



## MATERIAL SAFETY DATA SHEET

# Sodium Hypochlorite Solution (4.5 – 9.9 % w/w)

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	Sodium Hypochlorite Solution (4.5 – 9.9 % w/w)
<b>Product Usage</b>	Disinfection of water, household detergent
<b>Manufacturer</b>	Ansa McAl Chemicals Ltd
<b>Manufacturer Address</b>	North Sea Drive, Point Lisas Industrial Estate, Savonetta, Trinidad W.I
<b>Emergency Tel No (24 hr)</b>	636-5380 / 2251 / 9918
<b>Review / Update</b>	Feb 25, 2009

### SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NO	% (w/w)	REMARKS
Sodium Hypochlorite (as NaOCl)	7681-52-9	5%	Active
Water	7732-18-5	95%	Inert

**SECTION 3 – HAZARD IDENTIFICATION**

**Emergency Overview:**      *Warning! Harmful if swallowed or inhaled. Causes irritation to eyes and respiratory tract. Causes substantial but temporary eye injury.*

<b>POTENTIAL HEALTH EFFECTS</b>	
<b>Inhalation</b>	May cause irritation to the respiratory tract, nose and throat. Symptoms may include coughing and sore throat
<b>Skin Contact</b>	May irritate skin
<b>Ingestion</b>	May cause nausea, vomiting
<b>Eye Contact</b>	Contact may cause severe irritation and damage, especially at higher concentrations
<b>Chronic Exposure</b>	A constant irritant to the eyes and throat. Low potential for sensitization after exaggerated exposure to damaged skin
<b>Aggravation Of Pre-Existing Conditions</b>	Persons with impaired respiratory function, or heart disorders (or disease) may be more susceptible to the effects of the substance.

**SECTION 4 – FIRST AID MEASURES**

<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately
<b>Skin Contact</b>	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
<b>Ingestion</b>	If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately
<b>Eye Contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately
<b>Note To Physician</b>	Consider oral administration of sodium thiosulfate solutions if sodium hypochlorite is ingested. Do not administer neutralizing substances since the resultant exothermic reaction 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.

### SECTION 5 – FIRE FIGHTING MEASURES

<b>Fire</b>	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
<b>Explosion</b>	This solution is not considered to be an explosion hazard. Anhydrous sodium hypochlorite is very explosive
<b>Fire Extinguishing Media</b>	Use any means suitable for extinguishing surrounding fire Use water spray to cool fire-exposed containers, to dilute liquid, and control vapor
<b>Special Information</b>	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

### SECTION 6 – ACCIDENTAL RELEASE MEASURES

<b>Spills, Leaks, or Releases</b>	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 sawdust. Do not flush to sewer!
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### SECTION 7 – HANDLING AND STORAGE

<b>Handling Procedures and Equipment</b>	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.
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**SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**

<b>Airborne Exposure Limits</b>	Sodium Hypochlorite: AIHA (WEEL) - STEL - 2 mg/m <sup>3</sup> OSHA Permissible Exposure Limit (PEL): 0.5 ppm (TWA), 1 ppm (STEL) as Chlorine ACGIH Threshold Limit Value (TLV): 1 ppm (TWA), 3 ppm (STEL) as Chlorine
<b>Ventilation System</b>	A system of local and/or general exhaust is recommended, to control the emissions of the contaminant at its source, and keep employee exposures below the Airborne Exposure Limits,
<b>Personal Respirators (NIOSH Approved)</b>	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 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. <b>WARNING:</b> Air purifying respirators do not protect workers in oxygen-deficient atmospheres.
<b>Skin Protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
<b>Eye Protection</b>	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.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

<b>Molecular Formula</b>	Na-O-Cl
<b>Molecular Weight</b>	74.4
<b>Appearance</b>	Colorless to yellowish liquid
<b>Odor</b>	Chlorine-like odor
<b>Solubility</b>	100% in water
<b>Density</b>	1.07 - 1.14
<b>pH</b>	11-13
<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

**SECTION 10 – STABILITY AND REACTIVITY**

<b>Stability</b>	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.
<b>Hazardous Decomposition Products</b>	Emits toxic fumes of chlorine when heated to decomposition. Sodium oxide at high temperatures
<b>Hazardous Polymerization</b>	Will not occur.
<b>Incompatibilities</b>	Ammonia (chloramine gas may evolve), amines, ammonium salts, aziridine, methanol, phenyl acetonitrile, cellulose, ethyleneimine, oxidizable metals, acids, soaps, and bisulfates.
<b>Conditions to Avoid</b>	Light, heat, incompatibles

**SECTION 11 – TOXICOLOGICAL INFORMATION**

TOXICOLOGICAL DATA

<p>Toxicity Data</p>	<p>. No LD50/LC50 information found relating to normal routes of occupational exposure. Investigated as a tumorigen and mutagen.</p> <p><b>Irritation data:</b> eye, rabbit, 10 mg - Moderate</p>
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NTP CARCINOGEN

Ingredient	Known	Anticipated	IARC Category
Sodium Hypochlorite (as NaOCl) CAS No:(7681-52-9)	No	No	3
Water CAS No:(7732-18-5)	No	No	None

**SECTION 12 – ECOLOGICAL INFORMATION**

<b>Environmental Fate</b>	No information found.
<b>Environmental Toxicity</b>	No information found

**SECTION 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.

**SECTION 14 – TRANSPORT INFORMATION**

Not regulated. See Section 6	
For local Chemical Emergencies In Transportation Requiring Activation Of Ansa McAL 24 Hour Emergency Response Plan Call:	636-5380

**SECTION 16 – OTHER INFORMATION**

**Important!**

*The information presented herein, while not guaranteed, was prepared by technical personnel at Ansa McAl Chemicals and is true and accurate to the best of our knowledge. No warranty or guaranty, expressed or implied, is made regarding performance, stability or otherwise. This information is not intended to be all-inclusive as the manner and conditions of use, handling storage and other factors may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended and nothing herein shall be construed as a recommendation to infringe any existing patents or to violate any Federal, State or local laws.*