

Safety Data Sheet

1 IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE COMPANY / UNDERTAKING *

1.1. Product identifier

1.2.

Code: 610004149
Name: **ECO JETSAN**
Chemical name and synonym

1.2. Relevant identified uses of the substance or mixture and uses advised against
Description / Use: Pre-wash detergent.
Registration number: N.A. as mixture.

1.3. Informazioni sul fornitore della scheda di dati di sicurezza

Company	Forenz'dino zoani snc
Address	Via XXV Aprile 4/b
City and nation	20030 Senago - ITALIA
Telephone	Tel.029981050 - Fax 0299010874
e-mail address of the competent person responsible for the safety data sheet	Forenzmail@libero.it Doct. Silvano Invernizzi

1.4. Emergency telephone number

For urgent inquiries refer to CAV Hospital Niguarda Milan +39 02 66101029

(*) The symbol indicates that the information has been updated to the date of revision.

N.D. = Not available

N.A. = Not available

[] = bibliographic reference

2. HAZARDS IDENTIFICATION *

2.1. Classification of the substance or mixture

The product is classified as dangerous in accordance with Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety data sheet complies with the provisions of Regulation (EC) 1907/2006 and subsequent amendments.

Hazard symbols

GHS05

Classifications

Skin irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes severe eye damage.

2.2. Label elements

The product subject to hazard labeling pursuant to Regulation (IS) 1272/2008 (CLP) (and subsequent amendments and supplements).

Hazard pictograms :



Hazard Statement :

H318 Causes serious eye damage

H315 Causes skin irritation

Precautionary statements:

P264 Wash hands thoroughly after handling.

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

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing, Rinse skin with water/shower

P332 + P313 In case of skin irritation, get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse. **OPTIONAL**

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

P310 Immediately call a POISON CENTER or physician.

Contains: SODIUM ETASULFATE, ALCOHOL 2 ETHYLEXANOL 6 EO

2.3. Other hazards

Information not available.

3. COMPOSITION / INFORMATION ON INGREDIENTS *

3.1. Substances

Information not relevant.

3.2. Mixture

Contains:

Identification	Conc. %	Classification 67/548/CEE o 1999/45/CEE	Classification 1272/2008 (CLP)
ALCOHOL 2 ETHYLHEXANOL 6 EO CAS 26468-86-0 EC – INDEX - N ° REGISTRATION. -	3 – 9 %	Xn R22, Xi R41	Acute Tox. 4 H302, Eye Dam. 1 H318
EDTA SOLUTION CAS 64-02-8 CE 200-573-9 INDEX 607-428-00-2 REGISTRATION. 01-2119486762-27-xxxx	1 – 5 %	Xn R20, Xi R36	Acute Tox. 4 H332, Eye Irrit 2 H319, Met. Corr. 1 H290

SODIUM SILICATE CAS 1344-09-8 CE 215-687-4 INDEX – N° REGISTRAZ. 01-2119448725-31	1 – 3 %	Xi R36/38	Eye Irrit. 2 H315, Eye Irrit. 2 H319
ETHYLHEXYL SODIUM CAS 126-92-1 CE 204-812-8 INDEX – REGISTRATION 01-2119971586-23	1 – 2 %	Xi R38, R41	Skin Irrit. 2 H315, Eye Dam. 1 H318
SULFONIC ACIDS, C14 – C16 ALKANE HYDROXIDES E C14 – C16 ALKENE, SODIUM SALTS. CAS 68439-57-6 CE 270-407-8 INDEX – REGISTRATION : 01-2119513401-57	1 – 2 %	Xi R38, R41	Skin Irrit. 2 H315, Eye Irrit. 2, H319
SODIUM HYDROXIDE* CAS 1310-73-2 CE 215-185-5 INDEX 011-002-00-6 REGISTRATION : 01-2119457892-27	>0,1 < 1%	C R35	Met. Corr. 1 ; H290 Skin Corr. 1A ; H314

T + = Very Toxic (T +), T = Toxic (T), Xn = Harmful (Xn), C = Corrosive (C), Xi = Irritant (Xi), O = Oxidising (O), E = Explosive (E), F + = Extremely flammable (F +), F = Highly flammable (F) * Component indicated as having occupational exposure limits (Section 8)

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

INGREDIENTS IN ACCORDANCE WITH REGULATION EC RANKED # 648/2004

Contains: 5-15% non-ionic surfactants, anionic surfactants, soaps, EDTA <5%

4. FIRST AID MEASURES

Replace immediately all contaminated clothing. In case of danger of loss of consciousness, place and carry on its side in a stable position; eventual artificial respiration. Rescuers have to worry about their own safety. Ensure that eyewash facilities and safety showers are close to the workplace.

