

**1. Identification**

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| Product identifier | ChemChlor 160 |
| Other means of identification | |
| Synonyms | Sodium Hypochlorite Solution, Bleach. |
| Recommended use | Industrial/Municipal by personnel familiar with product. |
| Recommended restrictions | None known. |

| | |
|---------------------|--|
| Company name | Chemstream, Inc. |
| Address | 511 Railroad Ave Homer City, PA 15748 |

General Information

| | |
|-------------------------------|--|
| Telephone | (724)-915-8388 |
| Website | www.chemstream.com |
| Emergency phone number | CHEMTREC US: 1-800-424-9300 |

**2. Hazard(s) identification**

| | | |
|------------------------------|--|---|
| Physical hazards | Corrosive to metals | Category 1 |
| Health hazards | Skin corrosion/irritation | Category 1 |
| | Serious eye damage/eye irritation | Category 1 |
| | Specific target organ toxicity, single exposure | Category 3 respiratory tract irritation |
| Environmental hazards | Hazardous to the aquatic environment, acute hazard | Category 1 |
| | Hazardous to the aquatic environment, long-term hazard | Category 2 |
| OSHA defined hazards | Not classified. | |

Label elements

| | |
|--------------------------------|--|
| Signal word | Danger |
| Hazard statement | May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. |
| Precautionary statement | |
| Prevention | Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Keep only in original container. Avoid release to the environment. |
| Response | If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Collect spillage. |
| Storage | Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container with a resistant inner liner. |



Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information

Contact with acids liberates toxic gas.

3. Composition/information on ingredients**Mixtures**

| Chemical name | CAS number | % |
|---------------------|------------|-----------|
| Sodium hypochlorite | 7681-52-9 | 12.5-15.6 |
| Sodium hydroxide | 1310-73-2 | 0.1 - 2.0 |

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately. Wash contaminated clothing before reuse. Call a physician or poison control center immediately.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed Treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. With eye exposure, continue flushing during transport to hospital.

General information Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire. Do not use dry extinguishing media that contains ammonium compounds.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.



6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Absorb spillage to prevent material damage. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS.

Environmental precautions

Do not discharge into drains, water courses or onto the ground. Environmental manager must be informed of all major releases.

7. Handling and storage

Precautions for safe handling

Wear appropriate personal protective equipment. Do not get in eyes, on skin, on clothing. Use with adequate ventilation. Observe good industrial hygiene practices. Do not apply heat or direct sunlight. Temperature and product concentration affect product quality and decomposition rates.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool and well-ventilated place. Store in a corrosive resistant container. Consult container manufacturer for additional guidance. Store away from and do not mix with incompatible materials such as acids, oxidizers, organics, reducing agents, and all metals except titanium.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value |
|---------------------------------|------|---------------------|
| Sodium hydroxide (CAS1310-73-2) | PEL | 2 mg/m ³ |

US. ACGIH Threshold Limit Values

| Components | Type | Value |
|---------------------------------|---------|---------------------|
| Sodium hydroxide (CAS1310-73-2) | Ceiling | 2 mg/m ³ |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|---------------------------------|---------|---------------------|
| Sodium hydroxide (CAS1310-73-2) | Ceiling | 2 mg/m ³ |

US. Workplace Environmental Exposure Level (WEEL) Guides

| Components | Type | Value |
|------------------------------------|------|---------------------|
| Sodium hypochlorite (CAS7681-52-9) | STEL | 2 mg/m ³ |

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Reports indicate that sodium hypochlorite can react with various fabrics usually increasing with concentration. Reactions vary significantly depending on strength of chemical, material, fabric treatment and color of dyes. FRC treated cotton has a stronger response than plain cotton. Poly blend fabrics and meta aramid fabric have a weaker response than natural fibers. Contact the Personal Protective Equipment manufacturer for specific information about their products.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

| | |
|-----------------------|---------------|
| Physical state | Liquid |
| Form | Liquid |
| Color | Not Available |
| Odor | Pungent |

Odor threshold 0.9 mg/m³**pH** 12 - 14 (25 °C/77 °F)**Melting point/freezing point** -11 °F (-24 °C) (12.5% solution)**Initial boiling point and boiling range** Not available.**Flash point** Not applicable**Evaporation rate** No data available**Flammability (solid, gas)** Not available.**Upper/lower flammability or explosive limits****Flammability limit - lower (%)** Not applicable**Flammability limit - upper (%)** Not applicable**Explosive limit - lower (%)** Not available.**Explosive limit - upper (%)** Not available.**Vapor pressure** 12 mm Hg (20°C/68°F)**Vapor density** Not available.**Relative density** Not available.**Solubility(ies)****Solubility (water)** Completely miscible**Partition coefficient (n-octanol/water)** Not available.



Auto-ignition temperature Not applicable

Decomposition temperature Not available.

Viscosity Not available.

Other information

Bulk density Not applicable

Molecular formula NaOCl

Molecular weight 74.5 g/mol

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions Hazardous polymerization does not occur

Conditions to avoid Contact with incompatible materials. Avoid ultraviolet (UV) light sources. Excessive heat. Reacts violently with strong acids. Acid contact will produce chlorine gas. Amine contact will produce chloramines.

