of safety, move from immediate undamaged hazard containers.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Use suitable respiratory protection if powder is formed. Ensure good ventilation. Removing people who are not involved in intervention. Eliminate or exclude any source of ignition

6.2. Environmental precautions:

Allow to enter the ground / soil. Prevent spills into surface water or sanitary sewer system.

Retain contaminated washing water and discard.

In the event of a gas leak or penetration into waterways, soil or drains, inform responsible authorities.

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

6.3. Methods and material for containment and cleaning up

Collect the product with mechanical media, in suitable containers for its re-use or disposal. Wash the residues with water avoiding the drainage into Civil sewers.

6.4 Reference to other sections See also section 8 and 13

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SECTION 7. Handling and storage****

7.1. Precautions for safe handling
Follow the good industrial hygiene and safety procedures.
Do not smoke, eat or drink during the working processes.
Supply good air circulation in working area.
Avoid dusting.

7.2. Conditions for safe storage, including any incompatibilities.
Store in a cool, dry and airy place.
Keep away from heat, flames, sparks and static electricity. Keep away from food, drink and feed.
Incompatible materials: Reducing agents.
Recommendations for the areas: Areas adequately aired.

7.3. Specific end use:
For particular uses of the product, is necessary to refer to the specific information or contact the technical service of the Company.

SECTION 8. Exposure control/personal protection****

8.1. Control parameters

Disodium peroxodisulphate:

DNEL

Systemic effects to long term exposure - inhalation: 2.06 mg/m³

Systemic effects to acute/short term exposure - inhalation: 590 mg/m³

Local effects to long term exposure - inhalation: 2.06 mg/m³

Systemic effects to long term exposure - dermal: 18.2 mg/kg bw/day

Systemic effects to acute/short term exposure - dermal: 400 mg/kg bw/day

Local effects to long term exposure - dermal: 0.102 mg/cm²

Local effects to acute/short term exposure - dermal: 2.248 mg/cm²

PNEC:

Freshwater: 0.076 mg/L

Freshwater (intermittent releases): 0.763 mg/L

Marine water: 0.011 mg/L

STP: 3.6 mg/L

Sediment (freshwater): 0.275 mg/kg sediment dw

Sediment (marine water): 0.04 mg/kg sediment dw

Soil: 0.015 mg/kg soil dw

231-892-1		Disodium peroxodisulphate
SCENARIOS		Formulation of mixtures
SU3	Industrial uses: End uses of substances as such or preparations at industrial sites	
ERC2	Formulation into mixture	
PROC1	Enclosed processes & no likelihood of exposure.	
Concentration of substance in Mixture / Article		100 %
Physical Form (at time of use)		Solid; Average dustiness Liquid
Daily exposure time		4h
Frequency of use		5 day/week
Conditions and measures related to		Wear protective gloves (EN374 efficiency dermal 80%)

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personal protection, hygiene and health evaluation	Respiratory protection (efficiency 90%) (Mask with filter P2 or P3) Wear eye protection
Other operational conditions affecting worker exposure	Indoor
PROC2	Use in closed, continuous process with occasional controlled exposure (e.g. sampling)
PROC3	Use in closed batch process (synthesis or formulation)
PROC4	Use in batch and other process (synthesis) where opportunity for exposure arises
PROC5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
PROC6	Calendering operations
PROC8a	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing).
PROC13	Treatment of articles by dipping and pouring
PROC14	Tabletting, compression, extrusion, pelletisation, granulation
PROC15	Use as laboratory reagent
Concentration of substance in Mixture / Article	100 %
Physical Form (at time of use)	Solid ; Average dustiness Liquid
Daily exposure time	4h
Frequency of use	5 day/week
Technical measures and conditions for the control dispersion from source workers	local exhaust ventilation (LEV): efficiency 90%
Conditions and measures related to personal protection, hygiene and health evaluation	Wear protective gloves (EN374 efficiency dermal 80%) Respiratory protection (efficiency 90%) (Mask with filter P2 or P3) Wear eye protection
Other operational conditions affecting worker exposure	Indoor
PROC8b	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Concentration of substance in Mixture / Article	100 %
Physical Form (at time of use)	Solid; Average dustiness liquid
Daily exposure time	4h
Frequency of use	5 day/week
Technical measures and conditions for the control dispersion from source workers	local exhaust ventilation (LEV): efficiency 95%
Conditions and measures related to personal protection, hygiene and health evaluation	Wear protective gloves (EN374 efficiency dermal 80%) Respiratory protection (efficiency 90%) (Mask with filter P2 or P3) Wear eye protection
Other operational conditions affecting worker exposure	Indoor
SCENARIOS	<i>Industrial use of reactive technological adjuvants</i>
SU3	Industrial uses: End uses of substances as such or preparations at industrial sites
ERC6b	Use of reactive processing aid at industrial site (no inclusion into or onto article)
PROC1	Enclosed processes & no likelihood of exposure.
Concentration of substance in Mixture / Article	100 %
Physical Form (at time of use)	Solid; Average dustiness Liquid
Daily exposure time	4h
Frequency of use	5 day/week

