FICHA COM DADOS DE SEGURANÇA

Nome do Produto: HIPOCLORITO DE SODIO

1 - Identificação

Nome do Produto: HIPOCLORITO DE SODIO
Número da FDS: 4855
Comercializado por: Morais de Castro Comércio e Importação de Produtos Químicos Ltda.
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1.1-Outras maneiras de identificação:
Main Product Applications Industrial use.

1.2-Usos recomendados do produto químico e restrições de uso:

2 - Identificação de perigos

Product hazard classification
Chemical (substance): Skin corrosion / irritation: Category 1B
Serious eye damage / eye irritation: Category 1
Specific target organ toxicity: Single exposure: Category 3
Hazardous to the aquatic environment - Acute: Category 1
Oxidizing liquids - Category 1

Classification System Used:
ABNT Standard - NBR 14725-2: 2009 - corrected version 3: 2014

Globally Harmonized System for the Classification and Labeling of Chemicals, UN. (GHS)

Pictogramas:

Other hazards that do not result in classification:
The product may be corrosive to metals
GHS label elements:

Warning Word: DANGER

Danger Phrases:
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.
H400: Very toxic to aquatic organisms.
H290: May be corrosive to metals
H271: May cause fire or explosion, very oxidizing.
Precautionary Phrases (Prevention):
P260: Do not inhale dust / fumes / gases / mists / vapors / aerosols.
P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves / protective clothing / eye protection / face protection.

Precautionary phrases (Emergency Response):
P310: Immediately call a toxicology information center or doctor.
P312: If you feel unwell, contact a toxicological information center or a doctor.
P391: Collect spilled material.
P301 + P330 + P331: IF SWALLOWED, rinse mouth, DO NOT induce vomiting.
P303 + P361 + P353: IF ON SKIN or hair remove all clothing immediately
contaminated, rinse skin with water / shower.
P304 + P340: In case of inhalation, remove the person to a ventilated place and keep him at rest in a position that does not make breathing difficult.
P305 + P351 + P338: IF IN EYES, rinse cautiously with water for several minutes.
minutes. If using contact lenses, remove them if it is easy. Continue rinsing.

Precautionary phrases (Storage):
P405: Store locked up.

Precautionary statements (Provision):
P501: Dispose of the contents or container in an appropriate place according to current legislation.

3 - Composição e Informações sobre os ingredientes

SUBSTANCE
Common chemical name or technical name: Sodium hypochlorite.
Synonyms: Sodium chloride oxide; sodium salt of hypochlorous acid.
CAS Registry Number: 7681-52-9
Impurities that contribute to the hazard: Not available.

4 - Medidas de primeiros-socorros

Inhalation: Remove the victim to fresh air. Look for a health service taking the packaging, label or MSDS from the product.

Skin contact: Immediately remove contaminated clothing and shoes. Wash affected areas with soap and water current in abundance until there is no evidence of product residues, to avoid contact of the product with other unaffected body parts. Look for a health service immediately taking the MSDS or the product label.

Eye contact: Flush eyes with plenty of running water for 15 minutes with eyelids open.If the victim wears contact lenses, remove them. Seek a health service immediately with the MSDS or health care label. product.

Ingestion: If the product is ingested, DO NOT INDUCE VOMITING. Wash your mouth with plenty of running water. If the vomiting occurs naturally, keep the head below the level of the hips or in a lateral position if the victim is lying down to avoid aspiration of gastric contents. Seek a health service immediately taking the MSDS or the label of product.

Most important symptoms and effects, acute or delayed: Sodium Hypochlorite is corrosive. In contact with the eyes, can provoke severe burns, lacrimation pain and photophobia. In contact with the skin it can cause severe burns. Inhalation of vapors causes severe irritation of the respiratory tract with cough, headache, confusion, burns, difficulty respiratory and possibly coma. Pulmonary edema may also occur. Ingestion may cause corrosion of the mucous membranes, esophagus and stomach, burns in the mouth and throat nausea and vomiting. Aspiration can cause pulmonary complications.