Incompatible materials Strong oxidizing agents. Acids. Metals. Organic compounds. Ammonia.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

Inhalation Vapors and spray mist may irritate throat and respiratory system and cause coughing.

Skin contact Causes skin burns.

Eye contact Causes eye burns.

Symptoms related to the physical, chemical and toxicological characteristics

Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Occupational exposure to the substance or mixture may cause adverse effects.

| | Species | Test Results |
|-----------------------|-----------------|--------------|
| Acute Toxicity | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 2 g/kg |
| <i>Oral</i> | | |
| LD50 | Rat | 3-5 g/kg |
| <i>Inhalation</i> | | |
| LC50 | Rat (Dust/Mist) | >10.5 mg/L |

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization No data available.

Skin sensitization No data available.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1%



are mutagenic or genotoxic.

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Sodium hypochlorite (CAS 7681-52-9) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

Not classified, however droplets of the product may be aspirated into the lungs through ingestion or vomiting and may cause a serious chemical pneumonia.

Chronic effects

Prolonged or repeated overexposure causes lung damage.

Further information

Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity

Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

| | | Species | Test Results |
|----------------|------|--------------------------------|----------------------|
| Aquatic | | | |
| Crustacea | LC50 | Daphnia | 1 mg/l |
| Crustacea | EC50 | Daphnia | 0.035 mg/L, 48 hours |
| Fish | LC50 | Bluegill (Lepomis macrochirus) | 0.6 mg/l, 48 hours |

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available for this product.

Mobility in soil

Not available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information****DOT**

| | |
|-------------------------------------|---|
| UN number | UN 1791 |
| UN proper shipping name | Hypochlorite solutions |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | IB3, N34, T4, TP2, TP24 |
| Packaging exceptions | 154 |
| Packaging non bulk | 203 |
| Packaging bulk | 241 |

IATA

| | |
|-------------------------------------|--|
| UN number | UN 1791 |
| UN proper shipping name | Hypochlorite solution |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Label(s) | 8 |
| Packing group | III |
| Environmental hazards | Yes |
| ERG Code | 8L |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling |

IMDG

| | |
|-------------------------------------|---|
| UN number | UN 1791 |
| UN proper shipping name | HYPOCHLORITE SOLUTION |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Label(s) | 8 |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | Yes |
| EmS | F-A, S-B |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

| | |
|-------------------------------------|--------|
| Sodium hydroxide (CAS 1310-73-2) | LISTED |
| Sodium hypochlorite (CAS 7681-52-9) | LISTED |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

| | |
|--------------------------|------------------------|
| Hazard categories | Immediate Hazard - Yes |
| | Delayed Hazard - No |
| | Fire Hazard - No |
| | Pressure Hazard - No |



Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations**US. Massachusetts RTK - Substance List**

Sodium hydroxide (CAS 1310-73-2)

Sodium hypochlorite (CAS 7681-52-9)

US. New Jersey Worker and Community Right-to-Know Act

Sodium hydroxide (CAS 1310-73-2)

Sodium hypochlorite (CAS 7681-52-9)

US. Pennsylvania Worker and Community Right-to-Know Law

Sodium hydroxide (CAS 1310-73-2)

Sodium hypochlorite (CAS 7681-52-9)

US. Rhode Island RTK

Sodium hydroxide (CAS 1310-73-2)

Sodium hypochlorite (CAS 7681-52-9)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

| Country(s) or region | Inventory Name | On inventory(yes/no)* |
|-----------------------------|--|-----------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

| | | | |
|---------------------------------------|----------------------------|----------------------|---------------|
| USEPA Registration Number | 92757-1 | | |
| ANSI/NSF Standard 60 Certified | Maximum Use Level: 56 mg/L | | |
| Issue Date | May 5, 2015 | Revision Date | March 9, 2021 |
| NFPARatings | | | |

List of abbreviations

LD50: Lethal Dose, 50%.
 LC50: Lethal Concentration, 50%.
 EC50: Effective concentration, 50%.
 TWA: Time weighted average.

References

EPA: ACQUIRE database
 HSDB® - Hazardous Substances Data Bank
 US. IARC Monographs on Occupational Exposures to Chemical Agents
 IARC Monographs. Overall Evaluation of Carcinogenicity
 ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
 Olin Chlor Alkali Products Safety Data Sheet

Disclaimer

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product or considered a Certificate of Analysis. Supplier believes the information contained herein is accurate; however, supplier makes no guarantees or warranties with respect to such accuracy and assumes no liability in connection with the use of the information contained herein by any party. The provision of the information contained herein by supplier is not intended to be and should not be construed as legal advice or as ensuring compliance by other parties. Judgments as to the suitability of the information contained herein for the party's own use or purposes are solely the responsibility of that party. Any party handling, transferring, transporting, storing, applying or otherwise using this product should review thoroughly all applicable laws, rules, regulations, standards and good engineering practices. Such thorough review should occur before the party handles, transfers, transports, stores, applies or otherwise uses this product.