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Conditions and measures related to personal protection, hygiene and health evaluation	Wear protective gloves (EN374 efficiency dermal 80%) Respiratory protection (efficiency90%) (Mask with filter P2 or P3) Wear eye protection
Other operational conditions affecting worker exposure	Indoor
PROC2	Use in closed, continuous process with occasional controlled exposure (e.g. sampling)
PROC3	Use in closed batch process (synthesis or formulation)
PROC4	Use in batch and other process (synthesis) where opportunity for exposure arises
PROC5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
PROC6	Calendering operations
PROC8a	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing).
PROC10	Roller application or brushing
PROC13	Treatment of articles by dipping and pouring
PROC14	Tabletting, compression, extrusion, pelletisation, granulation
Concentration of substance in Mixture / Article	100 %
Physical Form (at time of use)	Solid; Average dustiness Liquid
Daily exposure time	4h
Frequency of use	5 day/week
Technical measures and conditions for the control dispersion from source workers	local exhaust ventilation (LEV): efficiency 90%
Conditions and measures related to personal protection, hygiene and health evaluation	Wear protective gloves (EN374 efficiency dermal 80%) Respiratory protection (efficiency90%) (Mask with filter P2 or P3) Wear eye protection
Other operational conditions affecting worker exposure	Indoor
PROC7	Industrial spraying
PROC8b	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Concentration of substance in Mixture / Article	100 %
Physical Form (at time of use)	Solid; Average dustiness Liquid
Daily exposure time	4h
Frequency of use	5 day/week
Technical measures and conditions for the control dispersion from source workers	local exhaust ventilation (LEV): efficiency 95%
Conditions and measures related to personal protection, hygiene and health evaluation	Wear protective gloves (EN374 efficiency dermal 80%) Respiratory protection (efficiency90%) (Mask with filter P2 or P3) Wear eye protection
Other operational conditions affecting worker exposure	Indoor
PROC15	Use as laboratory reagent
PROC22	Manufacturing and processing of minerals and/or metals at substantially elevated temperature
PROC23	Open processing and transfer operations at substantially elevated temperature
Concentration of substance in Mixture / Article	100 %
Physical Form (at time of use)	Solid; Average dustiness
Daily exposure time	4h
Frequency of use	5 day/week
Technical measures and conditions for	local exhaust ventilation (LEV): efficiency 95%

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the control dispersion from source workers	
Conditions and measures related to personal protection, hygiene and health evaluation	Wear protective gloves (EN374 efficiency dermal 80%) Respiratory protection (efficiency 90%) (Mask with filter P2 or P3) Wear eye protection
Other operational conditions affecting worker exposure	Indoor

Sulfuric acid, mono-C12-18-alkyl esters, sodium salts:

DNEL:

Systemic effects for long-term exposure - inhalation: 285 mg / m³

Systemic effects from exposure to long-term - dermal: 4060 mg / kg body weight / day

PNEC:

Fresh water: 0.098 mg / l

Sea water: 0.01 mg / l

Intermittent release: 0.013 mg / l

STP: 6.8 mg / l

Sediment (freshwater): 3.45 mg / kg dry weight

Sediment (sea water) 0.345 mg / kg dry weight

Soil: 0.631 mg / kg dry weight

ethyl 2,3-epoxy-3-phenylbutyrate:

DNEL:

