

Safety data sheet according to Regulation (EC) No. 1907/2006

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

1.1. Product identifier.

Code. **ALKALI-AZIDE REAGENT**
Product name. **Alkali-Azide Reagent**

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

Intended use. **Used in the determination of dissolved oxygen in water samples.**

1.3. Details of the supplier of the safety data sheet.

Name. **Hanna Instruments S.R.L.**
Full address. **str. Hanna Nr 1**
District and Country. **457260 loc. Nusfalau (Salaj)**
Romania
Tel. **(+40) 260607700**
Fax. **(+40) 260607700**

e-mail address of the competent person responsible for the Safety Data Sheet. **msds@hanna.ro**

1.4. Emergency telephone number.

For urgent inquiries refer to. **Emergency Number - International: +(1)-703-527-3887 - UK, London: +(44)-870-8200418 - CHEMTREC 24 hours/365 days**

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.

Hazard classification and indication:

| | | |
|--|------|---|
| Substance or mixture corrosive to metals, category 1 | H290 | May be corrosive to metals. |
| Acute toxicity, category 3 | H311 | Toxic in contact with skin. |
| Specific target organ toxicity - repeated exposure, category 1 | H372 | Causes damage to organs through prolonged or repeated exposure. |
| Skin corrosion, category 1A | H314 | Causes severe skin burns and eye damage. |
| Serious eye damage, category 1 | H318 | Causes serious eye damage. |
| Hazardous to the aquatic environment, chronic toxicity, category 3 | H412 | Harmful to aquatic life with long lasting effects. |

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:

H290 May be corrosive to metals.
H311 Toxic in contact with skin.
H372 Causes damage to organs through prolonged or repeated exposure.

SECTION 2. Hazards identification. ... / >>

H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.
EUH032 Contact with acids liberates very toxic gas.

Precautionary statements:

P280 Wear protective gloves, protective clothing, eye protection and face protection.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor, if you feel unwell.
P391 Collect spillage.

Contains: POTASSIUM IODIDE
SODIUM HYDROXIDE
SODIUM AZIDE

2.3. Other hazards.

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

SECTION 3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

| Identification. | x = Conc. %. | Classification 1272/2008 (CLP). |
|---------------------------|--------------|--|
| SODIUM HYDROXIDE | | |
| CAS. 1310-73-2 | 9 ≤ x < 30 | Met. Corr. 1 H290, Skin Corr. 1A H314 |
| EC. 215-185-5 | | |
| INDEX. 011-002-00-6 | | |
| Reg. no. 01-2119457892-27 | | |
| POTASSIUM IODIDE | | |
| CAS. 7681-11-0 | 5 ≤ x < 9 | Acute Tox. 4 H302, STOT RE 1 H372, Skin Irrit. 2 H315 |
| EC. 231-659-4 | | |
| INDEX. | | |
| SODIUM AZIDE | | |
| CAS. 26628-22-8 | 0,5 ≤ x < 1 | Acute Tox. 1 H310, Acute Tox. 2 H300, STOT RE 2 H373, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1, EUH032 |
| EC. 247-852-1 | | |
| INDEX. 011-004-00-7 | | |

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

SECTION 4. First aid measures.

4.1. Description of first aid measures.

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.

Specific information on symptoms and effects caused by the product are unknown.
For symptoms and effects caused by the contained substances, see chap. 11.

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

SODIUM AZIDE

Irritant effects, Cough, Shortness of breath, Dizziness, Unconsciousness, Nausea, Vomiting, collapse, Circulatory collapse, Headache, Convulsions, CNS disorders.

SODIUM HYDROXIDE

Irritation and corrosion, Cough, Shortness of breath, collapse, death. Risk of blindness!.

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.

POTASSIUM IODIDE

Hydrogen iodide, Potassium oxides.

SODIUM AZIDE

Combustible. Development of hazardous combustion gases or vapours possible in the event of fire. Risk of dust explosion. Fire may cause evolution of: nitrous gases, nitrogen oxides.