4.1. Description of first aid measures

EYES: Wash immediately with plenty of water for at least 10 minutes, holding the eyelids apart, protect the eyes with sterile gauze or a clean handkerchief dry. Remove the eye lens, if present. Consult a doctor immediately.

SKIN: Take off contaminated clothing as soon as possible. Immediately wash with mild soap and water the interested parts of the body, even if only suspected. Consult a doctor immediately. Wash contaminated clothing before reuse.

INHALATION: Move to fresh air and keep at rest. If breathing is irregular, seek medical advice immediately. Keep the casualty in the recovery position. Loosen tight clothing such as ties, collars, belt or waistband.

INGESTION: Rinse mouth immediately with water. Remove dentures if any. Consult your doctor immediately. Keep the patient at rest in a position comfortable for breathing. Do not induce vomiting. If vomiting comes spontaneously, keep airway clear. Never give anything by mouth to an unconscious person unless authorized by the physician.

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

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

EDTA SOLUTION: the main symptoms may include irritation of the eyes, difficulty breathing, gastrointestinal problems, irritation of the mucous membranes.

ETHYLHEXYL: May cause irritation of the skin, mouth and stomach, tearing and redness.

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

In case of accident or if you feel unwell, seek medical advice immediately and follow the signs. If possible, show the safety data sheet.

EDTA SOLUTION: If swallowed, rinse mouth immediately and, on medical advice, drink at least 200-300 mL of water.

ETHYLHEXYL SODIUM: as a result of high exposures, the casualty should be kept under medical supervision for at least 48 hours.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

SUITABLE EXTINGUISHING MEDIA

Extinguishing media which are the conventional kind: carbon dioxide, foam, powder and nebulised water. For product leaks and spills that have not caught fire, nebulized water may be used to disperse the flammable vapors and protect the people involved in stopping the leakage.

NON SUITABLE EXTINGUISHING MEDIA

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Avoid inhalation of the gas resulting from explosion or fire. In case of fire may liberate carbon dioxide, carbon monoxide, sulfur oxides, halogenated compounds, metal oxides and other potentially toxic compounds for health. For further information refer to section 10 of this document.

5.3. Advice for firefighters

GENERAL INFORMATIONS

Move out from the dangerous area unauthorized and unprotected persons. Cool ,by spraying with water, containers exposed to fire to prevent product decomposition and the development of substances potentially hazardous for health. Perform all the steps in safety. Always wear full fire prevention. Collect extinguishing water that must not be discharged into drains. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

EQUIPMENT

Hardhat with visor, fireproof clothing (fireproof jacket and trousers with straps around arms, legs and waist), work gloves (fireproof, cut proof and dielectric), a depressurised mask with facemask covering the whole of the face or self-respirator (self-protector) in the event of large quantities of smoke.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and procedures in case of emergency

Eliminate all sources of ignition (cigarettes, flames, sparks, etc..) From the area where the leak occurred. Block the leakage if is safe to do so. Avoid breathing vapors or mists. Do not handle damaged containers or the leaked product before donning appropriate protective gear. Remove unprotected persons. For information on risks for the environment and health, protection of the respiratory airways, ventilation and individual protective measures, refer to the other sections of this document.

6.2. Environmental precautions

Prevent product from entering drains, surface water, ground water and neighboring areas. In the case of seepage into water course or sewage alert the relevant authorities.

6.3. Methods and materials for containment and clearing up

Draw the product in a suitable container (made of material not incompatible with the product) and soak up any leaked product with absorbent inert material (sand, vermiculite, diatomaceous earth, Kieselguhr, etc.). Remove most of the resulting material with non-sparking tools and deposit it in containers for disposal. Eliminate the rest using jets of water if there are no contraindications. Ensure adequate ventilation of the area affected by the loss. Disposal of contaminated material must be done in accordance with the provisions of section 13.

6.4. Reference to other sections

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

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Keep away from food and drink. Do not swallow the product. Handle in accordance with good industrial hygiene and safety practice. Provide adequate ventilation of the place of use. Handle with extreme caution. Avoid contact with skin, eyes and do not inhale the vapors and fumes. Wear appropriate personal protective equipment (see section 8).