Systemic effects on expoures on long term expoures - inhalation: 2.45 mg/m³

Systemic effects on expoures on long term expoures - dermal: 0.7 mg/kg bw/day

PNEC:

Freshwater: 0.008 mg/L

Intermittent releases (Freshwater): 0.084 mg/L

Marine water: 8.4 µg/L

STP: 10 mg/L

Sediment (freshwater): 0.214 mg/kg dw

Sediment (marine water): 0.021 mg/kg dw

Soil: 0.038 mg/kg dw

Oral: 23.3 mg/kg

isopentyl acetate:

TLV: 270 mg/m³; 50 ppm (as TWA), 540 mg/m³; 100 ppm (as STEL)

DNEL

Systemic effects to long term exposure - inhalation: 20.8 mg/m³

Systemic effects to long term exposure - dermal: 2.95 mg/kg bw/day

PNEC:

Freshwater: 0.022 mg/L

Freshwater (intermittent releases): 0.22 mg/L

Marine water: 0.002 mg/L

STP: 100 mg/L

Methyl cinnamate:

DNEL

Systemic effects to long term exposure - inhalation: 28.2 mg/m³

Systemic effects to long term exposure - dermal: 4 mg/kg bw/day

PNEC

Freshwater. 2.76 µg/l

Intermittent releases (freshwater): 27.6 µg/l

Marine water: 0.276 µg/l

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STP: 1.81 mg/l
Sediment (freshwater): 74 µg/kg sediment dw
Sediment (marine water): 7.4 µg/kg sediment dw
Soil: 13 µg/kg soil dw

(R)-p-mentha-1,8-diene:

DNEL

Systemic effects of long-term exposure - inhalation: 66.7 mg/m³

Systemic effects of long-term exposure - dermal: 9.5 mg/kg bw/day

PNEC:

Freshwater: 14 µg/L

Marine water: 1.4 µg/L

STP: 1.8 mg/L

Sediment (freshwater): 3.85 mg/kg sediment dw

Sediment (marine water): 0.385 mg/kg sediment dw

Soil: 0.763 mg/kg soil dw

Oral: 133 mg/kg food

Butanedione

TLV-TWA: 0.07 mg/m³, 0.02 ppm; TLV-STEL: 0.36 mg/m³, 0.1ppm

8.2. Exposure control:

Avoid all unnecessary exposure, handle in accordance with good industrial hygiene and safety procedures. Avoid contact with the eyes and skin. Do not eat, drink or smoke while handling it. Accurately wash the hands with soap and water before meals

Individual protection

The DPI's choice must be done on the basis of the test's results obtained according to the rule EN 374

Hand protection : protective gloves of PVC, neoprene , rubber.

Penetration time of glove material: the exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection : protective goggles

Skin protection : workwear

Respiratory protection : Mask with Combination filter (DIN EN 141).

SECTION 9. Physical and chemical properties

9.1. Information of basic physical and chemical

Physical and chemical properties	Value	Determination method
Appearance	white powder	
Odour	not available	
Odour threshold	not available	
pH	About 3	Sol.1% in water, 20°C
Melting point/freezing point	110- 120 ° C	
Initial boiling point and boiling range	not pertinent	
Flash point	not pertinent	
Evaporation rate	not pertinent	
Flammability (solid, gas)	not available	

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Upper/lower flammability or explosive limits	not available
Vapour pressure	not pertinent
Vapour density	not pertinent
Density	not available
Solubility	not available
Water solubility	not available
Partition coefficient: n-octanol/water	not available
Auto-ignition temperature	not available
Decomposition temperature	140-200°C
Viscosity	not available
Explosive properties	not available
Oxidising properties	not available

9.2. More information

Miscibility: N.A. Lipid:

N.A. Conductivity: N.A.

SECTION 10. Stability and reactivity****

10.1. Reactivity

In contact with strong oxidants exothermal reaction may occur.

10.2. Chemical stability

Stable at room temperature.

10.3. Possibility of hazardous reactions

Citric acid monohydrate: reacts with oxidizing agents. Reacts with alkali and metals. When diluting, always add acid to water, never vice versa.

10.4. Conditions to avoid

Avoid extreme temperatures.

Avoid dust formation.

