

SAFETY DATA SHEET: SODIUM HYPOCHLORITE.

SECTION 1: IDENTIFICATION OF THE PRODUCT/COMPANY/UNDERTAKING.

1.1) Identification of the Product.

| | |
|---------------------|----------------------------|
| Identified Product: | SODIUM HYPOCHLORITE |
| Synonym(S): | SODIUM HYPOCHLORITE |
| CAS NO.: | 7681-52-9 |
| EC NO.: | 231-668-3 |
| HS CODE: | 28289030 |

1.2) Product Uses

Used as a disinfectant and bleaching agent with applications in the chemical, paper, textile, water treatment, and dairy industries; it is also used to disinfectant water in swimming pools and cooling towers of power plants.

1.3) Identification of The Company/Undertaking

Manufacturer/supplier

INDIGO CHEMICALS

44/1, PLOT NO.50, AT PO-BHATHA,
VILLAGE-BHATHA, TALUKA-CHORASI,
Surat, Gujarat, 394510

1.4) Emergency Contact Details.

INDIGO CHEMICALS

Tel: +91 76009 55231

Email: sales@indigochemicals.com

Website: www.indigochemicals.com

SECTION 2: HAZARD IDENTIFICATION

2.1) The product is identified as per dangerous by Globally Harmonized System of Classification and Labelling of Chemicals – GHS (REV.8) (2019)

2.1.1) Health Hazard Classifications:

- | | | |
|----------------------|-------------|--|
| • Skin Corrosion | Category 1B | Causes severe skin burns and eye damage. |
| • Serious Eye Damage | Category 1 | Causes serious eye damage |

2.1.2) Environmental Hazard Classifications:

- | | | |
|---------------------------------------|--------------------|--|
| • Short Term (Acute) Aquatic Hazards | Category Acute 1 | Very Toxic to Aquatic Life |
| • Long Term (Chronic) Aquatic Hazards | Category Chronic 2 | Very Toxic to Aquatic Life with Long Lasting Effects |

2.2) Labelling in Accordance with – GHS (REV.8) (2019) standards

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2.2.1) Hazard Pictograms:



2.2.2) Signal Word: DANGER

2.2.3) Codification of Physical, Health and Environmental Hazard Statements (H-codes)

| | |
|------|--|
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes severe skin burns and eye damage. |
| H400 | Very toxic to aquatic life. |
| H411 | Toxic to aquatic life with long lasting effects. |

2.2.4) Codification of Precautionary Statements (P-codes)

| | |
|--------------------|--|
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water (or shower). |
| P304 + P340 + P310 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P363 | Wash contaminated clothing before reuse. |
| EUH031 | Contact with acids liberates toxic gas. |

2.2.4.1) Responses

| | |
|---------------------------|--|
| P391 | Collect spillage. |
| P370 + P372 + P380 + P373 | In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water (or shower). |
| P304 + P340 + P310 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P363 | Wash contaminated clothing before reuse. |

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| | | | |
|------------------|-----------------------|-----------------------|-------------|
| Chemical Name | : Sodium Hypochlorite | Weight Proportion (%) | : 5- 10% |
| Chemical Formula | : NaOCl | CAS NO. | : 7681-52-9 |

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IUPAC Name : sodium; hypochlorite EC NO. : 231-668-3

SECTION 4: FIRST-AID MEASURES

4.1) Description of Necessary First Aid Measures.

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|-------------------|---|
| Upon Inhalation | Take the victim away from exposure to fresh air. Remove all the contaminated clothes. Take rest until fully recovered. If breathing is difficult seek medical advice immediately. |
| Upon Skin Contact | Upon contact with hair/skin thoroughly wash skin and hair in running water. Remove all the contaminated clothes. Seek medical assistance if skin irritation, blisters, redness or swelling occurs. Don't reuse the clothes before thoroughly washing. |
| Upon Eye Contact | Immediately rush to wash the eyes with running fresh water for 15 minutes. Expose entire eye - wash under the eyelids and clean thoroughly with water. Seek medical advice immediately. |
| If swallowed | After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise. |

4.2) Most Important Symptoms/Effects.

| | |
|-------------------|--|
| Upon Inhalation | Irritation in nose, coughing, runny nose, headache, breathing difficulties and sore throat. |
| Upon Skin Contact | Irritation, redness on contacted area. May cause dermatitis, blisters or swelling upon prolonged exposure. |
| Upon Eye Contact | Causes serious irritation, redness, burning sensation, pain, infection. |

4.3) Indication of immediate medical attention and special treatment needed, if necessary

Treat as per the visible symptoms.

SECTION 5: FIRE- FIGHTING MEASURES

5.1) Suitable extinguishing media.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2) Specific hazard arising from the chemicals.