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, well ventilated area and away from direct sunlight. Keep away from sources of ignition, flames and sparks. Store in airtight containers and labeled. Store in an area well-ventilated. Store at room temperature between 5 ° C and 40 ° C. Containers which are opened must be carefully resealed and kept upright to prevent leakage of the product. Store away from incompatible materials such as acids and metals. For more information see also section 10 of this sheet.

7.3. Specific End Use(s)

Pre-wash detergent.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION *

8.1. Control parameters

Information not available.

EDTA SOLUTION

DNEL Valors

Operator: Long-term exposure - systemic and local effects, inhalation 2.5 mg / m³
Operator: short-term exposure - systemic and local effects, inhalation 2.5 mg / m³
Consumer: Long-term exposure - systemic and local effects, inhalation 1.5 mg / m³
Consumers: Short-term exposure - systemic and local effects, inhalation 1.5 mg / m³
Consumer: Long-term exposure - systemic effects, oral: 25 mg / kg / day (body weight).

PNEC Valors

Fresh water: 2.2 mg / l
The derivative refers to acid free
sea water: 0.22 mg / l
The derivative refers to acid free
occasional issue: 1,2 mg / l
The derivative refers to acid free
soil: 0.72 mg / kg
The derivative refers to acid free

wastewater treatment plant: 43 mg / l

The derivative refers to acid free

SULFONIC ACIDS, C14 – C16 ALKANE HYDROX E C14 – C16 ALKENE, SODIUM SALTS

DNEL

Dermal exposure long-term - systemic effects 2158.33 mg / kg bw / day (worker)

For long-term inhalation exposure - systemic effects 152,22 mg / m³ (worker)

PNEC

fresh water 0,042 mg/l (-)

intermittent releases 0,042 mg/l (-)

marine water 0,0042 mg/l (-)

sediment (fresh water) 2,025 mg/kg sedimentdw (-)

sediment (marine water) 0,2025 mg/kg sedimentdw (-)

sewage treatment plant 4 mg/l (-)

soil 0,0061 mg/kg soil dw (-)

ETHYLHEXYL SODIUM

DNEL long-term inhalation 285 mg / m³ Systemic Workers

DNEL long-term Dermal 4060 mg / kg bw / Systemic daily workers

DNEL long-term inhalation 85 mg / m³ Systemic Consumers

DNEL long-term Dermal 2440 mg / kg bw / Systemic day Consumers

DNEL long-term oral 24 mg / kg bw / Systemic day Consumers

SODIUM SILICATE ; Nr. CAS : 1344-09-8

Specification: DNEL (EC)

Parameter: Systemic Effects_Long term_Dermal_Workers

Value: 1.59 mg / kg

Specification: DNEL (EC)

Parameter: Systemic Effects_Long term_Inhalation_Workers

Value: 5.61 mg / m³

Specification: DNEL (EC)

Parameter: Systemic Effects_Long term_Dermal_Population

Value: 0.8 mg / kg

Specification: DNEL (EC)

Parameter: Systemic Effects_Long term_Inhalation_Population

Value: 1.38 mg / m³

Specification: DNEL (EC)

Parameter: sistemi Effetcs_Long term_Oral_Population

Value: 0.8 mg / kg

Specification: PNEC STP (EC)

Value: 348 mg / l

Specification: PNEC (EC)

Parameter: Oral

Value: 348 mg / kg

Specification: PNEC (EC)

Parameter: Freshwater

Value: 7.5 mg / l

Specification: PNEC (EC)

Parameter: Teal

Value: 1 mg / l

Specification: PNEC (EC)

Parameter: Output occasional

Value: 7.5 mg / l

Specification: TLV / TWA (EC)

Value: 2 mg / m³

SODIUM HYDROXIDE; Nr. CAS : 1310-73-2

Specification: DNEL (EC)

Parameter: Local Effects_Long term_Inhalation_Workers

Value: 1 mg / m³

Specification: DNEL (EC)

Parameter: Effects locali_Long term_Inhalation_Population

Value: 1 mg / m³

Specification: TLV / TWA (EC)

Value: 2 mg / m³

Notes: ACGIH

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protection equipment, ensure good ventilation at the workplace through effective aspiration of the area through an exhaust. If these steps do not keep the concentration of the product below the exposure limit values in the workplace, wear suitable protection for the respiratory tract. During usage See product label for hazard details. When selecting personal protective equipment if necessary, request advice from yours chemical suppliers. The personal protective equipment must comply with the rules in force indicated below. Ensure that safety showers and eye wash facilities are located close to places where the product can get in contact with eyes or skin.