Notes for the doctor: Symptomatic and supportive treatment, according to the clinical picture. There is no specific antidote. Perform topical therapy in case of chemical burns.

5 - Medidas de combate a incêndio

Extinguishing media:
Suitable: Carbon dioxide, alcohol-resistant foam, dry powder, water spray or water mist.
Not recommended: Do not use dry extinguishing media that contain ammonium compounds.

Specific Hazards of the Substance: Contact with metals can release flammable hydrogen gas. Fire can produce irritating, corrosive and / or toxic gases such as chlorine, sodium oxide and hydrogen chloride,

Protective measures for fire-fighting personnel: Wear full protective clothing resistant to corrosive products and mask autonomous. Fight fire from a safe distance. Avoid contact with the product.

6 - Medidas de controle para derramamento ou vazamento

Personal precautions, protective equipment and emergency procedures:
For personnel who are not part of the emergency services:
Corrosive product, use personal protective equipment (PPE). Avoid contact of the product with the skin, eyes and mucous membranes.
Do not touch and walk on the spilled product, stay in a safe place, ventilate indoors.

For emergency service personnel: Use appropriate PPE. Ventilate indoors. Keep people not authorized away.

Environmental precautions: Avoid environmental contamination. In the event of a spill or leak, contain spilled material immediately, preventing the product from entering drains, drains or bodies of water, if it occurs, immediately stop capturing for human or animal consumption and contact the nearest environmental agency.

Methods and materials for containment and cleaning: Use PPE. Isolate and signal the contaminated area. Do not touch containers damaged or spilled material without appropriate PPE. Absorb spills with inert material (eg sand drought or earth), and then place in a chemical waste disposal container.

Differences in the action of large and small leaks: There is no distinction for small or large leaks in the means of combating spill and leakage. The residue should be placed in closed containers and identified, must be stored in open and safe places until the appropriate destination.

7 - Manuseio e armazenamento

Appropriate technical measures for handling:
Precautions for safe handling:
Corrosive product, use PPE resistant to the product. Avoid contact of the product with the skin, eyes and mucous membranes. Handle the
product in an open, well-ventilated place. When opening the packaging, do so in order to avoid splashing. Handle with respect to general rules of safety and industrial hygiene. Observe the expiration date, do not reuse the empty packaging

Hygiene measures: After handling the product, wash your hands thoroughly. Do not eat, drink or smoke when handling the product. Contaminated clothing must be changed and washed before reuse.

Conditions for safe storage, including any incompatibilities:
Suitable conditions:
Store the product in its original packaging, always closed at room temperature. Keep the product away from food, beverages, feed and other materials for human and animal consumption.

Suitable packaging materials:
The recommended materials for packaging are: polyvinyl chloride (PVC) tanks or drums, high density (HDPE), polypropylene (PP), polytetrafluoroethylene (PTFE), epoxy vinyl ester resins, phenolic, furan, polyester, natural rubber, neoprene and viton. Unsuitable packaging materials: Carbon steel, aluminum, bronze, cadmium, lead, copper, nickel, iron galvanized, brass, nickel, silver

8 - Controle de exposição e proteção individual

Control parameters:
Occupational exposure limits: There are no biological exposure indicators established by law Brazilian (NR15 from the Ministry of Labor and Employment, 2011), ACGIH (2013), NIOSH or OSHA for sodium hypochlorite.

Biological indicators: There are no biological exposure indicators established by Brazilian legislation (NR7 of the Ministry of Labor and Employment, 2011) or by ACGIH (2013) for sodium hypochlorite.

Other limits and values: Not established.

Engineering control measures: Ensure adequate ventilation when handling the product. Showers emergency and eye wash should be available close to work areas.

Personal protection measures:
Eye / face protection: Safety goggles for chemical products.
Skin / body protection: Aprons, protective clothing and PVC or rubber boots and chemical resistant gloves (butyl rubbers, natural rubber, neoprene rubber, nitrile rubber, PE, PVC).
Respiratory protection: Semi-face masks with gas filter and autonomous air mask in emergency situations.