Disodium peroxodisulphate: Keep away from heat and sources of ignition. Protect from humidity. Avoid contact with combustible materials.

Citric acid monohydrate: humidity. Heat and ignition sources.

10.5. Incompatible materials

Reducing agents.

Disodium peroxodisulphate: Keep away from accelerators, strong acids and bases, heavy metal salts, reduction agents. Prevent contamination with dust, ashes, rust, etc.

Sulfuric acid, mono-C12-18-alkyl esters, sodium salts: Strong oxidizing agents, strong acids

isopentyl acetate: Strong oxidants

(R)-p-mentha-1,8-diene: Avoid contact with strong acids and strong oxidizing agents.

10.6. Hazardous decomposition products

Due to thermal decomposition or in the event of a fire vapours may be produced potentially dangerous to health (COx, NOx, SOx, HCl).

Disodium peroxodisulphate: Observable thermal decomposition at temperatures > 60 °C. may form sulphur oxides, nitrogen oxides, toxic pyrolysis products.

SECTION 11. Toxicological information****

11.1. Information on toxicological effects

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ATE(mix) oral = 1.459,5 mg/kg

- (a) acute toxicity: Harmful product: do not ingest
- (b) skin corrosion/irritation: If brought into contact with the skin, the product causes significant inflammation with erythema, scabs, or edema.
- (c) serious eye damage/irritation: If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.
- (d) respiratory or skin sensitization: The product, if inhaled, can cause respiratory sensitization, and if brought into contact with skin can cause skin sensitization.
- (e) germ cell mutagenicity: based on available data, the classification criteria are not met.
- (f) carcinogenicity: based on available data, the classification criteria are not met.
- (g) reproductive toxicity: based on available data, the classification criteria are not met.
- (h) specific target organ toxicity (STOT) single exposure: If inhaled the product, causes irritations to the respiratory tract.
- (i) specific target organ toxicity (STOT) repeated exposure based on available data, the classification criteria are not met.
- (j) aspiration hazard: based on available data, the classification criteria are not met.

Disodium peroxodisulphate:

LD50 = 930 mg/kg body weight (oral, rat)

LC50: > 5.1 mg/L/4h air (Inhalation, rat)

LD50: > 10 000 mg/kg bw (dermal, rabbit)

Sulfuric acid, mono-C12-18-alkyl esters, sodium salts:

LD50: 4010 mg/kg bw (oral, rat)

LD50: > 2000 mg/kg bw (dermal, rat)

Citric acid monohydrate:

LD50 oral (mouse): 5400 mg/kg bw

LD50 dermal (rat): > 2000 mg/kg bw

ethyl 2,3-epoxy-3-phenylbutyrate:

LD50: > 5000 mg/kg bw (oral, rat)

LD50 > 2000 mg/kg bw (dermal, rat)

isopentyl acetate:

ROUTES of EXPOSURE: The substance can be absorbed into the body for inhalation of its vapor

INHALATION HAZARDS: harmful contamination of air can be reached slowly by evaporation of the substance at 20 °C.

EFFECTS OF SHORT-TERM: The substance is irritant to eyes, skin and respiratory tract. Exposure far above OEL could cause lowering of consciousness.

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: The liquid is degreasing to skin

ACUTE HAZARDS / SYMPTOMS

INHALATION: Cough. Sore throat. Vertigo. Drowsiness. Headache

SKIN: Dry skin. Redness.

EYE: Redness. Pain.

NOTE: The use of alcoholic beverages enhances the harmful effect.

LD50: 7400 mg/kg bw (oral, rat)

Methyl cinnamate:

LD50: 2610 mg/kg bw (oral, rat)

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LD50: > 5000 mg/kg bw (dermal, rabbit)

(R)-p-mentha-1,8-diene:

EFFECTS OF SHORT-TERM: The substance is 'irritating to the skin and it is mildly irritating to the eyes

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: Repeated or prolonged contact may cause skin sensitization

ACUTE HAZARDS / SYMPTOMS

SKIN Redness. Pain.

EYES Redness

LD50: 2000 mg/kg bw (oral, mouse)

LD50:> 5000 mg/kg bw (dermal, rabbit)

SECTION 12. Ecological information****

12.1. Toxicity

Adopt good working practices: Avoid littering.

