

Safety Data Sheet

according to 1907/2006/EC, Article 31

Date Printed: 04/05/2017

Version 3

Date Reviewed: 04/04/2017

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

• **Product Identifier:** Sodium Hypochlorite Solution (10-20%)

• **Synonyms:** Bleach

• **Product Use:** Various industrial uses.

• **Manufacturer/Supplier:**

Formosa Plastics Corporation, Texas

201 Formosa Drive

Point Comfort, TX 77978 USA

+1 (361) 987-7000

E-Mail: MSDS@fpcusa.com

• **Business Division:** Chlor-Alkali

• **Emergency Telephone Number:**

In case of a chemical emergency, contact CHEMTREC (24 hrs) at:

+1 (800) 424-9300 (United States, Canada, Puerto Rico, Virgin Islands)

+1 (703) 527-3887 (International & Maritime)

* Section 2: Hazards Identification

• **Hazard Classification:**



GHS09

Aquatic Acute 2 H401 Toxic to aquatic life.



GHS05

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

• **Signal Word:** DANGER

• **Precautionary Statements:**

P260 Do not breathe dusts or mists.

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

P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

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.

P309 If exposed or if you feel unwell:

P310 Immediately call a doctor.

P501 Dispose of contents/container in accordance with local regulations.

• **NFPA Ratings (scale 0 - 4):**



Health = 3

Fire = 0

Reactivity = 2

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- **Additional Information:**

If you do not understand the hazards or safety precautions described in this data sheet, contact your supervisor or safety administrator before handling this product.

Section 3: Composition/Information on Ingredients

- **Dangerous Components:**

- **CAS No. Description**

7681-52-9 sodium hypochlorite, solution	10-20%
⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400	
1310-73-2 sodium hydroxide	≤5%
⚠ Skin Corr. 1A, H314	

Section 4: First Aid Measures

- **General information:**

Rescue personnel must wear appropriate protective equipment during removal of victims from contaminated areas.

- **After Inhalation:**

Remove victim to fresh air.
Administer oxygen if breathing is difficult.
Administer artificial respiration if breathing has stopped.
Onset of symptoms may be delayed up to 48 hours.
Get immediate medical attention.

- **After Skin Contact:**

Remove contaminated clothing and shoes. Wash affected area with soap and water.
Use caution to avoid spreading contamination while washing.
Delayed skin damage is possible if product is not completely washed off.
Get immediate medical attention.

- **After Eye Contact:**

In case of accidental contact, immediately flush eyes with water.
Hold eyelids open to ensure adequate flushing.
Remove contact lenses, if present and easy to do. Continue rinsing.
Get immediate medical attention.

- **After Swallowing:**

Rinse mouth.
Administer 1-2 glasses of water to dilute ingested material.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
Get immediate medical attention.

- **Most Important Symptoms and Effects:** No further relevant information available.

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Section 5: Firefighting Measures

- **Suitable Extinguishing Agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray.
- **Special Firefighting Hazards:**
Decomposes when heated. Decomposition products may cause containers to rupture or explode. May react vigorously with organic materials. Depending on temperature and concentration, decomposition products may include hypochlorous acid, sodium oxide, chlorine gas, sodium chlorate and oxygen. Sodium chlorate crystals may cause fire or explosion if subjected to friction or impact.
- **Protective Equipment:**
In the event of a fire, wear a NIOSH (USA) or CEN (EU) approved self-contained breathing apparatus (SCBA) and full protective clothing.
- **Additional Information:** Evacuate all non-essential personnel from the danger area.

Section 6: Accidental Release Measures

- **Personal Precautions, Protective Equipment and Emergency Procedures:**
In case of a spill or other accidental release of this material, contact your supervisor, safety administrator, or emergency response team immediately.
Restrict access to keep out unauthorized or unprotected personnel.
Stay upwind of spilled material.
Wear appropriate personal protective equipment during all clean-up activities. See Section 8 for more information.
Avoid inhalation and direct contact.
All clean-up personnel must be properly trained.
- **Environmental Precautions:**
Keep spilled material out of sewage/drainage systems and waterways.
This product contains a U.S. EPA Reportable Quantity (RQ) substance. If amounts exceeding the Reportable Quantity are released, notification of the National Response Center +1 (800) 424-8802 is required. See Section 15 for more information.
- **Methods for Containment and Clean-Up:**
Ensure adequate ventilation.
Secure the source of the leak if conditions are safe.
Use neutralizing agent.
Collect using an appropriate absorbent material such as clay or sand.
Place waste in an appropriate container for disposal.
Use care during clean-up to avoid exposure to the material and injury from broken containers.