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.

Block the leakage if there is no hazard.

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.

Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. 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.

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

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.

Storage class TRGS 510 (Germany): 6.1C

7.3. Specific end use(s).

Information not available.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Regulatory References:

| | | |
|-----|----------------|--|
| DEU | Deutschland | MAK-und BAT-Werte-Liste 2012 |
| ESP | España | INSHT - Límites de exposición profesional para agentes químicos en España 2015 |
| FRA | France | JORF n°0109 du 10 mai 2012 page 8773 texte n° 102 |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits |
| HUN | Magyarország | 50/2011. (XII. 22.) NGM rendelet a munkahelyek kémiai biztonságáról |
| NLD | Nederland | Databank of the social and Economic Council of Netherlands (SER) Values, AF 2011:18 |
| ROU | România | Monitorul Oficial al României 44; 2012-01-19 |
| EU | OEL EU | Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC. |
| | TLV-ACGIH | ACGIH 2016 |

SODIUM HYDROXIDE

Threshold Limit Value.

| Type | Country | TWA/8h | | STEL/15min | |
|-----------|---------|--------|-----|------------|-----|
| | | mg/m3 | ppm | mg/m3 | ppm |
| VLA | ESP | | | 2 | |
| VLEP | FRA | 2 | | | |
| WEL | GBR | | | 2 | |
| AK | HUN | 2 | | 2 | |
| TLV | ROU | 1 | | 3 | |
| TLV-ACGIH | | | | 2 (C) | |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers. | | | | Effects on workers | | | |
|-------------------|-----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Inhalation. | | | VND | 1 mg/m3 | | | VND | 1 mg/m3 |

POTASSIUM IODIDE

Threshold Limit Value.

| Type | Country | TWA/8h | | STEL/15min | |
|-----------|---------|--------|------|------------|-----|
| | | mg/m3 | ppm | mg/m3 | ppm |
| TLV-ACGIH | | | 0,01 | | |

Predicted no-effect concentration - PNEC.

| | | |
|--|-------|-------|
| Normal value in fresh water | 0,007 | mg/l |
| Normal value for fresh water sediment | 0,007 | mg/kg |
| Normal value for water, intermittent release | 0,075 | mg/l |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers. | | | | Effects on workers | | | |
|-------------------|-----------------------|----------------|---------------|--------------------|--------------------|----------------|---------------|--------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral. | | | VND | 0,01 mg/kg bw/d | | | | |
| Inhalation. | | | VND | 0,035 mg/m3 | | | VND | 0,07 mg/m3 |
| Skin. | | | VND | 1 mg/kg bw/d | | | VND | 1 mg/kg bw/d |

SECTION 8. Exposure controls/personal protection. ... / >>

SODIUM AZIDE

Threshold Limit Value.

| Type | Country | TWA/8h | | STEL/15min | | |
|-----------|---------|-------------------|-----|-------------------|-----|--------|
| | | mg/m ³ | ppm | mg/m ³ | ppm | |
| MAK | DEU | 0,2 | | 0,4 | | INHAL. |
| VLA | ESP | 0,1 | | 0,3 | | |
| VLEP | FRA | 0,1 | | 0,3 | | |
| WEL | GBR | 0,1 | | 0,3 | | |
| AK | HUN | 0,1 | | 0,3 | | |
| MAC | NLD | 0,1 | | 0,3 | | |
| OEL | EU | 0,1 | | 0,3 | | |
| TLV-ACGIH | | 0,29 | | | | |

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.

SODIUM HYDROXIDE

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norm OSHA ID-121.

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

Provide an emergency shower with face and eye wash station.

If the product may or must come into contact or react with acids, suitable technical and/or organisational measures should be taken to prevent the development of toxic and/or inflammable gases.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category III 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 a hood visor or protective visor combined with airtight 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

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type B filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS.

