COMPANY IDENTITY: Univar
PRODUCT IDENTITY: Liquichlor 10-16% (Sodium Hypochlorite 10-16%)

SAFETY DATA SHEET

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements and the International Chemical Safety Cards of the Global Harmonizing System.
THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)
IMPORTANT: Read this SDS before handling & disposing of this product.
Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: Liquichlor 10-16% (Sodium Hypochlorite 10-16%)
SDS NUMBER: OX76685
NEW MSDS DATE: 12/21/2011
COMPANY IDENTITY: Univar
COMPANY ADDRESS: 17425 NE Union Hill Road
COMPANY CITY: Redmond, WA 98052
COMPANY PHONE: 1-425-889-3400
EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)
CANUTEC: 1-613-996-6666 (CANADA)

SECTION 2. HAZARDS IDENTIFICATION

DANGER!!

EXPOSURE PREVENTION: STRICT HYGIENE! AVOID ALL CONTACT!

RISK STATEMENTS:

R35	Causes severe burns.
R50	Very toxic to aquatic organisms.

SAFETY STATEMENTS:

S1/2	Keep locked up and out of the reach of children.
S24/25	Avoid contact with skin and eyes.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28	After contact with skin, wash immediately with plenty of water.
S45	In case of accident, or if you feel unwell, seek medical advice immediately. (Show the label where possible).
S61	Avoid release to the environment. Refer to special instructions/safety data sheet.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	EINECS#	WT %
Water	7732-18-5	231-791-2	84-98
Sodium Hypochlorite	7681-52-9	-	< 16
Sodium Hydroxide	1310-73-2	-	<= 1.75

Trace components: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.

SECTION 6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE AND ENVIRONMENTAL PRECAUTIONS:
Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

PERSONAL PROTECTIVE EQUIPMENT
The proper personal protective equipment for incidental releases (such as: 1 Liter of the product released in a well-ventilated area), use impermeable gloves (triple-gloves (rubber gloves and nitrile gloves, over latex gloves), goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard hat. Self-Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

ENVIRONMENTAL PRECAUTIONS:
Stop spill at source. Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material. Close or cap valves and/or block or plug hole in leaking container and transfer to another container. Keep from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance.

CONTAINMENT AND CLEAN-UP MEASURES:
Absorb spilled liquid with polypads or other suitable absorbent materials. If necessary, neutralize using suitable buffering material, (acid with soda ash or base with phosphoric acid), and test area with litmus paper to confirm neutralization. Clean up with non-combustible absorbent (such as: sand, soil, and so on). Shovel up and place all spill residue in suitable containers. dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

SECTION 7. HANDLING AND STORAGE

HANDLING
Use only with adequate ventilation. Do not get in eyes, on skin or clothing.
Wear OSHA Standard full face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse. NEVER pour water into this substance. When dissolving or diluting, always add it slowly to the water.
To minimize static discharge when transferring, ensure electrical continuity by bonding and grounding all equipment. Use an inlet line diameter of at least 3.5 inches (8.9 centimeters) with a maximum flow rate of 1 meter/second.

STORAGE
Keep separated from strong oxidants, strong acids, combustible & reducing substances, metals, food & feedstuffs. Keep cool. Keep dry. Keep in the dark. See: Section 10, <Materials to Avoid>. Do not store above 49 C/120 F. Keep container tightly closed & upright when not in use to prevent leakage.
Wear full face shield, gloves & full protective clothing when opening or handling.
When empty, drain completely, replace bungs securely.

NONBULK: CONTAINERS:
Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Empty containers should be handled with care. Never store food, feed, or drinking water in containers which held this product.

BULK CONTAINERS:
All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks immediately to the proper personnel.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

BODY PROTECTION:
Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from impervious materials are generally acceptable, depending on the task.