Hydrogen chloride gas, Sodium oxides, not combustible. Ambient fire may liberate hazardous vapours.

5.3) Special protective actions for fire-fighters.

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. Wear protective suits equipped with oxygen supply to avoid exposure to harmful decomposed gases, cover full body to avoid exposure to chemicals.

SECTION 6: ACCIDENTAL RELEASE MEASURE.

6.1) Personal Precautions, Protective Equipment and Emergency Procedure.

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

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6.2) Environmental Precautions.

Prevent the spill from getting into waterways, sewers, and drains. Do not let product enter drains.

6.3) Methods and Materials for Containment and Cleaning Up.

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.

SECTION 7: HANDLING AND STORAGE.

7.1) Precautions for safe handling.

Store in a cool, dry, and well-ventilated place. Keep containers closed. Keep away from incompatibles. Use only with adequate ventilation.

Avoid contact with eyes, skin, or clothing.

7.2) Conditions of Safe Storage, Including Any Incompatibilities.

Store in a cool, dry, well-ventilated area, away from incompatibles. Ensure containers are labelled, protected from physical damage, and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapours, liquid), observe all warnings and precautions listed for the product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1) Control parameters.

Ingredients with workplace control parameters.

8.2) Appropriate engineering controls

Effective exhaust ventilation system.

Ensure that eyewash stations and safety showers are close to the workstation location.

8.3) Individual protection measures such as personal protective equipment (PPE).

| | |
|------------------------|--|
| Eye/face protection | : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles. |
| Skin protection | : Full contact Material: - Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) : Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) |
| Respiratory protection | : Wear a N95 mask to cover the mouth and nose to avoid dust particles to enter the respiratory track. During emergency where fumes are produced |
| Body protection | : Wear protective clothing. |



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| | |
|-----------------------------------|------------------------------------|
| Control of environmental exposure | : Do not let product enter drains. |
|-----------------------------------|------------------------------------|

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES AND SAFETY CHARACTERISTICS.

| | | | |
|-------------------------------------|---|--|--|
| • Physical State/ Appearance | : Liquid, Aqueous solution | • Auto-Ignition Temperature | : Not Available |
| • Colour | : Yellow | • Decomposition Temperature | : Decomposes on heating. |
| • Odour | : irritating | • pH | : 13,5 at 150 g/l solution in water at 20 °C |
| • Melting Point | : < -16 °C | • Kinematic Viscosity | : Not available |
| • Boiling Point | : Not relevant, Decomposes on heating. | • Solubility | : Not available |
| • Flammability | : Not available | • Partition Coefficient N-Octanol/Water (Log Value) | : Not available. |
| • Flammability Limit | : Not available | • Vapour Pressure | : 17 hPa at 20 °C |
| • Flash Point | : Not available | • Density | : 1.220 kg/m ³ at 20 °C |
| • Relative Vapour Density | : Not available | • Particle Characteristics. | : Not available |

SECTION 10: STABILITY AND REACTIVITY.

10.1) Reactivity

Stable under normal conditions.

10.2) Chemical Stability

Risk of decomposition.

10.3) Possibility of hazardous reactions

Contact with acids liberates toxic gas.

Heating can release hazardous gases.

10.4) Conditions to avoid

Contacts to avoid with extremes of temperature and direct sunlight. UV light causes decomposition.

10.5) Incompatible materials

Keep away from Iron, Copper, Acids, and Nickel.

10.6) Hazardous decomposition products.

- **Hazardous decomposition products:** Chlorine dioxide gas may evolve from solution. Oxygen.
- **Thermal decomposition:** Decomposes on heating.

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SECTION 11: TOXICOLOGY INFORMATION.

- **MIXTURE:**

- a) **Acute toxicity:**

Oral: No data available.

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages: damage of respiratory tract.

Dermal: No data available.

- b) **Skin irritation:** Causes severe burns.

- c) **Serious eye irritation:** Causes serious eye damage.

- d) **Respiratory or skin sensitization:** No data available.

- e) **Germ cell mutagenicity:** No data available.

- f) **Carcinogenicity:** No data available

- g) **Reproductive toxicity:** No data available

- h) **STOT-single exposure:** No data available

- i) **STOT-repeated exposure:** No data available

- j) **Aspiration hazard:** No data available

- **COMPONENTS:**

- a) **Acute toxicity:** LD50 Oral - Rat - male - 1.100 mg/kg (OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rabbit - male and female - > 20.000 mg/kg

(OECD Test Guideline 402).

- b) **Skin corrosion/irritation:** Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2).

- c) **Serious eye damage/eye irritation:** Causes serious eye damage.