HAND PROTECTION

Protect your hands with work gloves, category III (ref. Directive 89/686 / EEC and standard EN 374), such as PVC, PVA, neoprene, nitrile, fluorine elastomers, PTFE, Viton or equivalent. For the final selection of the gloves, must be considered : degradation, breakage times and permeation. In the case of preparations the resistance of protective gloves should be checked before use, as it can be unpredictable. The gloves have a time limit depends on the duration of exposure.



EYE PROTECTION

Wear protective airtight goggles (ref. Standard EN 166) or a full facepiece 402 EN Do not use eye lens. Provide for the installation of eye showers in or near the workplace.

SKIN PROTECTION

Wear work clothes with long sleeves and safety shoes for professional use category III (ref. Directive 89/686 / EEC and standard EN 344). Wash with soap and water after removing protective clothing. Provide for the installation of safety showers in the vicinity of the workplace.



RESPIRATORY PROTECTION

In case of exceeding the threshold value for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the service of prevention and protection business, wear a halfmask type FFP3 (ref. standard EN 141). Usage of means of respiratory protection, such as masks with organic vapor and dust / mist cartridges, is necessary in the absence of technical measures limiting worker exposure. The protection provided by masks is in any case limited. In the case in which the substance in question is odorless or its olfactory threshold is higher than the relative exposure limit and in case of emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear a compressed air breathing apparatus with open circuit (ref. standard EN 137) or fresh air breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138). Should there be a risk of exposure to splashes or squirts during work performed, there should be an adequate protection of the mucous membranes (mouth, nose, eyes) in order to prevent accidental absorption.

9. PHYSICAL AND CHEMICAL PROPERTIES *

9.1. Information on basic physical and chemical

Appearance	Liquid
Colour	Blue
Odour	Practically odorless
pH as such	11,1
Distillation range	>100°C
Flash Point	ND (not available)
Evaporation rate	ND (not available)
Flammability of solids and gases	ND (not available)
Auto-flammability	ND (not available)
Explosive properties	Not explosive
Reactive Properties	Not oxidizing
Relative density at 20°C	1,07 g/mL
Solubility in water	Soluble
Liposoluble	ND (not available)
Partition coefficient(n-octanol/water)	ND (not available)
Vapor Pressure	ND (not available)
Vapour density	ND (not available)
Oxidizing properties	ND (not available)

9.2. More information

Not available.

10. STABILITY AND REACTIVITY *

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical Stability

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

10.3. Possibility of hazardous reactions

In normal conditions of use and storage not hazardous reactions are foreseeable.
However, avoid contact with incompatible materials.

10.4. Conditions to avoid

Observe the usual precautions against chemicals. Avoid overheating, electrostatic discharge and all sources of ignition.

10.5. Incompatible materials

Avoid contact with acids.

EDTA SOLUTION: amphoteric metals, light metals.

ETHYLHEXYL SODIUM: Carbon oxides, Sulfur oxides.

10.6. Hazardous decomposition products

Thermal decomposition or in the event of fire potentially dangerous to health gases and vapors maybe released as carbon dioxide, carbon monoxide, sulfur oxides, halogenated compounds, metal oxides and other compounds potentially toxic to your health.

11. TOXICOLOGICAL INFORMATION *

11.1. Information on toxicological effects

Acute Effects: Contact with eyes causes irritation; Symptoms may include redness, swelling, pain and tearing. Inhalation of vapors may cause mild irritation of the upper respiratory tract; contact with the skin may cause slight irritation. Ingestion may cause health problems, including stomach pain with heartburn nausea and vomiting.

ALCOHOL 2 ETHYL HEXANOL 6 EO

LD50: > 200 mg/kg (rat)

EDTA SOLUTION

LD50 rat (oral): 1780-2000 mg / kg (test manufacturer for solid product)

LD50 rat (oral):> 2,000 mg / kg (test manufacturer for product solution ca.40%)

Rat LC50 (inhalation): 1000 - 5000 mg / m³ / 6 h (OECD - guideline 403; assessment derived from products with similar chemical).

Irritation - Assessment of irritating effects (solid product): not irritating to the skin. Risk of serious damage to eyes.