WORK & HYGIENIC PRACTICES:
Provide readily accessible eye wash stations & safety showers.
Wash at end of each workshift & before eating, smoking or using the toilet.
Promptly remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:	Liquid, Clear, Yellow to Yellow-Green
ODOR:	Chlorine-like, Pungent
ODOR THRESHOLD:	0.3 ppm (detection), for Chlorine
pH (Neutrality):	12 - 14 (1% Solution)_
MELTING POINT/FREEZING POINT:	-27 C / -17 F
BOILING RANGE (IBP,50%,Dry Point):	140 C / 284 F
FLASH POINT (TEST METHOD):	Not Applicable
EVAPORATION RATE (n-BUTYL ACETATE=1):	Not Applicable
FLAMMABILITY CLASSIFICATION:	Non-Combustible
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	Not Applicable
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	Not Available
VAPOR PRESSURE (mm of Hg)@20 C	12 (12.5% Solution)
VAPOR DENSITY (air=1):	0.670
GRAVITY @ 68/68 F / 20/20 C:	
SPECIFIC GRAVITY (Water=1):	1.17 - 1.22
POUNDS/GALLON:	9.75 - 10.20
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT (n-Octane/Water):	Not Available
AUTO IGNITION TEMPERATURE:	Not Applicable
DECOMPOSITION TEMPERATURE:	Not Available
VOC'S (>0.44 Lbs/Sq In) :	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
TOTAL VOC'S (TVOC)*:	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC'S (CVOC)*:	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS):	0.0 Wt% /0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)	0.0

* Using California South Coast Air Quality Management District (SCAQMD) Rule 443.1.

SECTION 10. STABILITY & REACTIVITY

STABILITY
Stable under normal conditions.

CONDITIONS TO AVOID
Isolate from extreme temperatures and incompatible chemicals.

MATERIALS TO AVOID
Reacts violently with fire extinguishers containing water. The substance is a strong base, reacts violently with acids and is corrosive. Decomposes on heating and on contact with strong acids, (such as sulfuric acid) producing, toxic & corrosive fumes including, chlorine, phosgene, & hydrogen chloride. The substance is a strong oxidant & reacts violently with combustible & reducing materials. Reacts with water generating sufficient heat to ignite combustible materials. Reacts violently with strong acids, causing fire & explosion hazard. Attacks many plastics, rubber, coatings, many metals, such as aluminum, zinc, tin, & lead. forming flammable/explosive gas (hydrogen).
Reacts with ammonium salts to produce ammonia & causing fire hazard.
Rapidly absorbs carbon dioxide & water from the air.

SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

MAMMALIAN TOXICITY INFORMATION (CONTINUED)

SODIUM HYPOCHLORITE:
Eye effects (Adult Rabbit): Moderate irritation effects
Microsomal Mutageniticity Assay (Salmonella typhimunium): 1 mg/plate
Cytogenetic Analysis (Human): Lymphocyte, 100 ppm/24 hours.
TDLo, Oral (Woman): 1 g/kg, Central nervous system effects, blood pressure effects
TDLo, Intravenous (Man): 45 mg/kg, Pulmonary system , LD50 (Oral, Mouse): 5800 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

EFFECT OF MATERIAL ON PLANTS OR ANIMALS:
This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

EFFECT OF MATERIAL ON AQUATIC LIFE:

LC50 (Bluegill sunfish):	2.90 mg/L/96 hours
LC50 (Pimephales promelas):	1.40 mg/L/96 hours
LC50 (Oncorhynchus mykiss):	0.90 mg/L/0.5 hours

The substance is toxic to aquatic organisms.
The substance may be hazardous in the environment.
Special attention should be given to water organisms.

MOBILITY IN SOIL
Mobility of this material has not been determined.

DEGRADABILITY
This product is completely biodegradable.

ACCUMULATION
Bioaccumulation of this product has not been determined.

SECTION 13. DISPOSAL CONSIDERATIONS

Processing, use or contamination may change the waste management options.
Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws. If in doubt, contact appropriate agencies.

SECTION 14. TRANSPORT INFORMATION

IF > 625 LB / 284 KG OF THIS PRODUCT IN 1 CONTAINER,
IT EXCEEDS THE "RQ" OF SODIUM HYPOCHLORITE.

DOT SHIPPING NAME: UN1791, Hypochlorite Solutions, 8, PG-III
DRUM LABEL: (CORROSIVE)
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 154