

 al kout industrial projects الكوت للمشاريع الصناعية	<b>AL KOUT INDUSTRIAL PROJECTS</b>	Document No:	C-SM-XX-D-010
		Issue No:	1
	<b>Safety Data Sheet</b> <b>SODIUM HYPOCHLORITE- 06%</b>	Rev no:	5
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1.0 Chemical Identity		
1.1	Product Name	Sodium Hypochlorite (6 %)
	Product Form	Mixture
	Synonyms	Bleach; Hypochlorous Acid, Sodium Salt; Soda Bleach; Sodium Oxychloride
	Formula	NaOCl
	CAS No	7681-52-9
1.2	Recommended Use and Restrictions	
	Use of substance	For general purpose cleaning, sanitizing, bleaching and for controlling bacteria, algae and fungal slimes in pool and industrial waters.
1.3	Company Information	
		<b>Name:</b> Al Kout Industrial Projects , Kuwait <b>Plant:</b> Salt & Chlorine Plant, Shuaiba, Kuwait <b>Company's Post Box No.:</b> 10277, Shuaiba-65453, Kuwait <b>Tel No.:</b> 00-(965)-22283726 Intercom: 3726, 3725 <b>Fax No.:</b> 00-(965)- 22284043 <b>Company's Emergency Phone No:</b> 00-(965)-, 23261029, 97216020, 99794511
1.4	Emergency Telephone Number	00-(965)-, 23261029, 97216020
2.0 Hazards Identification		
2.1	Classification of the Substance or Mixture	
<b>GHS US Classification</b>		
Skin Irrit. 2 H315 Eye Dam. 1 H318 Aquatic Acute 2 H401		
2.2	Label Elements	
<b>GHS US Labeling</b>		
Hazard Pictograms (GHS – US) :		
		
Single Word (GHS-US) : Danger Hazard Statements (GHS-US) : H315 - Causes skin irritation H318 - Causes serious eye damage H401 - Toxic to aquatic life		
Precautionary Statements (GHS – US) : P264 - Wash exposed skin thoroughly after handling P273 - Avoid release to the environment P280 - Wear protective gloves, protective clothing, eye protection, face protection P302+P352 - IF ON SKIN: Wash with plenty of soap and water P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P332+P313 - If skin irritation occurs: Get medical advice/attention P362 - Take off contaminated clothing P501 - Dispose of contents/container to comply with local, state and federal regulations		
2.3	Other Hazards	
No additional information available		
2.4	Unknown acute toxicity (GHS US)	


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Not Applicable

3.0 Composition/ Information on ingredients		
3.1	Substances	
Not Applicable		
3.2	Mixtures	
	Finished products specification	Sodium Hypochlorite (06%)
	<b>CAS Number</b>	<b>Chemical Name</b>
	7681-52-9	Sodium Hypochlorite (as NaOCl)
	7732-185	Water
	%	GHS -US Classification
		Not classified
		Unst. Expl, H200 Ox. Sol. 2, H272 Skin Corr. 1B, H314 STOT SE 3, H335 Aquatic Acute 1, H400
	Finished product specification	Sodium Hypochlorite
	Chemical Analysis	
	PARAMETERS	Specification
	Appearance	Clear greenish yellow aqueous solution
	PH	10.5---12.5
	Specific Gravity at 20 °C	1.07- 1.150
	Sodium Hypochlorite as NaOCl % wt	5.0 – 7.5
	Available Chlorine as Cl <sub>2</sub> (gpl)	50--85.0
	Excess Alkali as NaOH (gpl)	1.0---2.5
	Excess Alkali as Na <sub>2</sub> CO <sub>3</sub> (gpl)	4.0---10.0
	Iron as Fe+3 ppm	≤ 1.0
	Copper as Cu+2 ppm	≤ 0.20
	Nickel as Ni+2 ppm	≤ 0.20
	Details of ingredients that could be released from the product in Excess of the PEL value	
	Warmed to > 40 o C ,or mixed with acids, toxic chlorine gas in excess of the PEL will be evolved.	