Experimental / calculated data (solid product):

- corrosion / irritation rabbit: non-irritant. (test made by the producer)
- Serious damage to eyes / eye irritation rabbit: irreversible damage (test made by the producer)

Experimental / calculated data (produced liquid-sol.35-40%):

- corrosion / irritation rabbit: non-irritant. (test made by the producer)
- Serious damage to eyes / eye irritation rabbit: Irritant. (test made by the producer)

Respiratory sensitization / skin - Experimental / calculated data (solid product): Guinea pig maximization test : not sensitizing (OECD - guideline 406). The product has not been tested. The statement has been derived from products of a similar structure and composition.

Germ cell mutagenicity - Assessment of mutagenicity (solid product): In most of the experiments performed (bacteria / microorganisms / cell cultures) was not seen by a mutagenic effect of the substance. Even from experiments on animals showed such an effect.

Carcinogenicity - Assessment of carcinogenicity (solid product) in long-term experiments on rats and mice with oral administration, in the food, the substance is not carcinogenic. The product has not been tested. The statement has been derived from products of a similar structure and composition.

Reproductive toxicity - Assessment of reproduction toxicity (solid product): results of animal studies show no effects of damaging fertility. The product has not been tested. The statement has been derived from products of a similar structure and composition.

Developmental toxicant. - Assessment of teratogenicity (solid product): Experiments on animals showed no toxic effect on the development of the offspring, at doses that were not toxic to the parental animals.

Specific target organ toxicity (single exposure) - Assessment of STOT single (solid product) on the basis of the data available, it is not expected to cause specific target organ toxicity after single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure) - Assessment of toxicity following repeated administration (solid product): not adverse effects were observed in tests on animals even after repeated exposure.

Aspiration hazard: Not relevant.

LD50 (Oral): > 1780 mg/kg rat

LC50 (Inhalation): > 1000 mg/m³/6h rat (evaluated by similar products)

SULFONIC ACIDS, C14 – C16 ALKANE HYDROX E C14 – C16 ALKENE, SODIUM SALTS

LD50 (Oral): 2079 mg/kg (rat)

LD50 (Dermal): 6300 – 13500 mg/kg (rabbit)

LC50 (Inhalation): > 52 mg/L/4h (rat)

Skin sensitization: tests performed on guinea pig according to OECD - guideline 406 The product does not cause sensitization. Even the tests carried out on humans show that the product does not cause sensitization.

- Mutagenicity tests are performed with the results shown below.
- • OECD 471 Bacterial Reverse Mutation Test: negative.
- • OECD 476 In vitro Mammalian Cell Gene Mutation Test: negative.
- • OECD 473 In vitro Mammalian Chromosomal Aberration Test: negative.

Carcinogenicity tests are performed according to protocols unofficial results are listed below.

- Route of exposure, oral; species, rat; exposure, 2 years: negative;
- Route of exposure, skin; species, rat; exposure, 2 years for 2 days a week: negative.

Teratogenicity: you run test OECD 414 Prenatal Developmental Toxicity Study on the species of rabbit and otteine value of a NOAEL of 2 mg / kg.

Potential acute effects on health :

Inhalation: No known significant effects or critical hazards.

Ingestion: Irritating to mouth, throat and stomach.

Skin contact: Irritating to the skin.

Eye Contact: No known significant effects or critical hazards.

General: No known significant effects or critical hazards.

NOAEL Chronic Oral: 227 mg/kg

Symptoms related to the physical, chemical and toxicological characteristics

Skin contact: Adverse symptoms may include irritation and redness

Ingestion: No specific data.

Inhalation: No specific data.

Eye Contact: No specific data.

SODIUM SILICATE

LD50 (Oral): >2000 mg/kg (rat)

Short-term exposure: Irritating to eyes, respiratory system and skin.

Prolonged or repeated exposure: Repeated exposure may cause chronic respiratory disease.

Routes of exposure: it can absorb through inhalation, through the skin and by ingestion.

ETHYLHEXYL SODIUM

LD50 (Oral): >2000 mg/kg (rat)
LD50 (Dermal): >500 mg/kg (rabbit)
LC50 (Inhalation): > 5 mg/L/4h (rat)

Sensitization by skin: test performed according to OECD 406 Skin Sensitization of the rat. The product does not cause sensitization.

Mutagenicity tests are performed with the results shown below.