Section 7: Handling and Storage

- **Precautions for Safe Handling:**
Ensure adequate ventilation.
Avoid inhalation and direct contact.
Wear appropriate personal protective equipment.
Do not mix with water without dilution and agitation to prevent potentially violent reaction.
Do not mix with acids, ammonia, alcohol, ethers or hydrocarbons.
- **Protection Against Fires and Explosions:** No special measures required.

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- **Conditions for Safe Storage:**

Store in closed, properly labeled containers.
Protect containers from heat, physical damage, ignition sources and incompatible materials.
Have emergency equipment for fires and spills readily available.

- **Additional Information:**

If you do not understand the hazards or safety precautions described in this data sheet, contact your supervisor or safety administrator before handling this product.

Section 8: Exposure Controls/Personal Protection

- **Occupational Exposure Limits:**

7681-52-9 sodium hypochlorite, solution

WEEL (USA) Short-Term Value: 2 mg/m³

1310-73-2 sodium hydroxide

PEL (USA) Eight-Hour Value: 2 mg/m³

REL (USA) Ceiling Limit Value: 2 mg/m³

TLV (USA) Ceiling Limit Value: 2 mg/m³

- **Exposure Controls:**

Use local exhaust ventilation during open transfers.
Check ventilation for proper operation before starting work.
Ensure emergency eyewash and shower facilities are available.

- **General Protective and Hygienic Measures:**

Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Follow all safety precautions, posted signs and warnings.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

- **Respiratory Protection:**

An industrial hygiene risk assessment is required to determine appropriate respiratory protection.
An air-purifying respirator may be appropriate under limited exposure conditions.
Perform a respirator fit/seal check after donning.
Protection provided by air-purifying respirators is limited.
Wear a self-contained breathing apparatus (SCBA) if there is a potential for uncontrolled release, exposure levels are not known, or in other circumstances where air-purifying respirators may not provide adequate protection.

- **Hand Protection:**



Chemical resistant gloves.

Work gloves may be worn over chemical resistant gloves.
Wear a second pair of chemical resistant gloves for added protection.
Tape gloves to coveralls or suit, if worn.
Use caution when removing gloves to avoid exposure to hazardous chemicals.

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· **Eye/Face Protection:**



Safety glasses with side shields.

Splash goggles/mono-goggles recommended during tasks with high potential for exposure.

· **Body Protection:**

Lab coat recommended for small scale operations.

Tasks with a high probability for splashing or skin contact may require:

Chemical resistant coveralls or apron.

Heavy duty chemical resistant boots.

· **Additional Information:**

If unusual exposures are expected, an industrial hygiene review of work practices, engineering controls and personal protective equipment is recommended.

Section 9: Physical/Chemical Properties

· Form:	Liquid
· Color:	Light yellow
· Odor:	Pungent
· Odor Threshold:	Not determined.
· pH Value at 20 °C (68 °F):	12.5
· Melting Point:	Not determined.
· Boiling Point:	Not determined.
· Flash Point:	Not applicable.
· Autoignition Temperature:	Not determined.
· Decomposition Temperature:	Not determined.
· Lower Explosive Limit (LEL):	Not determined.
· Upper Explosive Limit (UEL):	Not determined.
· Vapor Pressure at 20 °C (68 °F):	20 hPa (15 mm Hg)
· Density:	Not determined.
· Vapor Density at 20 °C (68 °F):	2.6 g/cm ³ (21.697 lbs/gal) (air = 1)
· Evaporation Rate:	Not determined.
· Solubility in Water:	Not determined.
· Partition Coefficient (n-octanol/water):	Not determined.
· Viscosity:	Not determined.

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Section 10: Stability and Reactivity

- **Chemical Stability/Reactivity:** Stable if used and stored according to the specifications listed below.
- **Conditions to Avoid:**
 - Keep away from heat, sparks and open flames.
 - Keep away from incompatible materials.
 - Do not mix with water without dilution and agitation to prevent potentially violent reaction.
 - Do not mix with acids, ammonia, alcohol, ethers or hydrocarbons.
- **Possibility of Hazardous Reactions/Incompatible Materials:**
 - Keep away from strong acids and bases.
 - Keep away from strong oxidizers.
 - Contact with acids releases toxic gases.
- **Hazardous Decomposition Products:**
 - Decomposes when heated. Decomposition products may cause containers to rupture or explode. May react vigorously with organic materials. Depending on temperature and concentration, decomposition products may include hypochlorous acid, sodium oxide, chlorine gas, sodium chlorate and oxygen. Sodium chlorate crystals may cause fire or explosion if subjected to friction or impact.

* Section 11: Toxicological Information

- **Acute Toxicity:** No data available.
- **Relevant LD/LC50 Values:**
 - 7681-52-9 sodium hypochlorite, solution**
Oral LD50 5800 mg/kg (mouse)
 - 1310-73-2 sodium hydroxide**
Oral LD50 2000 mg/kg (rat)
- **Skin Irritation:** Causes severe skin burns and eye damage.
- **Eye Irritation:** Causes severe skin burns and eye damage. Causes serious eye damage.
- **Respiratory Irritation:** May cause respiratory irritation.
- **Sensitization/Allergic Reaction:** No data available.
- **Subchronic/Chronic Toxicity:** No data available.