**Note:** Half Shelf life period at 20° C (Winter) : 10 Days  
Half Shelf life period at 40°C (Summer) : < 5 Days  
Filled containers should be kept under shelter

4.0 First Aid Measures	
4.1. Description of first aid measures	
Inhalation	May cause irritation to the respiratory tract, (nose and throat); symptoms may include coughing and sore throat.
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	Contact may cause severe irritation and damage, especially at higher concentration 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 in mouth to an unconscious person. Get medical attention immediately.

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<b>4.2. Most important symptoms and effects, both acute and delayed</b>	
Symptoms/injuries after skin contact	Causes skin irritation.
Symptoms/injuries after eye contact	Causes serious eye damage.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	
No additional information available	

## 5.0 Fire Fighting Measures


<b>5.1. Extinguishing media</b>	
Fire and Explosion hazards	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. This solution is not considered to be an explosion hazard
Suitable Extinguishing Media	Use any means suitable for extinguishing surrounding fire. Use water spray to cool fire-exposed containers, to dilute liquid, and control vapor
<b>5.2. Special hazards arising from the substance or mixture</b>	
Special Information.	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode.
<b>5.3. Advice for firefighters</b>	
Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection.

## 6.0 Accidental Release Measures


<b>6.1. Personal precautions, protective equipment and emergency procedures</b>	
<b>6.1.1. For non-emergency personnel</b>	
Protective equipment	Safety glasses. Protective clothing. Gloves.
Emergency procedures	Evacuate unnecessary personnel.
<b>6.1.2. For emergency responders</b>	
Protective equipment	Equip cleanup crew with proper protection.
Emergency procedures	Ventilate area.
<b>6.2. Environmental precautions</b>	
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.	
<b>6.3. Methods and material for containment and cleaning up</b>	
Methods for cleaning up	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
<b>6.4. Reference to other sections</b>	
See Heading 8. Exposure controls and personal protection.	

## 7.0 Handling and Storage

<b>7.1. Precautions for safe handling</b>	
Precautions for safe handling	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent

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	formation of vapour.
Hygiene measures	Wash exposed skin thoroughly after handling.
7.2. Conditions for safe storage, including any incompatibilities	
Storage conditions	Keep only in the original container in a cool, well ventilated place away from : incompatible materials. Keep container closed when not in use.
Incompatible products	Strong reducing agents. combustible materials. aluminium. metals. Ammonia. Strong acid
Incompatible products	Sources of ignition. Direct sunlight.
7.3. Specific end use(s)	
No additional information available	

8.0 Exposure Controls/Personal Protection		
8.1	Exposure Control	Provide Exhaust Ventilation or other Engg controls to keep the airborne concentrations of vapors below their respective TLV's.
8.2	Personal Protection	Face shield, Full Suit, Rubber or PVC gloves, Boot, Vapor respirator (approved/certified type) <div style="text-align: right;">  </div>
	Exposure Limits	OSHA-PEL, IDLH, ACGIH-TLV not available. STEL = 2 mg/m3

9.0 Physical and Chemical Properties		
9.1	Appearance/ Colour	Colorless to pale yellow watery liquid
9.2	Odour	Pungent chlorine odor
9.3	Molecular Weight	75.45
9.4	Melting Point	-5°C to -25°C
9.5	Boiling Point	40°C -76°C (104-169°F)
9.6	Specific gravity	1.07-1.15 @ 20°C
9.7	Vapour Density (Air = 1)	2.61
9.8	Vapour Pressure @ 20°C	12-17 mm Hg
9.9	Solubility (water)	Very soluble


10.0 Stability and Reactivity		
10.1. Reactivity		
No additional information available		
10.2. Chemical stability		
Stable under normal conditions.		
10.3. Possibility of hazardous reactions		
Reacts violently with acids. May react violently with reducing agents. Contact with acids liberates toxic gas.		
10.4. Conditions to avoid		
Incompatible materials. Direct sunlight. Extremely high or low temperatures.		
10.5. Incompatible materials		
Strong reducing agents. Water. zinc. metals. aluminium. Ammonia. Strong acids.		
10.6. Hazardous decomposition products		
Hydrogen chloride. Chlorine. Phosgene.		