- OECD 471 Bacterial Reverse Mutation Test: negative.
- OECD 478 Genetic Toxicology: Rodent Dominant Lethal Test: negative.
- OECD 475 Mammalian Bone Marrow Chromosomal Aberration Test: negative.
- OECD 474 Mammalian Erythrocyte Micronucleus Test: negative.

Carcinogenicity tests are performed according to protocols unofficial results are listed below.

- Route of exposure, oral; species, rat; exposure, 2 years: negative;
- Route of exposure, skin; species, rat; exposure, 2 years for 2 days a week: negative.

Teratogenicity: you run test OECD 414 Prenatal Developmental Toxicity Study on species rat and otteine worth NOEL of 300 mg / kg.

Reproductive Toxicity: you run test OECD 416 Two-Generation Reproduction Toxicity Study on species rat and you get a value of Oral NOEL equal to 703 mg / kg.

Potential acute effects on health

Inhalation: No known significant effects or critical hazards.

Ingestion: Irritating to mouth, throat and stomach.

Skin contact: Irritating to the skin.

Contact with eyes: severely irritating to the eyes. Risk of serious damage to eyes.

Symptoms related to the physical, chemical and toxicological characteristics

Skin contact: Adverse symptoms may include irritation and redness

Ingestion: No specific data.

Inhalation: No specific data.

Eye contact: Adverse symptoms may include pain or irritation, tearing and redness

Potential Chronic Health Effects:

- OECD 407 Repeated Dose 28-day Oral Toxicity Study in Rodents: NOEL (Oral, subchronic) from 70 to 100 mg / kg / d;
- OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents: NOEL (Oral, subchronic) from 61 to 134 mg / kg / d;
- OECD 410 Repeated Dose Dermal Toxicity: 21/28-day Study: NOEL (Dermal, subchronic) equal to 5%;
- OECD 411 Subchronic Dermal Toxicity: 90-day Study: NOEL (Dermal, subchronic) equal to 5%.

SODIUM HYDROXIDE

Primary irritant effect

Chronic Effects: Inhalation of aerosol may cause bronchopneumonia. Irritation of nose and throat, difficulty breathing. Repeated exposures may cause nosebleeds.

Acute effects:

The powders are corrosive to the digestive mucosa, eyes, skin. Ingestion causes burns to the mouth, throat, esophagus, nausea and vomiting blackish, the risk of edema in the throat and shock. In severe cases, perforation of the gastro-intestinal and cardiovascular collapse

Carcinogenic effects, mutagenic or risks to re production

Based on the evidence there is no indication of mutagenic (Sources: Environmental and Molecular Mutagenesis and NIOSH / 00217350).

Assessment of carcinogenicity: In animal experiments, with long-term administration of high concentration in drinking water, the substance is not carcinogenic. Assessment of reproduction toxicity: Experiments on animals have not shown a decrease in fertility at doses not toxic to the parental animals.

12. ECOLOGICAL INFORMATION *

Use according to good working practices, avoiding disposal in the environment. Inform the competent authorities if the product has reached running waters or sewers or contaminate soil or vegetation.

12.1. Toxicity

EDTA SOLUTION (information about solid product)

High probability that the product is not acutely harmful to aquatic organisms. The correct introduction of low concentrations in biological treatment plants should not compromise the degradation activity of activated sludge.

Toxicity to fish: LC50 (96 h) > 100 mg / L, *Lepomis macrochirus* (OPP 72-1 (EPA guidelines), static). Nominal concentration. The product has not been tested. The statement has been derived from products of a similar structure and composition.

Aquatic invertebrates: EC50 (48 h) > 100 mg / L, *Daphnia magna* (DIN 38412 Part 11 static) Nominal concentration. The product has not been tested. The statement has been derived from products of a similar structure and composition.

Aquatic plants: EC50 (72 h) > 100 mg / L (growth rate), *Scenedesmus obliquus* (Directive 88/302 / EEC, Part C, p89, static). nominal concentration.

Microorganisms / Effect on activated sludge: EC20 (30 min) > 500 mg / L, activated sludge, domestic (OECD - guideline 209, water). Nominal concentration. The correct introduction of low concentrations in biological treatment plants should not compromise the degradation activity of activated sludge. The product has not been tested. The statement has been derived from products of a similar structure and composition.

Chronic toxicity to fish: NOEC (35 d) > = 36.9 mg / L, *Brachydanio rerio* (OECD Guideline 210, Flow). The indications of toxic refer to the analytically determined concentration. The product has not been tested. The statement has been derived from products of a similar structure and composition.

