TABEX INC.

SECTION 1 - PRODUCT IDENTIFICATION

Product identifier/Trade name: **TABEX LITHIUM SHOCK**
Product code/Internal Identification: 18-4011, 18-40111, 18-40118, 18-4012, 18-4018
Product use/Description: Sanitizer to control bacteria and algae in swimming pool water.
Product chemical name: Lithium hypochlorite
Chemical family: Lithium hypochlorite
MSDS preparation/review date: March 20, 2017
Supplier identifier: TABEX INC., 2770 – 24 Avenue N.E., Calgary, Alberta, T1Y 6V7
403-250-2494 or 1-800-661-8179
Manufacturer identifier: Same as supplier.
Emergency phone number: Canutec 613-996-6666.
WHMIS Classification: C – Oxidizing material
E – Corrosive material

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview
DANGER. OXIDIZER. Promotes combustion. Contact with combustible materials may cause a fire and/or explosion. CORROSIVE. May be harmful if inhaled or ingested. Causes severe eye and skin burns or irritations.

POTENTIAL HEALTH EFFECTS

Primary entry route(s): Skin contact, skin absorption, eye contact, ingestion and inhalation.
Effects of short-term (acute) exposure:
Inhalation: May be harmful if inhaled. May cause a severe burn or irritation to the nose, throat and respiratory tract.
Skin: Direct skin contact may cause a severe burn or irritation.
Eye: Direct eye contact may cause a severe eye burn or irritation. Symptoms may include redness, stinging, tearing and pain. May cause blindness.
Ingestion: May be harmful if ingested. Ingestion may cause a severe burn or irritation to the mouth, throat and stomach.
Effects of long-term (chronic) exposure:
Refer to Section 11, Toxicological Information, for further information.
Other important hazards:
Refer to Section 11, Toxicological Information, for further information.

SECTION 3 - CHEMICAL COMPOSITION / HAZARDOUS INGREDIENTS

Hazardous Ingredients	CAS #	% (weight)	LD_{50} (route, species)	LC_{50} (species)
Lithium hypochlorite	13840-33-0	30-40	N/Av	N/Av

SECTION 4 - FIRST AID MEASURES

Inhalation:
Remove source of contamination or have victim move to fresh air. If not breathing, give artificial respiration. Obtain medical attention immediately.
Skin contact:
Wash contaminated area with running water for at least 15-20 minutes. Obtain medical attention.
Eye contact:
Immediately flush the contaminated eye(s) with gently flowing water for at least 15-20 minutes. Obtain medical attention.
Ingestion:
NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink two glasses of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Repeat administration of water. Obtain medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability: OXIDIZER. Promotes combustion.
Contact with combustible materials may cause a fire and/or explosion.

Flash point (Method): None

Lower flammable limit (% by volume): N/Av

Upper flammable limit (% by volume): N/Av

Sensitivity to mechanical impact: Probably not sensitive.

Sensitivity to static discharge: Probably not sensitive.

Auto-ignition temperature: N/Av

Suitable extinguishing media: Carbon dioxide, dry chemical powder and appropriate foam for surrounding products.

Special fire-fighting procedures/equipment:

During a fire, irritating/toxic smoke and fumes may be generated. Do not enter fire area without proper protection. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece. Shield personnel to protect from venting, rupturing or bursting cans. Move containers from fire area if it can be done without risk. Water spray may be useful in cooling equipment and cans exposed to heat and flame.

Hazardous combustion products: Carbon oxides and other irritating and TOXIC fumes and smoke.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions:

Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment (See Section 8).

Spill response/Cleanup:

Ventilate area of release. Stop the leak if it can be done safely. Contain and absorb any spilled liquid concentrate with inert absorbent material, then place material into a container for later disposal (see Section 13). Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.

Environmental precautions:

Confine spill, preventing it from entering sewer lines or waterways. Dispose of as per local, state and federal regulations.

SECTION 7 - HANDLING AND STORAGE

Safe handling procedures:

Before handling, it is very important that engineering controls are operating, and that protective equipment requirements and personal hygiene measures are being followed. People working with this chemical should be properly trained regarding its hazards and its safe use. Inspect containers for leaks before handling. Label containers appropriately. Ensure proper ventilation. Avoid breathing dusts, vapours or mists. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Avoid generating high concentrations of dusts, vapours or mists. Keep away from incompatible materials such as combustible materials. Keep containers closed when not in use. Empty containers are always dangerous. Assume that empty containers contain residues which are hazardous.

Storage requirements:

Store in a cool, dry, well-ventilated area out of direct sunlight, away from heat and ignition sources. Store away from incompatible materials. Inspect all incoming containers to make sure they are properly labelled and not damaged. Storage area should be clearly identified, clear of obstruction and accessible only to trained personnel. Inspect periodically for damage or leaks.

Incompatible materials:

COMBUSTIBLE MATERIALS, strong acids, ...

