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## MATERIAL SAFETY AND DATA SHEET

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### 1. Product and Company Identification

<u>Trade / Commercial Name</u>	<b>SODIUM HYPOCHLORITE 10 - 12.5% (M/V)</b>		
<u>Chemical Name</u>	Sodium hypochlorite, solution conc> 10% active Cl		
<u>Formula</u>	NaOCl		
<u>Chemical Family</u>	Hypochlorites		
<u>Synonyms</u>	Hypo, Jik, Bleach, Javal		
<u>Un No</u>	1791	<u>Hazchem Code</u>	2r
<u>ERG No</u>	154	<u>EAC</u>	59

#### Company Identification:

Acorn Chemicals Ltd. Emergency Tel No:  
T/A Acorn Water  
Glasslyn Rd. (023) 43466  
Bandon,  
Co. Cork.  
Rep. Of Ireland.  
Tel: (023) 43466  
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### 2. Composition

<u>Hazardous Components</u>	Sodium hypochlorite (Cl <sub>2</sub> ) 10 - 12.5 % m/v Sodium hydroxide 1.5 - 2.5 % m/v
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### 3. Hazards Identification

Corrosive liquid.  
Poisonous if inhaled or swallowed.  
Skin contact poisonous.  
Contact could cause burns to skin and eyes.  
Fire could produce irritating or poisonous gases.  
Reaction with acids will release toxic chlorine gas.  
Runoff from fire-control or dilution water could cause pollution.

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#### 4. First Aid Measures

<u>First Aid Skin</u>	Wash off with water. Remove clothing. Shower thoroughly.
<u>First Aid Eyes</u>	Flush eyes with water for 15 minutes. Hold eyelids open while washing. Seek medical attention.
<u>First Aid Ingested</u>	Do not induce vomiting. Give large amounts of water. Seek medical attention.
<u>First Aid Inhalation</u>	Remove from contaminated area. Give oxygen. CPR if indicated. Seek medical attention.

#### 5. Fire Fighting Measures

Solution is non flammable but may assist combustion.  
Contain fire and allow to burn.  
Move container from fire area if you can do it without risk.  
Cool containers that are exposed to flames with water from the side until well after the fire is out.  
Stay away from ends of tanks.  
Keep unnecessary people away; isolate hazard area and deny entry.  
Thermal decomposition product is chlorine gas - stay upwind; keep out of low areas.  
Use self contained breathing apparatus and chemical protective clothing.  
Use an extinguishing media appropriate for the material that is burning.  
Do not allow run-off from fire fighting to enter sewers or water courses.

#### 6. Accidental Release Measures

Full protective clothing including breathing apparatus  
Dilute (substance may be washed to drain with a lot of water)  
PRECAUTIONS:  
Restrict access to area.  
Provide adequate protective equipment and ventilation.  
Always work upwind from the spill.  
Remove sources of heat and flame.  
Notify occupational and environmental authorities.  
SPILL OR LEAK:  
Do not touch spilled material.  
Stop leak if you can do it without risk.  
Use water spray to reduce vapours.  
SMALL SPILLS:  
Takeup with sand or other noncombustible absorbent material  
and place into containers for later disposal.

LARGE SPILLS:  
Dike liquid spill for later disposal.

## 7. Handling And Storage

### HANDLING

Avoid contact with eyes or skin and do not breath in mist.  
Avoid generation of mist.  
Keep away from cleaning agents.

### STORAGE

Keep containers in cool ventilated areas away from sunlight.  
Keep away from acids, ammonia salts, amines, methanol.

## 8. Exposure Controls/Personal Protection

Occupational Exposure Limits TWA - OEL - RL not listed

In case of chlorine emission, observe OEL for chlorine  
TWA - OEL - RL = 1.5 mg/m<sup>3</sup> Cl<sub>2</sub>  
Short term OEL - RL = 3 mg/m<sup>3</sup> Cl<sub>2</sub>

Controls

The control measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside. Supply sufficient replacement air to make up for air removed. Have a safety shower/eye wash fountain readily available in the immediate work area

Personal Protection

If engineering controls and work practices are not effective in controlling this material, then wear suitable personal protection equipment, including chemical safety goggles & face shield, boots, imperious gloves, coveralls, & respiratory protection. Have appropriate equipment available for use in emergencies.

## 9. Physical & Chemical Properties

Colour: yellowish solution.which may contain small amounts of precipitate  
Chlorine content: 10 - 12.5 % m/v  
Alkalinity: 1.0 - 2.5 m/v (as NaOH)  
SG @ 20 deg C: 1.20 maximum

Completely soluble in water.  
Sodium hypochlorite at high concentrations is unstable and deteriorates with exposures to

heat and UV light.

Product should be diluted asap to at least 6 % to improve stability.  
Shelf life at 12.5 % is approximately 1 week, before it starts to deteriorate.

## 10. Stability And Reactivity

<u>Conditions to Avoid</u>	High temperatures and light will cause the product to deteriorate. Precipitates (chlorates) will form and the product will turn brown/black. Gas will form which may lead to containers bursting.
<u>Incompatible Materials</u>	Reacts with acids and releases toxic chlorine gas and oxygen. Powerful oxidizing agent.
<u>Other</u>	Thermal decomposition product will evolve toxic chlorine and sodium dioxide fumes.

## 11. Toxicological Information

Acute toxicity:

Released Chlorine is toxic by inhalation.

Skin and eye contact:

Irritating to skin causing burns.

Chronic toxicity:

Prolonged exposure to skin will result in dermatitis, to eyes - conjunctivitis, inhalation - adversely effect respiratory tract.

## 12. Ecological Information

No ecological problems are expected when the product is handled and used with due care.

## 13. Disposal Considerations

<u>Disposal Method Product</u>	There are no uniform EC regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.
<u>Disposal Method Packaging</u>	Disposal in accordance with local legal provisions.

## 14. Transport Information

<u>UN No</u>	1791	<u>Hazchem Code</u>	2r
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<u>Marine Pollutant</u>	True
<u>Class</u>	Class: 8 Corrosive Group: III
<u>Subsidiary Risks</u>	None
<u>Tremcard Number</u>	45/80G12

### 15. Regulatory Information

<u>EEC Hazard Classification</u>	8
<u>Risk Phases</u>	R31 - Contact with acids liberates toxic gas R36/38 - Irritating to eyes, and skin R5r - Harmful to aquatic organisms
<u>Safety Phases</u>	S1/2/13 - Keep out of reach of children, away from food, drink and animal feed stuffs. S7/9 - Keep containers closed in a well ventilated area. S23/24/25 - Do not breath in fumes emitted and avoid contact to eyes. S28 - wash skin immediately with plenty of water. S36/37/38 - Wear suitable chemical protective chloting, gloves and eye/face protection. S45 - In case of not feeling well seek medical attention. S50 - Do not mix with formic acid, phynylactonitrile, amines, ammonium salts, methanol and aziridine.
<u>National Legislation</u>	None