Thermal hazards: Not available

9 - Propriedades físicas e químicas

Appearance (physical state, shape and color): Yellow liquid.
Odor / odor limit: Unpleasant and sweet odor / Not available.
pH: 11.5-12.5
Melting point / freezing point: -25 ° C (-13 ° F)
Initial boiling point and boiling temperature range: 110 ° C (230 ° F). It breaks down.
Flash point: Not available.
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
Lower / upper limit of flammability or explosivity: Not available.
Vapor pressure: Sodium hypochlorite (12.5% ??solution): 1613.2 - 2333.1 Pa / 12.1 - 17.5 mmHg) at 20 ° C.
Vapor density: Not available.
Density: 1.19 - 1.21 to 12%
Solubility: Completely soluble in water.
Partition coefficient - n-octanol / water: No data available.
Auto-ignition temperature: Not available.
Decomposition temperature:> 40 ° C.
Viscosity: Sodium Hypochlorite (12.5% ??solution: 1.81 at 25 ° C
Corrosivity: The sodium hypochlorite solution is corrosive to metals.
Other information: Not applicable

10 - Estabilidade e reatividade

Stability and reactivity:
Sodium hypochlorite is unstable, product solutions are inherently unstable. Stability is affected by heat, light, pH and the presence of certain heavy metals with iron and copper. Sodium Hypochlorite reacts with nitrogen compounds and may form toxic reactive chloramines. When Hypochlorite is in excess, nitrogen gas is formed.

Possibility of dangerous reactions:
Reacts violently with oxidizing products, which may generate fire. Contact with ammonium salts in an acidic medium forms explosive nitrogen trichloride. Sodium hypochlorite reacts with acids, especially hydrochloric acid, releasing gas chlorine. Reacts with methanol to form methyl hypochlorite, which can explode.

Conditions to avoid: Sources of ignition, heat, light and contact with incompatible substances.

Incompatible materials: Acids, ammonia salts, methanol, urea, amines, isocyanurates, oxidizing compounds, metals and oxidizable metal compounds, alkalis, ketones, fatty acid salts, nitrogen compounds, metals, reducing agents, ammonia.

Hazardous decomposition products: Temperatures above 40 ° C slowly decompose sodium hypochlorite into sodium chloride and chlorate. Chlorine.

11 - Informações toxicológicas

Acute toxicity: oral LD50 (rats): 8800mg / kg p.c.

Corrosion / irritation to the skin: Causes corrosive effect to the skin.

Serious eye damage / skin irritation: Contact of the product with the eyes can cause severe irritation to the eyes.

Respiratory or skin sensitization: In guinea pig studies, no sensitization potential was observed dermal.

Germ cell mutagenicity: There are no adequate data to assess the mutagenic potential of Sodium.

Carcinogenicity: Sodium Hypochlorite is not classified as a human carcinogenic potential (IARC, 1997).

Reproductive toxicity: There are no data available in the literature regarding reproductive toxicity of Hypochlorite from Sodium.

Specific target organ toxicity - single exposure: Product classified for target organ toxicity specific - single exposure. Sodium Hypochlorite solutions below 15% have low acute oral toxicity. At available information shows that the product has low acute thermal toxicity.

Specific target organ toxicity - repeated exposure: In subchronic studies conducted in animals of experimentation by dermal and oral routes, no toxicity to specific target organs was observed. The observed effects were related to the irritating nature of Sodium Hypochlorite (ECHA, 2007).

Aspiration hazard: No data available.

12 - Informações ecológicas

Ecotoxicity: Toxic to aquatic organisms.

Toxicity to algae: EC50 (72h): 0.780 mg / L, pH 5.1 (Selenastrum capricornutum) - OECD, 2002.

Toxicity to crustaceans: LC50 (48h): 0.492 mg / L, pH 5.3 (Daphnia magna) - OECD, 2002.