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure limits: There is no available data for the product. See below for individual ingredient exposure limits.

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Lithium hypochlorite	N/Av	N/Av	N/Av	N/Av

Engineering controls:

Use under well-ventilated conditions. Local exhaust ventilation system is recommended to maintain concentrations of contaminants below exposure limits.

Respiratory Protection:

Respiratory protection is required if the concentrations are higher than the exposure limits. Use a NIOSH approved respirators if the exposure limits are unknown.

Protective Clothing/Equipment:

Chemically protective gloves (impervious), and other protective clothing to prevent prolonged or repeated skin contact, must be worn during all handling operations. Wear protective chemical splash goggles to prevent mist, vapour and dust from entering the eyes. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

General Hygiene Considerations:

Avoid generating high concentrations of dusts, vapours or mists. Avoid contact with skin and eyes. Avoid breathing dusts, vapours or mists. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material. Remove and wash contaminated work clothing before re-use.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state, colour and odour: Solid white granules. Chlorine odour.

Odour threshold: N/Av

pH :	11 @ 1%	**Boiling point:**	> 1600°C
Melting/freezing point:	N/Av	**Vapour pressure:**	N/Av
Coefficient of oil/water distribution:	N/Av	**Solubility in water:**	Moderately Soluble
Specific gravity or density (water = 1):	0.9 – 1.0 g/cm^3	**Vapour density (Air = 1):**	Slightly heavier than air
Evaporation rate (n-Butyl acetate = 1):	N/Av	**% volatile by volume:**	N/Av

SECTION 10 - REACTIVITY AND STABILITY DATA

Stability and reactivity: Stable under the recommended storage and handling conditions prescribed.
Polymerization: Hazardous polymerization will not occur.
Conditions to avoid: Incompatible materials (see Section 7).
Materials to avoid: Incompatible materials (see Section 7).
Hazardous decomposition products: Chlorine. Refer to 'Hazardous combustion products', Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicological data:

There is no available data for the product itself, only for the ingredients. **For more details, refer to Section 3.**

Carcinogenicity: No ingredient is listed by IARC, ACGIH, NTP or OSHA as a carcinogen.
Teratogenicity, mutagenicity, other reproductive effects: N/Av
Skin sensitization: N/Av
Respiratory tract sensitization: N/Av
Conditions aggravated by exposure: N/Av
Synergistic materials: N/Av

SECTION 12 - ECOLOGICAL INFORMATION

Environmental effects: There is no available data on the product itself.
Important environmental characteristics: N/Av
Aquatic toxicity: N/Av

SECTION 13 - WASTE DISPOSAL

Handling and storage conditions for disposal: Store material for disposal as indicated in Handling and Storage (Section 7).
Methods of disposal: Review federal, provincial and local government requirements prior to disposal.

SECTION 14 - TRANSPORTATION INFORMATION

Transportation of Dangerous Goods Regulations (TDGR) :

TDG Classification: UN1471; LITHIUM HYPOCHLORITE, DRY; CLASS 5.1 ; PG II
Special case: Product can also be shipped as a LIMITED QUANTITY according to TDG Section 1.17.

SECTION 15 - REGULATORY INFORMATION

WHMIS information:

Product is regulated according to the Controlled Product Regulations (CPR) in Canada. Refer to Section 1 for the appropriate WHMIS classification. *This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR. This product is sold in Canada as a Pest control product.*

Canadian Environmental Protection Act (CEPA) information: The ingredients in this product are listed on the DSL.

United States OSHA information:

This product is regulated according to OSHA. This MSDS contains all the information required by OSHA.

United States TSCA information: The ingredients in this product are listed on the TSCA.

National Fire Protection Association (NFPA):

HEALTH: 3 FLAMMABILITY: 0 INSTABILITY: 1 SPECIAL HAZARDS: Refer to Section 1 & 3.
HAZARD SCALE: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

New Jersey Labeling Requirements: Ingredients to be disclosed on product labelling: Refer to Section 3.

California Proposition 65: This product does contain Lithium carbonate that is known to the State of California to cause cancer or other reproductive harm.

SECTION 16 - OTHER INFORMATION

Prepared by: NSS ENTREPRISE INC. for TABEX INC.
Telephone number: Tel. 514-239-8785 or 403-250-2494 or 1-800-661-8179

References:

1. Material Safety Data Sheets from manufacturer/supplier.
2. CSST, Répertoire Toxicologique, Les produits, 2011.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2011.

Abbreviations:

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
CAS	Chemical Abstract Service
DSL	Domestic Substance List
IARC	International Agency for Research on Cancer
LC	Lethal concentration
LD	Lethal Dosage
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program (U.S.A.)
OSHA	Occupational Safety and Health Administration (U.S.A.)
PEL	Permissible Exposure Limit
STEL	Short-term Exposure Limit
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System