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

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

| | |
|---------------------------------|----------------|
| Appearance | liquid |
| Colour | colourless |
| Odour | odourless |
| Odour threshold. | Not available. |
| pH. | 12,4 |
| Melting point / freezing point. | Not available. |
| Initial boiling point. | Not available. |

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

| | |
|--|------------------|
| Boiling range. | Not available. |
| Flash point. | > 60 °C. |
| 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. | 1,400 |
| Solubility | soluble in water |
| 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. |

9.2. Other information.

| | |
|------------------------------|---------|
| Total solids (250°C / 482°F) | 37,48 % |
| VOC (Directive 2010/75/EC) : | 0 |
| VOC (volatile carbon) : | 0 |

SECTION 10. Stability and reactivity.

10.1. Reactivity.

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

SODIUM AZIDE

highly reactive, Risk of dust explosion.

10.2. Chemical stability.

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

SODIUM HYDROXIDE

Hygroscopic.

POTASSIUM IODIDE

May decompose on exposure to air and moisture. Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions.

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

SODIUM HYDROXIDE

Risk of explosion/exothermic reaction with: Acetone, Nitriles, phosphides, halogens, halogen-halogen compounds, chlorinated solvents, Ethylene oxide, Hydrazine hydrate, hydroxylamine, anhydrides, Peroxides, Acrolein, Acid chlorides, Acids, sulphuric acid, silver salt, hydrogen peroxide, organic nitro compounds, Water, Metals, Light metals. Possible formation of: Hydrogen. Violent reactions possible with: ammonium compounds, organic combustible substances, phenols. Generates dangerous gases or fumes in contact with: persulfates, Sodium borohydride, Oxides of phosphorus.

SODIUM AZIDE

A risk of explosion and/or of toxic gas formation exists with the following substances: Heavy metals, Bromine, dimethylsulfate, Acid, dichloromethane, carbon disulfide, sulphuric acid, Halogenated hydrocarbon, Copper, Lead, chromyl chloride, Generates dangerous gases or fumes in contact with: Acids, Water, Violent reactions possible with: nitrates, benzoyl chloride.

10.4. Conditions to avoid.

None in particular. However the usual precautions used for chemical products should be respected.

SODIUM HYDROXIDE

Exposure to the air, moisture and sources of heat.

POTASSIUM IODIDE

SECTION 10. Stability and reactivity. ... / >>

Tin/tin oxides.

10.5. Incompatible materials.

SODIUM HYDROXIDE

Strong acids, ammonia, zinc, lead, aluminium, water and flammable liquids.

POTASSIUM IODIDE

Strong reducing agents, Nickel, Strong acids, and its alloys, Steel (all types and surface treatments), Aluminum, Alkali metals, Brass, Magnesium, Zinc, cadmium, Copper.

SODIUM AZIDE

Aluminium, Heavy metals.

10.6. Hazardous decomposition products.

Information not available.

SECTION 11. Toxicological information.

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.

11.1. Information on toxicological effects.

POTASSIUM IODIDE

Skin corrosion/irritation, Skin, rabbit, Result: Irritating to skin - Serious eye damage/eye irritation, Eyes, rabbit, Result: Irritating to eyes, 24 h, (Draize Test) - Respiratory or skin sensitisation, Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals - Reproductive toxicity, Exposure to excessive amounts of iodine during pregnancy is capable of producing fetal hypothyroidism, Iodine-containing drugs have been associated with fetal goiter - Additional Information, Prolonged exposure to iodides may produce iodism in sensitive individuals. Symptoms of exposure include: skin rash, running nose, headache and irritation of the mucous membrane. For severe cases the skin may show pimples, boils, hives, blisters and black and blue spots. Iodides are readily diffused across the placenta. Neonatal deaths from respiratory distress secondary to goiter have been reported. Iodides have been known to cause drug-induced fevers, which are usually of short duration, Liver, Irregularities, Based on Human Evidence.