Chronic toxicity to aquatic invertebrates: NOEC (21 d), 25 mg / L, *Daphnia magna* (OECD - guideline 211, semi-static). Nominal concentration. The product has not been tested. The statement has been derived from products of a similar structure and composition.

Organisms that live in soil: LC50 (14 d) 156 mg / kg, *Eisenia foetida* (OECD - guideline 207 artificial soil). The product has not been tested. The statement has been derived from products of a similar structure and composition.

Other non land mammals: study scientifically not justified.

LC50 (96 h): >100 mg/L *Lepomis macrochirus* (rated by similar products)

IC50 (72 h): >100 mg/L *Scenedesmus obliquus* (growth rate)

EC50 (48 h): >100 mg/L *Daphnia magna* (rated by similar products)

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EC50 (72 h): 5.2 mg / L ISO 10253: 2006 - inhibition test with *Skeletonema costatum* and algal growth *Phaeodactylum tricornutum*

EC50 (48 h): 4.53 mg / L *Daphnia magna* (according to OECD 202)

IC50 (3 h): 230 mg / L bacteria (according to OECD 209)

LC50 (96 h): 4.2 mg / L fish (according to OECD 203)

SODIUM SILICATE

LC50 (96 h): 260 mg / L fish (according to OECD 203)

EC50 (48 h): 1700 mg / L *Daphnia magna* (according to OECD 202)

EC50 (72 h): 345 mg / L algae (according to OECD 201)

ETHYLHEXYL SODIUM

LC50 (96 h): > 1 mg / L (fish)

IC50 (72 h): 1-10 mg / L (algae)

EC50 (48 h): 1-10 mg / L (*Daphnia magna*)

EC50 (5 d): > 1 mg / L (bacteria)

SODIUM HYDROXIDE

aquatic toxicity

Specification: EC50 (sodium hydroxide; Nr. CAS: 1310-73-2)

Parameter: *Daphnia*

Ceriodaphnia dubia

Value = 40.4 mg / l

Per. of the test: 48 h

Specification: LC50 (sodium hydroxide; Nr. CAS: 1310-73-2)

Parameter: Fish

Value = 35-189 mg / l

Per. of the test: 96 h

12.2 Persistence and degradability

No information available for the mixture.

EDTA SOLUTION (solid information on product): evaluation of biodegradation and elimination (H₂O), there was a potential biodegradability. Not readily biodegradable (by OECD criteria).

ALCOL 2 ethyl hexanol 6 EO: biodegradability of 75% after 28 days.

Other parameters: BIAS SOLUTION 1 g / L 300 ac; SOLUTION 1 g COD / L ca 2300; MBAS SOLUTION 1 g / L OFFLINE.

SULFONIC ACIDS, C14 - C16 ALKANE HYDROX and C14 - C16 ALKENE, SODIUM SALTS: readily biodegradable.

ETHYLHEXYL SODIUM: readily biodegradable (similar issues).

Sodium hydroxide: It oxidizes rapidly in air for photochemical reaction.

12.3. Potential for bioaccumulation

No information available for the mixture.

EDTA SOLUTION (solid information on product): the bioconcentration factor is approximately 1.8 (28 d), *Lepomis macrochirus*. Accumulation in organisms is low.

SULFONIC ACIDS, C14 - C16 ALKANE HYDROX and C14 - C16 ALKENE, SODIUM SALTS: the value of log Pow is 1.3 and BCF is equal to 70.8.

ETHYLHEXYL SODIUM: the value of logPow is less than 4 and BCF is less than 73.

12.4. Mobility in soil

No information available for the mixture.

EDTA SOLUTION (solid information on product): the transport between environmental compartments assessment reveals that the substance will not evaporate into the atmosphere from the water surface. Is not predictable absorption to the solid phase of the soil.

12.5. Results of PBT and vPvB assessment

No information available for the mixture.

The criteria for identification of PBT / vPvBas provided in the Annex XIII REACH Regulation does not apply to SILICATE SODIUM.

EDTA SOLUTION (solid information on product): According to Annex XIII of Regulation (EC) n.1907 / 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), does not meet the criteria for classification as a PBT (persistent / bioaccumulative / toxic).Self-assessment

According to Annex XIII of Regulation (EC) n.1907 / 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), does not meet the vPvB (very persistent / very bioaccumulative). Self-assessment.

12.6. Other adverse effects

Information not available

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 authorized waste management, in the compliance with national and local regulations.