Toxicity to fish: LC50 (96h): 4.92 mg / L, pH 4.3 (Cyprinus carpio) - OECD, 2002.

Persistence and degradability: The product is biodegradable.

Bioaccumulative potential: No data were found regarding the bioaccumulative potential of Sodium Hypochlorite.

Mobility in soil: Sodium hypochlorite has high mobility in the soil, the product is soluble in water and can be disperse in the aquatic environment.

Other adverse effects: Not available.

13 - Considerações sobre destinação final

Recommended methods for final destination:
Product and product residues: Keep any product leftovers in their original packaging properly closed. Do not dispose of in sewage systems, water courses and wastewater treatment plants. Disposal of the product must be made in accordance with municipal and state legislation.

Used packaging: The packaging must not be reused for other products. Packaging for recycling or even for disposal they must be washed and neutralized. Inappropriate disposal of contaminated empty packaging by the product in the environment causes contamination of the soil, water, and air, damaging the fauna, flora and the health of the people. Make empty packaging available in accordance with municipal, state and federal regulations.

14 - Informações sobre transporte

National and international regulations:
Land: Resolution No. 5232 of December 14, 2016 of the National Land Transport Agency (ANTT), Approves the Complementary Instructions to the Regulation for the Inland Transportation of Dangerous Products and their modifications.
UN Number: 1791
Proper shipping name: HYPOCLORITE, SOLUTION.
Risk class or subclass
Main: 8
Risk Number: 80
Packing group: II
Danger to the environment: Yes.

Waterway: IMO -International Maritime Organization
IMDG Code - International Maritime Dangerous Goods Code
DPC - Directorate of Ports and Coasts (Transport in Brazilian waters)
UN Number: 1791
Proper shipping name: HYPOCHLORITE SOLUTION.
Risk class or subclass
Main: 8
Packing group: II
EmS: F-A, S-B
Danger to the environment: Yes

Air: ANAC - National Civil Aviation Agency - Resolution No. 129 of 8/12/2009.
IATA - International Air Transport Association.
RBAC N ° 175-001 - Brazilian Civil Aviation Regulation - Transport of dangerous articles in civil aircraft.
UN number: UN 1791
Proper shipping name: Hypochlorite solution
Risk class or subclass
Main: 8
Packing group: II
Danger to the environment: Yes

15 - Informações sobre regulamentações

Specific safety, health and environmental regulations for the chemical
Federal Decree No. 2,657 of July 3, 1998.
Ordinance No. 229 of May 24, 2011 - Amends Regulatory Standard No. 26.
ABNT Standard - NBR 14725-4: 2014.
Resolution 5232 of 12/14/2016: Complementary Instruction to the Regulation of Inland Transportation of Dangerous Products
Ordinance No. 240, of March 12, 2019: Product subject to control and inspection by the Ministry of Justice - Department of Federal Police - MJ / DPF, when it comes to import, export and re-export, authorization is essential DPF preview for these operations (ANTT).

16 - Outras Informações

Important information, but not specifically described in the previous sections
Limitations and Warranties: The information contained in this sheet corresponds to the current state of knowledge National and International technical-scientific knowledge of this product. Information is provided in good faith, for guidance only,
the user is responsible for its use in accordance with relevant federal, state and local laws and regulations

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Captions and abbreviations:
ACGIH - American Conference of Government Industrial Hygienists.
CAS - Chemical Abstract Service.
CLso - Concentration that results in the death of 50% of experimental animals.
DLso - Dose administered that results in the death of 50% of the experimental animals.
PPE - Personal protective equipment.
GHS - Global / y Harmonized System of Classification and Label / ing of Chemicals.
NIOSH - National Institute for Occupational Safety and Health.
OSHA - Occupational Safety and Health Administration.

PE - Polyethylene.
PVC - Polyvinyl chloride.
OSHA PEL - Permissible Exposure Limit established by OSHA.
TWA - Time Weighted Average.