* Section 12: Ecological Information

- **Aquatic Toxicity:** Toxic to aquatic life.
- **Persistence and Degradability:** No data available.
- **Bioaccumulative Potential:** No data available.

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Section 13: Disposal Considerations

· **Disposal Instructions:**

Keep spilled material out of sewage/drainage systems and waterways.
 Maximize product recovery for reuse or recycling.
 Waste materials may be hazardous due to the pH/corrosivity.
 Dispose of waste in accordance with applicable laws and regulations.

· **Additional Information:**

It is the responsibility of the product user to determine at the time of disposal whether a material containing or derived from this product should be classified as hazardous waste.

* Section 14: Transport Information

· **UN Number:**

· **DOT, ADR, IMDG, IATA** UN1791

· **UN Proper Shipping Name:**

· **DOT:** RQ Hypochlorite solutions
 · **ADR:** 1791 Hypochlorite solutions
 · **IMDG:** HYPOCHLORITE SOLUTION, MARINE POLLUTANT
 · **IATA:** HYPOCHLORITE SOLUTION

· **Transport Hazard Class(es):**

· **DOT:**



· **Class:** 8 Corrosive substances

· **Label:** 8

· **ADR, IMDG**



· **Class:** 8 Corrosive substances

· **Label:** 8

· **IATA:**



· **Class:** 8 Corrosive substances

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- **Label:** 8

- **Packing Group:**
- **DOT, ADR, IMDG, IATA III**

- **Environmental Hazards:**
- **Marine Pollutant:** Yes
Symbol (fish and tree)
- **Special Marking (ADR):** Symbol (fish and tree)
- **Special Precautions:** Warning: Corrosive substances
- **EMS Number:** F-A,S-B
- **Segregation Groups:** Hypochlorites

- **Additional Information:**
- **DOT:**
- **Remarks:** This product contains a U.S. EPA Reportable Quantity (RQ) substance. If amounts exceeding the Reportable Quantity are released, notification of the National Response Center +1 (800) 424-8802 is required. See Section 15 for more information.

Shippers must consult transportation regulations for packaging instructions, quantity limitations and other regulatory information applicable to the desired mode of transport.

Section 15: Regulatory Information

- **U.S. Superfund Amendments & Reauthorization Act (SARA) 355 (Extremely Hazardous Substances):**
None of the ingredients are listed.
- **U.S. Superfund Amendments & Reauthorization Act (SARA) 313 (Specific Toxic Chemical Listings):**
None of the ingredients is listed.
- **U.S. Environmental Protection Agency Reportable Quantity:**
7681-52-9 sodium hypochlorite, solution: 100 lbs.
1310-73-2 sodium hydroxide: 1,000 lbs.
- **U.S. Toxic Substances Control Act (TSCA):**
All ingredients are listed.
- **California Proposition 65 Carcinogens:**
None of the ingredients is listed.
- **Canadian Domestic Substances List (DSL):**
All ingredients are listed.
- **Canadian Ingredient Disclosure List (limit 0.1%)**
None of the ingredients are listed.

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- **Canadian Ingredient Disclosure List (limit 1%):**

All ingredients are listed.

- **Container Labeling According to Regulation (EC) No 1272/2008:**

The product is classified and labeled according to the CLP regulation.

- **Hazard Pictograms:**



GHS09



GHS05

- **Signal Word: DANGER**

- **Hazard Statements:**

H401 Toxic to aquatic life.

H314 Causes severe skin burns and eye damage.

- **Precautionary Statements:**

P260 Do not breathe dusts or mists.

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

P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

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.

P309 If exposed or if you feel unwell:

P310 Immediately call a doctor.

P501 Dispose of contents/container in accordance with local regulations.

Section 16: Other Information

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Formosa Plastics Corporation, U.S.A. at the time it was prepared. Formosa Plastics Corporation, U.S.A. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, Formosa Plastics Corporation, U.S.A. and its subsidiaries cannot guarantee that these are the only hazards that exist. Formosa Plastics Corporation, U.S.A. assumes no legal responsibility for loss, damage or expense arising out of, or in any way connected with, the handling, storage, use or disposal of this product.

- **Department Issuing Safety Data Sheet:** Corporate Environment, Health & Safety

- **Abbreviations & Acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

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IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labeling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Sources & References:

* - Indicates that data has been updated from the previous version.

This Safety Data Sheet conforms to regulation 1907/2006/EC (REACH). This product has been classified in accordance with European CLP regulations (1272/2008/EC) and the U.S. Hazard Communication standard (29 CFR 1910.1200).

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