11.0 Toxicological Information		
11.1. Information on toxicological effects		
Acute toxicity	Not classified	

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Water (7732-18-5) LD50 oral rat $\geq 90000$ mg/kg Skin corrosion/irritation : Causes skin irritation pH: 11.3 Serious eye damage/irritation : Causes serious eye damage. pH: 11.3 Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified	
Sodium Hypochlorite (7681-52-9)	
IARC group 3 - Not classifiable	
Reproductive toxicity : Not classified Specific target organ toxicity (single exposure) : Not classified Specific target organ toxicity (repeated exposure) : Not classified Aspiration hazard : Not classified Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Symptoms/injuries after skin contact : Causes skin irritation. Symptoms/injuries after eye contact : Causes serious eye damage.	

12.0 Ecological Information	
12.1. Toxicity	
Ecology - water	Toxic to aquatic life.
Sodium Hypochlorite, 6% w/v (7681-52-9)	
LC50 fishes 1	4.7 mg/l
Sodium Hypochlorite (7681-52-9)	
LC50 fishes 1	0.026 mg/l (96 h; Oncorhynchus kisutch; Chlorine)
EC50 Daphnia 1	2.1 mg/l (96 h; Daphnia magna)
EC50 other aquatic organisms 1	0.2 mg/l (24 h; Skeletonema costatum; Biomass)
LC50 fish 2	0.19 mg/l (96 h; Pimephales promelas)
Threshold limit algae 1	0.84 mg/l (24 h; Chlorophyta; Biomass)
12.2. Persistence and degradability	
Sodium Hypochlorite, 6% w/v (7681-52-9)	
Persistence and degradability	Not established.
Sodium Hypochlorite (7681-52-9)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

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BOD (% of ThOD)	Not applicable
Water (7732-18-5)	
Persistence and degradability	Not established.
12.3. Bioaccumulative potential	
Sodium Hypochlorite, 6% w/v (7681-52-9)	
Bioaccumulative potential	Not established.
Sodium Hypochlorite (7681-52-9)	
Bioaccumulative potential	Not bioaccumulative.
Water (7732-18-5)	
Bioaccumulative potential	Not established.
12.4. Mobility in soil	
No additional information available	
12.5. Other adverse effects	
Other information	Avoid release to the environment.


### 13.0 Disposal Considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose contents/container to comply with local, state and federal regulations.

Ecology - waste materials : Avoid release to the environment.

### 14.0 Transport Information

14.1	UN No	1791	
14.2	IMCO Class	8	
14.3	Packaging	III	
14.4	ADR/RID classification code	C9	

### 15.0 Regulatory Information


Hazardous by definition of Hazard Communication standard  
( 29 CFR 1910: 1200) OSHA

US Federal regulations

Sodium Hypochlorite, 6% w/v (7681-52-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory


RQ (Reportable quantity, section 304 of EPA's List | 100 lb

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Lists):	
Sodium Hypochlorite (7681-52-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
RQ (Reportable quantity, section 304 of EPA's List Lists):	100 lb
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

16.0 Other Information		
16.1	Packing	Jerry Cans, IBC's, ISO Tankers & Road Tankers
16.2	Disclaimer	The Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is upto the manufacturer/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured / handled or sold by him as the case may be. The AIPC makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

Full text of H-phrases: see section 16:	
Aquatic Acute 1	Hazardous to the aquatic environment — AcuteHazard, Category 1
Aquatic Acute 2	Hazardous to the aquatic environment — AcuteHazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Ox. Sol. 2	Oxidising Solids, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
Unst. Expl	Explosives, Unstable explosives
H200	Unstable explosives
H272	May intensify fire; oxidiser
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H401	Toxic to aquatic life

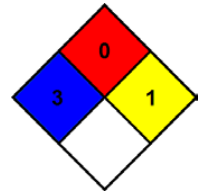
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NFPA health hazard injury. : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.

Hazard Rating



Health given : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal protection : H  
H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

*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.*