CONTAMINATED PACKAGING

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

14. TRANSPORT INFORMATION

The product is not classified as dangerous under current provisions of the Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), by sea (IMDG Code) and by air (IATA).

15. REGULATORY INFORMATION

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

1 Directive 1999/45 / EC, as amended

2 Directive 67/548 / EEC and subsequent amendments

3 Regulation (EC) 1907/2006 of the European Parliament (REACH)

4 Regulation (EC) 1272/2008 of the European Parliament (CLP)

5 Regulation (EC) 790/2009 of the European Parliament (first ATP, CLP)

6 Regulation (EC) 453/2010 of the European Parliament

Where applicable, refer to the following regulations:
Leg. September 21, 2005 n. 238 (Seveso Directive Ter)

Category Seveso. None

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

Substances in Candidate List (Ad. 59 REACH).
None.

Substances subject to authorization (Annex XIV REACH).
None.

Health checks.

Workers exposed to this hazardous chemical agent must undergo health surveillance made in accordance with the provisions of art. 41 of Legislative Decree no. 81 dated 9 April 2008 unless the risk to the safety and health of the worker is irrelevant been assessed, in accordance with art. 224 paragraph 2.

15.2. Chemical Safety Assessment

Has not been processed a chemical safety assessment for the mixture and the substances it contains.

16. OTHER INFORMATION*

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

Acute Tox. 4 Acute toxicity, category 4
Eye Dam. 1 Serious eye damage, category 1
Eye Irrit. 2 Eye irritation, category 2
Skin Irrit. 2 Skin irritation, category 2
Skin Corr. 1A Skin corrosion / irritation category 1A
STOT SE 3 Specific target organ toxicity - single exposure, category 3
Met. Corr. 1 Corrosive to metals, category 1
H290 May be corrosive to metals
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes severe eye damage.
H319 Causes severe eye irritation.
H332 Harmful if inhaled.

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

R20 Harmful by inhalation.
R22 HARMFUL IF SWALLOWED.
R35 CAUSES SEVERE BURNS
R36 Irritating to eyes
R36 / 38 IRRITATING TO EYES AND SKIN.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.

GENERAL BIBLIOGRAPHY:

1. The Merck Index. Ed. 10
2. Handling Chemical Safety
3. Niosh - Registry of Toxic Effects of Chemical Substances
4. INRS - Fiche Toxicologique
5. Patty - Industrial Hygiene and Toxicology
6. N.I. Sax - Dangerous properties of Industrial Materials-7 Ed., 1989

Abbreviations and acronyms:

ACGIH = American Conference of Governmental Industrial Hygienists

CSR = Chemical Safety Report

DNEL = Derived No Effect Level

DMEL = Derived Minimum Effect

EC50 = actual concentration, 50%

EL50 = actual load, 50 %

EPA = Environmental Protection Agency

IC50 = Inhibitory concentration, 50%

LC50 = Lethal concentration, 50%

LD50 = Lethal dose , 50%

LL50 = Letha load, 50%

LL0 = Lethal load, 0%

LOAEL = Low Observed Adverse Effects Level. (dose with low observable adverse effect).

LOAEC = Low Observed Adverse Effects Concentration. (concentration with low observable adverse effect). NOEC = No Observed Effects Concentration.

NOAEC = No Observed Adverse Effects Concentration.

NOEL = No Observed Effects Level.

NOAEL = No Observed Adverse Effects Level. (dose senza effetti avversi osservabili)

NOELR = No Observed Effect Loading Rate

OECD = Organization for Economic Cooperation and Development

TLV®TWA = Threshold Limit Value- time-weighted average n.a.= not applicable

n.d. = non available

PBT = Substance Persistent, Bioaccumulative and Toxic

SNC = Central nervous system

STOT = Specific target organ toxicity

(STOT) RE = Repeated Exposure

(STOT) SE = Single Exposure

PNEC = Predicted No Effect Concentration

TLV®STEL = Threshold Limit Value- limit for short exposure time

UVCB = substances of unknown or variable composition, complex reaction products or biological materials vPvB = very Persistent and very Bioaccumulative

WAF = Water Accomodated Fraction

Note for the USER:

The information contained in this data sheet is based on the knowledge available to us at the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product. It should not be construed as a guarantee on any specific product property. Since the use of this product is not subject to our direct control, users must follow, under their own responsibility, laws and regulations relating to health and safety. We assume no responsibility for any improper use .