The product is dangerous to the environment as it is harmful to aquatic life with long lasting effects.

Disodium peroxodisulphate:

LC50: 76.3 mg/L/96h (Oncorhynchus mykiss)

EC50: 120 mg/L/48h (Daphnia magna)

Sulfuric acid, mono-C12-18-alkyl esters, sodium salts:

LC50:1.3 mg/L/96h (Lepomis macrochirus)

Citric acid monohydrate:

LC50 : >100 mg/L/96h (Pimephales promelas)

LC50 : 440 mg/L/48hL (Leuciscus idus melanotus)

LC50: 1513 mg/L/96 (Lepomis macrochirus)

LC50: 1 535 mg/L/24h (Daphnia magna)

isopentyl acetate:

LC50: > 22 - < 46 mg/L/96h (Danio rerio)

EC50: 42 mg/L/48h (Daphnia magna)

Methyl cinnamate:

LC50: 2.76 mg/l/96h (Danio Rerio)

EC50: 24 mg/l/48h (Daphnia magna)

NOEC: 12.5 mg/L/48h (Daphnia maga)

(R)-p-mentha-1,8-diene:

LC50: 702 µg/l/96h (Pimephales promelas)

LC50: 0.307 mg/l/48h (Daphnia magna)

12.2. Persistence and degradability

product testing base lower 5%

Sulfuric acid, mono-C12-18-alkyl esters, sodium salts: readily biodegradable 93% (28 days)

Citric acid monohydrate: Ready biodegradation Degr. 97% (28 days)

ethyl 2,3-epoxy-3-phenylbutyrate: Not readily biodegradable. Degr. 53% (28 days)

isopentyl acetate: prontamente biodegradabile Deg 88% (28 days)

Methyl cinnamate: Readily biodegradable, Degr. 100% (7 days)

(R)-p-mentha-1,8-diene: readily biodegradable Degr. 71.4% (28 days)

12.3. Bioaccumulation potential :

Disodium peroxodisulphate: Log Pow:-1

Sulfuric acid, mono-C12-18-alkyl esters, sodium salts: log Pow <= -2.1

Citric acid monohydrate: log Pow -1.72

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ethyl 2,3-epoxy-3-phenylbutyrate: log Pow: 2.8

isopentyl acetate: log Pow: 2.7

Methyl cinnamate: Log pow: 2.68

(R)-p-mentha-1,8-diene: Log Pow: 4.38

12.4. Mobility in soil

Product mobility in soil: No information available.

- Test: N.A. - Duration: N.A. - Notes: N.A.

12.5. Results of PBT and vPvB

Disodium peroxodisulphate: the substance is not PBT / vPvB

Sulfuric acid, mono-C12-18-alkyl esters, sodium salts: the substance is not PBT / vPvB

Citric acid monohydrate: the substance is not PBT / vPvB

ethyl 2,3-epoxy-3-phenylbutyrate: The substance is not PBT/vPvB

isopentyl acetate: The substance is not PBT/vPvB

Methyl cinnamate: The substance is not PBT/vPvB

(R)-p-mentha-1,8-diene: The substance is not PBT/vPvB

12.6. Other adverse effects

Information not available.

SECTION 13. Disposal considerations

13.1. Methods of treatment of the waste materials

Recover the mixture if possible and inactivate before discarding into the sewer. The procedure is shown in the following example:

Dissolve 10 g of a mixture containing 50% of Disodium peroxodisulphate in 2 l of water and mix with 3,71 g of NaHCO₃ to neutralize the pH, if not already present in the mixture, and 0.48 g of NT01, stirring the solution. Let the neutralizer react for about 30'. Mix the resulting solution with 7 liters of water (1: 8 dilution) to allow the sulphates generated by the neutralization reaction to get within the limits established by Legislative Decree 152/06 (Part III, Annex 5, Table 3). Dispose of sewage in the solutions obtained. The same treatment should be carried out on 1 l of solution of 1% mixture. For every extra gram of Disodium peroxodisulphate present in the mixture 0.1 g of NT01 are added.

SECTION 14. Transport information

14.1. UN number

Not included in the scope of application regulations concerning the transport of dangerous goods: by road (ADR); by rail (RID); by air (ICAO / IATA); by sea (IMDG).

