


MSDS	<b>Sodium Hypochloride</b>	 <b>Adwan Chemical Industries Co. Ltd.</b>
Issuing Date		

# Safety Data Sheet

## 1. PRODUCT AND COMPANY IDENTIFICATION

<b>PRODUCT NAME</b>	Sodium Hypochlorite Solution
<b>CHEMICAL NAME</b>	Sodium Hypochlorite Solution
<b>SYNONYMS</b>	Bleach; hypochlorous acid, sodium salt; soda bleach; sodium oxychloride
<b>MANUFACTURED BY</b>	Adwan Chemical Industries Co. Ltd. Riyadh 2nd Industrial City – Al Kharj Road PO Box 355128 Riyadh 11383 Kingdom of Saudi Arabia
<b>PHONE</b>	+966-11-265-0041
<b>FAX</b>	+966-11-265-0023

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO EYES AND RESPIRATORY TRACT. CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY.

<i>Health Rating</i>	: 2 Moderate
<i>Flammability Rating</i>	: 0 None
<i>Reactivity Rating</i>	: 1 Slight
<i>Contact Rating</i>	: 2 Moderate
<i>Lab Protective Equip</i>	: GOGGLES; LAB COAT
<i>Storage Color Code</i>	: Orange (General Storage)

### POTENTIAL HEALTH EFFECTS

#### INHALATION

May cause irritation to the respiratory tract, (nose and throat); symptoms may include coughing and sore throat.

#### SKIN

May irritate skin.

#### EYE


Contact may cause severe irritation and damage, especially at higher concentration.

#### INGESTION

May cause nausea, vomiting

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Consider oral administration of sodium thiosulfate solutions if sodium hypochlorite is ingested. Do not administer neutralizing substances since the resultant exothermic reaction

MSDS	<b>Sodium Hypochloride</b>	 <b>Adwan Chemical Industries Co. Ltd.</b>
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could further damage tissue. Endotracheal intubation could be needed if glottic edema compromises the airway. For individuals with significant inhalation exposure, monitor arterial blood gases and chest x ray.

### 3. COMPOSITION / INFORMATION INGREDIENTS

**CHEMICAL NAME** : Sodium Hypochlorite  
**CAS NUMBER** : 7681 52 9  
**% RANGE** : 15%

### 4. FIRST AID MEASURES

#### INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

#### SKIN

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

#### EYES

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

#### INGESTION

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

### 5. FIRE-FIGHTING MEASURES

#### FLAMMABLE PROPERTIES

Not considered to be a fire hazard. Substance releases oxygen when heated, which may increase the severity of an existing fire. Containers may rupture from pressure build up.

#### FLASH POINT

None

#### AUTOIGNITION TEMPERATURE

N/A

#### FLAMMABLE LIMITS IN AIR (PERCENT BY VOLUME)


Nonflammable

#### HAZARDOUS COMBUSTION PRODUCTS

Nonflammable.

#### EXTINGUISHING MEDIA

Use any means suitable for extinguishing surrounding fire. Use water spray to cool fire exposed containers, to dilute liquid, and control vapor.

MSDS	<b>Sodium Hypochloride</b>	 <b>Adwan Chemical Industries Co. Ltd.</b>
Issuing Date		

### **FIRE FIGHTING INSTRUCTIONS**

In the event of a fire, wear full protective clothing and NIOSH approved self contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## **6. ACCIDENTAL RELEASE MEASURES**

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

## **7. HANDLING AND STORAGE**

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **ENGINEERING CONTROLS**

#### **VENTILATION**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

### **PERSONAL PROTECTIVE EQUIPMENT**

#### **EYE AND FACE PROTECTION**


Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick drench facilities in work area.

#### **SKIN PROTECTION**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

#### **RESPIRATORY PROTECTION**

If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece respirator with an acid gas cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full facepiece positive pressure, air supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen deficient atmospheres.

MSDS	<b>Sodium Hypochloride</b>	 <b>Adwan Chemical Industries Co. Ltd.</b>
Issuing Date		

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE</b>	: Colorless to yellowish liquid.
<b>ODOR</b>	: Chlorine like odor.
<b>SOLUBILITY</b>	: 100% in water.
<b>SPECIFIC GRAVITY</b>	: 1.07 1.14
<b>PH</b>	: 9 10 (neutral solution no excess sodium hydroxide)
<b>% VOLATILES BY VOLUME @ 21C (70F)</b>	: ca. 95
<b>BOILING POINT</b>	: 40C (104F) Decomposes slightly
<b>MELTING POINT</b>	: 6C (21F)
<b>VAPOR DENSITY (AIR=1)</b>	: No information found.
<b>VAPOR PRESSURE (MM HG)</b>	: 17.5 @ 20C (68F)
<b>EVAPORATION RATE (BUAC=1)</b>	: No information found.

## 10. STABILITY AND REACTIVITY

### CHEMICAL STABILITY

Slowly decomposes on contact with air. Rate increases with the concentration and temperature. Exposure to sunlight accelerates decomposition. Sodium hypochlorite becomes less toxic with age.

### CONDITIONS TO AVOID

Light, heat, incompatibles.

### INCOMPATIBILITY WITH OTHER MATERIALS


Ammonia (chloramine gas may evolve), amines, ammonium salts, aziridine, methanol, phenyl acetonitrile, cellulose, ethyleneimine, oxidizable metals, acids, soaps, and bisulfates.

### HAZARDOUS DECOMPOSITION PRODUCTS

Emits toxic fumes of chlorine when heated to decomposition. Sodium oxide at high temperatures.

### HAZARDOUS POLYMERIZATION

Will not occur.

MSDS	<b>Sodium Hypochloride</b>	 <b>Adwan Chemical Industries Co. Ltd.</b>
Issuing Date		

## 11. TOXICOLOGICAL INFORMATION

No LD50/LC50 information found relating to normal routes of occupational exposure. Investigated as a tumorigen and mutagen. Irritation data: eye, rabbit, 10 mg Moderate

## 12. ECOLOGICAL INFORMATION

### ENVIRONMENTAL FATE

No information found.

### ECOTOXICITY

No information found.

## 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. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. TRANSPORT INFORMATION

Not regulated.


## 15. REGULATORY INFORMATION

### Chemical Inventory Status

Ingredient	TSCA	EC	Japan	Australia	Korea	DSL	NDSL	Phil
Sodium Hypochlorite (as NaOCl) (7681 52 9)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

### Federal, State & International Regulations

Ingredient	SARA 302		SARA 313		CERCLA	RCRA 261.33	TSCA 8(d)
	RQ	TPQ	List	Chemical Catg.			
Sodium Hypochlorite (as NaOCl) (7681 52 9)	No	No	No	No	No	No	No

MSDS	<b>Sodium Hypochloride</b>	 <b>Adwan Chemical Industries Co. Ltd.</b>
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**Chemical Weapons Convention:** No TSCA 12(b): No CDTA: No  
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No  
Reactivity: No(Mixture / Liquid)

**Australian Hazchem Code:** None allocated.  
Poison Schedule: S5

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## 16. OTHER INFORMATION

**NFPA RATINGS:**

Health: 2 Flammability: 0 Reactivity: 1

**LABEL HAZARD WARNING:**

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO EYES AND RESPIRATORY TRACT. CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY.

**LABEL PRECAUTIONS:**

Avoid contact with eyes, skin and clothing.  
Avoid breathing mist.  
Keep container closed.  
Use with adequate ventilation.  
Wash thoroughly after handling.

**LABEL FIRST AID:**

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. In all cases get medical attention immediately.