

## SODIUM HYPOCHLORITE

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Rev.0

### 1. Product and Company Identification

<b>Product Name</b>	Sodium hypochlorite
<b>Structure Formula</b>	NaOCl
<b>CAS Number</b>	7681-52-9
<b>Synonyms</b>	Bleach, HICHLOR
<b>Manufacturer's Name</b>	THASCO Chemical Co., Ltd.

### 2. Composition / Information on Ingredient

Substance	Concentration (by weight)
Sodium hypochlorite	≥ 10% AB.Cl <sub>2</sub>

### 3. Physical / Chemical Properties

<b>Molecular Weight</b>	74.4	<b>pH</b>	11
<b>Melting Point (°C)</b>	-6 (5% solution)	<b>Density (g/cm<sup>3</sup>)</b>	1.2
<b>Boiling Point (°C)</b>	Decomposition above 40°C	<b>Status</b>	Liquid
<b>Appearance and Odor</b>	Greenish yellow with a chlorine odor		
<b>Solubility in water</b>	Soluble in all proportions.		

### 4. Fire and Explosion Hazard Data

<b>Extinguishing Media</b>	Use any means suitable for extinguishing surrounding fire and/or materials.
<b>Fire Hazard Comments</b>	Fire-exposure or excessive heat may cause the rupture of containers.
<b>Special Fire Fighting Procedures</b>	Use water to cool the containers.
<b>Protective Equipments for Fire Fighters</b>	Wear fire-resistant suit, chemical resistant suit and self-contained breathing apparatus.
<b>Flash Point (°C)</b>	Non-flammable
<b>Autoignition Temperature (°C)</b>	Non-flammable

### NFPA Symbol



<b>Flammability</b>	0	: Will not burn
<b>Reactivity</b>	2	: May undergo violent change at elevated temperature and pressure.
<b>Health</b>	2	: Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical treatment is given.
<b>Special data</b>	OXY	: Oxidizer

# Sodium Hypochlorite

## 5. Reactivity Data

Stabilization	Solution decomposes slowly. Rate of decomposition depends on heat and light.
Prevention	Keep away from heat and light.
Explosion Data	Not explosive
Reaction with Water	Will not occur
Oxidation	Oxidizer
Hazardous Decomposition Products	Chlorine, oxygen, sodium chlorate
Protection from Decomposition Products	Use chemical cartridge respirator containing the chlorine cartridge.

## 6. Health Hazard Data

Special Precaution A corrosive chemical.

### Health Effects

Routes of Entry Inhalation, skin, eye and swallow

Hazard (Skin, Eye and Mucous membrane)

Causes irritation.

Effects of Short-Term (Acute) Exposure

**Inhalation** : May irritate nose and the respiratory tract.

**Skin Contact** : May cause skin irritation. In severe cases, burn may occur.

**Eye Contact** : May cause severe eye irritation.

**Ingestion** : May cause irritation and pain. Causes severe burn to mouth and stomach, vomiting, shock and death.

Effects of Long-Term (Chronic) Exposure

**Skin** : Causes dryness, cracking and dermatitis.

## First Aid Procedure

Skin Contact	Remove contaminated clothing and shoes under running water for at least 15 minutes. Obtain medical attention immediately.
Eye Contact	Flush with running water for at least 15 minutes, occasionally lifting the eyelids. Do not allow the contaminated water into the non-affected eye. Obtain medical attention immediately.
Inhalation	Move victim to fresh air. If breathing is difficult, give oxygen. Obtain medical attention immediately.
Ingestion	Never give anything by mouth if victim is unconscious. Rinse mouth thoroughly with water. Do not induce vomiting. Drink 240 to 300 ml. of water. Obtain medical attention immediately.
Exposure Guidelines	TLV-C: 2 mg/m <sup>3</sup>

## Toxicological Information

### Acute Toxicity

LD<sub>50</sub> ingestion (mg/l) 5800 (Rat)

LD<sub>50</sub> skin (mg/l) > 10000 (Rabbit)

LC<sub>50</sub> inhalation (ppm) > 10000 for 1 h. (Rat)

Eye Contact Severe irritation

Skin Contact Irritation

Sub-Acute Toxicity Slightly liver damage on rat when administered with 0.4% of sodium hypochloride for 13 consecutive weeks.

Allergenic Effects Not information available

### Chronic Toxicity

Carcinogenic Effects Not classified as carcinogen.

Embryologic Effects Not information available

Teratogenic Effects Not information available

Mutagenic Effects Not information available

Neurogenic Effects Not information available

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## 7. Precaution for Handling and Use

### Handling

<u>Warning</u>	Avoid generating mist for decreasing the dispersion. Do not allow react with acid which lead to chlorine gas.
<u>Precaution</u>	All equipments will be cleaned before using.
<u>Ventilation</u>	Adequate ventilation should be provided.
<u>Safety Handling</u>	Use smallest possible amount in designated areas with adequate ventilation. Prepare appropriate safety measures and protective equipment. Keep containers tightly closed.
<u>Incompatible Materials</u>	Reducing agents, Strong acids, Nitrogen compound, Copper, Nickel, Cobolt

### Exposure Controls

<u>Personal Protection</u>	Restrict access to exposure area. Use appropriate personal protective equipments. Have a well-ventilated system.
<u>Environment Protection</u>	Prevent liquid run-off into sewers, which lead to water ways. Use sand or soil to make a dike.
<u>Spill and Leakage Procedures</u>	Contain spill with soil, sand, or absorbent material. Sweep up material and place into a suitable labelled disposal container. Flush area with water.

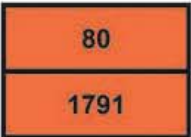

### Waste Disposal Method

<u>Products</u>	React with reducing agents such as sodium metabisulfite and then neutralize with sodium carbonate or sodium thiosulfate.
<u>Empty Containers</u>	Clean up with water and neutralize with sodium carbonate. Dispose containers with all compliance in law regulations.

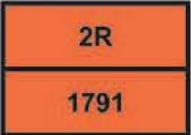
## 8. Control Measure

<b>Engineering Controls</b>	Totally enclose processes and personal. Control the condition of process. Normal ventilation is generally adequate. If generated heat or vapors, local exhaust ventilation should be provided.
<b>Respiratory Protection</b>	Not specification but chemical cartridge respirator with a chlorine cartridge should be provided.
<b>Body Protection</b>	Protective clothing
<b>Hand Protection</b>	Chemical resistant gloves
<b>Eye Protection</b>	Chemical safety goggles, or glasses. Face shield may be used in properly.
<b>Others Protection</b>	Chemical resistant boots, Eyewash fountain and safety shower. Do not eat, drink or smoke in work areas.

## 9. Regulatory Information

ORANGE SYMBOL	LABEL
 <p>80 : Corrosive substance and react violently with water.</p> <p>1791 : UN Number</p>	 <p>For transportation.            Label sizing : more than 250 x 250 mm.            Picture sizing : 12.5 mm. far from edge            5 mm.</p>

## Hazchem Code

	2 : Use water spray or fog to reduce or direct vapors.
	R : Use chemical protective full body and self contained breathing apparatus. Dilute with water before release to sewers, water ways.
	1791 : UN number



## 10. Transportation Information

UN Number	1791	UN Class	8
UN Packing Group	III	IMDG-Ems Number	8-08
IMDG-Class	8	IMDG Packing Group	III
IATA-Class	8	Tank Number	L4BV (+)
IATA-Packing Group	III		

## 11. Other Informations

Bioaccumulation	Not available
Ecotoxicological Information	Not available