14.2. UN proper shipping name

None

14.3. Transport hazard class(es)

None

14.4. Packing group

None

14.5. Environmental hazards

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None

14.6. Special precautions for user
No data available.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
It is not intended to carry bulk

SECTION 15. Regulatory information****

15.1. Standards and legislation, health legislation specific for the substance or mixture

Regulation	CAS	Substance
Reg. (EC) 428/2009 ex CE 1334/2000 Ann.1	-	-
Reg. (EC) 273/04 Tab.1 Cat.1	-	-
Reg. (EU) 98/2013 Tab. 1	-	-
Reg. (EU) 98/2013 Tab. 2	-	-
Reg. (EU) 1258/2013 ex Reg. (EC) 273/04 Tab.1 Cat.2	-	-
Reg. (EC) 273/04 Tab.1 Cat.3	-	-
Reg. (EC) 1907/2006 Ann. XIV	-	-
Reg. (EC) 1907/2006 Substances SVHC	-	-
Reg. (EC) 1907/2006 Ann. XVII	-	Mixture (Entry 3)
Directive 2012/18/UE Ann.1 part 1	-	-
Directive 2012/18/UE Ann.1 part 2	-	-

15.2. Chemical Safety Assessment:

The supplier hasn't made a chemical safety assessment for the mixture. The supplier has made a chemical safety assessment for the substances:

- Disodium peroxodisulphate Cas No 7775-27-1
- Sulfuric acid, mono-C12-18-alkylesters, sodium salts Cas No 68955-19-1
- ethyl 2,3-epoxy-3-phenylbutyrate CAS No 77-83-8
- isopentyl acetate Cas No 123-92-2
- Methyl cinnamate CAS No 103-26-4
- (R)-p-mentha-1,8-diene Cas No 5989-27-5

SECTION 16. Other information****

Text of phrases in section 3:

H272 = May intensify fire; oxidiser.

H302 = Harmful if swallowed.

H315 = Causes skin irritation.

H317 = May cause an allergic skin reaction.

H334 = May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 = May cause respiratory irritation.

H318 = Causes serious eye damage.

H412 = Harmful to aquatic life with long lasting effects.

H319 = Causes serious eye irritation.

H411 = Toxic to aquatic life with long lasting effects.

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H226 = Flammable liquid and vapour.
H304 = May be fatal if swallowed and enters airways.
H400 = Very toxic to aquatic life.
H225 = Highly flammable liquid and vapour.
H331 = Toxic if inhaled.
H373 = May cause damage to organs through prolonged or repeated exposure.

Classification based on data of all components of the mixture

*****Indicates information that has changed from previously issued*

GENERAL BIBLIOGRAPHY:

1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) 1272/2008 of the European Parliament (CLP) and its amendments and adjustments
3. Regulation (EC) 790 / 2009
4. Regulation (EU) 453/2010
5. Regulation (EU) 830/2015
6. The Merck Index. Ed 10
7. Handling Chemical Safety
8. NIOSH - Registry of Toxic Effects of Chemical Substances
9. INRS - Fiche Toxicologique
10. Patty - Industrial Hygiene and Toxicology
11. NI Sax - Dangerous Properties of Industrial Materials-7, 1989 Edition
12. ADR Directive 2008/68/CE and its amendments and adjustments
13. ECHA Web site <http://echa.europa.eu/web/guest>
14. Directive 2012/18/UE
15. Directive 2009/161/UE

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.

LEGEND:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstracts Service (Division of the American Chemical Society).
DNEL: Derivative level without effect.
IATA: Association for International Air Transport.
IATA-DGR: Regulation on dangerous goods of the "International Air Transport Association" (IATA)
ICAO: International Organization for Civil Aviation.
IMDG: International Maritime Dangerous Goods Code.
LC50: Concentration lethal for 50 percent of the test population.
LD50: Fatal dose for 50 percent of the test population.
LTE: Long-term exposure.
PNEC: Concentration expected without effect.
RID: Regulation on the International Carriage of Dangerous Goods by Rail.
STE: Short term exposure.

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STEL: Short-term exposure limit. STOT: Organ-specific toxicity.

TLV: Limit value of threshold.

TWATLV: Threshold limit value for the weighted average of 8 hours. (ACGIH Standard).

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