SODIUM AZIDE

Acute oral toxicity, absorption, Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract - Acute inhalation toxicity, oedemas in the respiratory tract., Symptoms may be delayed - Acute dermal toxicity, Skin irritation, Possible damages: slight irritation - Eye irritation, Possible damages: slight irritation.

SODIUM HYDROXIDE

Acute oral toxicity, Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach - Acute inhalation toxicity, Symptoms: burns of mucous membranes, Cough, Shortness of breath, Possible damages:; damage of respiratory tract - Skin irritation, Rabbit, Result: Causes severe burns - Eye irritation, Rabbit, Result: Irreversible effects on the eye, Causes serious eye damage. Risk of blindness! - Sensitisation, Patch test: human, Result: Does not cause skin sensitisation - Germ cell mutagenicity, Genotoxicity in vitro, Mutagenicity (mammal cell test): micronucleus, Result: negative, (Lit.) Ames test, Result: negative.

ACUTE TOXICITY.

| | |
|---|--|
| LC50 (Inhalation - vapours) of the mixture: | Not classified (no significant component). |
| LC50 (Inhalation - mists / powders) of the mixture: | Not classified (no significant component). |
| LD50 (Oral) of the mixture: | 13811,115 mg/kg |
| LD50 (Dermal) of the mixture: | 500,001 mg/kg |

POTASSIUM IODIDE

| | |
|--------------|------------------|
| LD50 (Oral). | 1000 mg/kg Mouse |
|--------------|------------------|

SODIUM AZIDE

| | |
|--------------|--------------|
| LD50 (Oral). | 27 mg/kg Rat |
|--------------|--------------|

SODIUM HYDROXIDE

| | |
|----------------|----------------|
| LD50 (Oral). | 1350 mg/kg Rat |
| LD50 (Dermal). | 1350 mg/kg Rat |

SKIN CORROSION / IRRITATION.

SECTION 11. Toxicological information. ... / >>

Corrosive for the skin.

SERIOUS EYE DAMAGE / IRRITATION.

Causes serious eye damage.

RESPIRATORY OR SKIN SENSITISATION.

Does not meet the classification criteria for this hazard class.

GERM CELL MUTAGENICITY.

Does not meet the classification criteria for this hazard class.

CARCINOGENICITY.

Does not meet the classification criteria for this hazard class.

REPRODUCTIVE TOXICITY.

Does not meet the classification criteria for this hazard class.

STOT - SINGLE EXPOSURE.

Does not meet the classification criteria for this hazard class.

STOT - REPEATED EXPOSURE.

Causes damage to organs.

ASPIRATION HAZARD.

Does not meet the classification criteria for this hazard class.

SECTION 12. Ecological information.

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

12.1. Toxicity.

POTASSIUM IODIDE

Toxicity to daphnia and other aquatic invertebrates, EC50, Daphnia: 2,7 mg/l - 24 h.

POTASSIUM IODIDE

LC50 - for Fish. 2190 mg/l/96h Oncorhynchus mykiss

SODIUM AZIDE

LC50 - for Fish. 0,7 mg/l/96h Lepomis macrochirus

EC50 - for Crustacea. 4,2 mg/l/48h Daphnia pulex

EC50 - for Algae / Aquatic Plants. 272 mg/l/72h Green algae

SODIUM HYDROXIDE

LC50 - for Fish. 45,4 mg/l/96h Oncorhynchus mykiss

EC50 - for Crustacea. 40,38 mg/l/48h Daphnia

12.2. Persistence and degradability.

POTASSIUM IODIDE

Solubility in water. > 10000 mg/l

Rapidly biodegradable.

SODIUM AZIDE

Solubility in water. > 10000 mg/l

SODIUM HYDROXIDE

Solubility in water. > 10000 mg/l

Biodegradability: Information not available.

12.3. Bioaccumulative potential.

POTASSIUM IODIDE

Partition coefficient: n-octanol/water. -0,958

BCF. 2,268

SECTION 12. Ecological information. ... / >>

SODIUM AZIDE

Partition coefficient: n-octanol/water. 0,3 Log Kow

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.