- d) **Respiratory or skin sensitization:** Guinea pig

Result: Not a skin sensitizer.

(OECD Test Guideline 406).

- e) **Germ cell mutagenicity:** Result: negative

Method: Mutagenicity (micronucleus test)

Species: Mouse - male

Result: negative

- f) **Carcinogenicity:** No data available.

- g) **Reproductive toxicity:** No data available.

- h) **Specific target organ toxicity - single exposure:** Remarks: No data available, may cause respiratory irritation.

- i) **Specific target organ toxicity - repeated exposure:** No data available

- j) **Aspiration hazard:** No data available.

SECTION 12: ECOLOGICAL INFORMATION.

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher. The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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- **Toxicity to fish:** LC50 - Pimephales promelas (fathead minnow) - 0,08 mg/l - 96 h Remarks: (Regulation (EC) No 1272/2008, Annex VI) (ECOTOX Database).
- **Toxicity to daphnia and other aquatic invertebrates:** EC50 - Daphnia magna (Water flea) - 0,04 mg/l - 48 h Remarks: (Regulation (EC) No 1272/2008, Annex VI) (ECOTOX Database).
- **Toxicity to algae:** static test ErC50 - Pseudokirchneriella subcapitata - 0,036 mg/l - 72 h (OECD Test Guideline 201) static test EC10 - Pseudokirchneriella subcapitata - 0,02 mg/l - 72 h (OECD Test Guideline 201).
- **Toxicity to bacteria: static test EC50** - activated sludge - 77,1 mg/l - 3 h (OECD Test Guideline 209) Remarks: (ECHA).

SECTION 13: DISPOSAL CONSIDERATIONS.

Dilute with water and flush to sewer if local ordinances allow, otherwise, whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. Dispose of container and unused contents in accordance with national, state, and local requirements.

SECTION 14: TRANSPORT INFORMATION.

Air Transport Association (IATA).

UN-Number : UN1791
UN Proper Shipping Name : Hypochlorite solution
Transportation Hazard Class : 8
Packing Group : III
Environmental Hazards : No

International Maritime Dangerous Goods Code/International Maritime Organization (IMDG/IMO).

UN-Number : UN1791
UN Proper Shipping Name : HYPOCHLORITE SOLUTION (sodium hypochlorite solution)
Transportation Hazard Class : 8
Packing Group : III
Environmental Hazards : Marine pollutant (YES)

Department of Transportation (DOT).

UN-Number : Not regulated
UN Proper Shipping Name
Transportation Hazard Class
Packing Group
Environmental Hazards

Transport of Dangerous Goods (TDG).

UN-Number : Not regulated
UN Proper Shipping Name
Transportation Hazard Class
Packing Group
Environmental Hazards



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SECTION 15: REGULATORY INFORMATION.

EU regulations:

| Chemical Name | CAS No. | EINECS | UN Number |
|---------------------|-----------|-----------|-----------|
| Sodium Hypochlorite | 7681-52-9 | 231-668-3 | 1791 |

(Refer SECTION 2 of SDS for Hazardous details)

USA Federal Regulations:

| | |
|---------------------------|--|
| SARA 311/ SARA 312 | <ul style="list-style-type: none">• Acute Health Hazard: Yes• Chronic Health Hazard: No• Fire Hazard: No• Sudden Release of Pressure Hazard: No• Reactive Hazard: No |
| SARA 313 | Not Listed |
| Clean water act | Listed |
| Clean air act | Not Listed |
| TSCA | Listed |
| RCRA | Listed |

Australian regulations:

| | |
|----------------------------|----------------------------------|
| Safe work Australia | Regulated as Hazardous substance |
| AICS | Listed |

SECTION 16: OTHER INFORMATION.

Source of data: United Nations Publications. (2019). *Globally Harmonized System of Classification and Labelling of Chemicals (GHS)* (Eighth Revised ed.). United Nations.

https://unece.org/fileadmin/DAM/trans/danger/publi/ghs/ghs_rev08/ST-SG-AC10-30-Rev8e.pdf

Disclaimer:

The safety data sheet is prepared by Indigo Chemicals to the best of its knowledge. All the information present in the SDS is obtained from verified technical sources and verified literature source to the best knowledge at the date of issue. Indigo Chemicals cannot control or foresee on how the product is used. Everyone accessing the product must be aware about the risks and take required precautions to use the material. Indigo Chemicals shall be responsible for damage caused to the consumer in terms to handling, storing, disposing and using the product. Contact Indigo Chemicals for any information regarding the SDS. The SDS applies to the direct users of the product. The SDS shall be considered valid if the product is used formixing other substances or chemicals.

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END OF SDS