SODIUM AZIDE

Additional ecological information, Biological effects: Forms toxic mixtures in water, dilution measures notwithstanding. Herbicide, Nematocidal effect. Discharge into the environment must be avoided.

SODIUM HYDROXIDE

Harmful effect due to pH shift. Forms corrosive mixtures with water even if diluted. Neutralisation possible in waste water treatment plants. Discharge into the environment must be avoided.

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.

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.

14.1. UN number.

ADR / RID, IMDG, IATA: 1719

14.2. UN proper shipping name.

ADR / RID: CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE)

IMDG: CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE)

IATA: CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE)

14.3. Transport hazard class(es).

ADR / RID: Class: 8 Label: 8



IMDG: Class: 8 Label: 8



IATA: Class: 8 Label: 8



14.4. Packing group.

ADR / RID, IMDG, IATA: II

14.5. Environmental hazards.

ADR / RID: NO

IMDG: NO

IATA: NO

SECTION 14. Transport information. ... / >>

14.6. Special precautions for user.

| | | | |
|------------|-----------------------|-------------------------|------------------------------|
| ADR / RID: | HIN - Kemler: 80 | Limited Quantities: 1 L | Tunnel restriction code: (E) |
| | Special Provision: - | | |
| IMDG: | EMS: F-A, S-B | Limited Quantities: 1 L | |
| IATA: | Cargo: | Maximum quantity: 30 L | Packaging instructions: 855 |
| | Pass.: | Maximum quantity: 1 L | Packaging instructions: 851 |
| | Special Instructions: | A3, A803 | |

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

Information not relevant.

SECTION 15. Regulatory information.

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

Seveso Category - Directive 2012/18/EC: None.

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

| | |
|-----------------|---|
| <u>Product.</u> | |
| Point. | 3 |

Substances in Candidate List (Art. 59 REACH).

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

Substances subject to authorisation (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

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.

WGK 1: Low hazard to waters

15.2. Chemical safety assessment.

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

SECTION 16. Other information.

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

| | |
|--------------------------|--|
| Met. Corr. 1 | Substance or mixture corrosive to metals, category 1 |
| Acute Tox. 1 | Acute toxicity, category 1 |
| Acute Tox. 2 | Acute toxicity, category 2 |
| Acute Tox. 3 | Acute toxicity, category 3 |
| Acute Tox. 4 | Acute toxicity, category 4 |
| STOT RE 1 | Specific target organ toxicity - repeated exposure, category 1 |
| STOT RE 2 | Specific target organ toxicity - repeated exposure, category 2 |
| Skin Corr. 1A | Skin corrosion, category 1A |
| Skin Corr. 1B | Skin corrosion, category 1B |
| Skin Corr. 1C | Skin corrosion, category 1C |
| Eye Dam. 1 | Serious eye damage, category 1 |
| Eye Irrit. 2 | Eye irritation, category 2 |
| Skin Irrit. 2 | Skin irritation, category 2 |
| Aquatic Acute 1 | Hazardous to the aquatic environment, acute toxicity, category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment, chronic toxicity, category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment, chronic toxicity, category 2 |

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| Aquatic Chronic 3 | Hazardous to the aquatic environment, chronic toxicity, category 3 |
| Aquatic Chronic 4 | Hazardous to the aquatic environment, chronic toxicity, category 4 |
| H290 | May be corrosive to metals. |
| H310 | Fatal in contact with skin. |
| H300 | Fatal if swallowed. |
| H311 | Toxic in contact with skin. |
| H302 | Harmful if swallowed. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H315 | Causes skin irritation. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |
| H413 | May cause long lasting harmful effects to aquatic life. |
| EUH032 | Contact with acids liberates very toxic gas. |

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. Regulation (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EU) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament

- The Merck Index. - 10th Edition
- Handling Chemical Safety

SECTION 16. Other information. ... / >>

- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- 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.