

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification of the substance & the company

1.1. Product identifier

Product name : L-Hygiene - FRUIT & VEGETABLE DISINFECTING TABLETS
Product code : LCFW1

1.2. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T: +91 22 6663 6663 F: +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.3. Emergency telephone number

Emergency number : +91 22 6663 6663

SECTION 2: Hazards identification

GHS classification Eye Irrit. 2, H319 Causes serious eye irritation
STOT SE 3, H335 May cause respiratory irritation
Aquatic Acute 1, H400 - Very toxic to aquatic life
Aquatic Chronic 1, H410 - Very toxic to aquatic life with long lasting effects



Signal Word

Hazard statements

Precautionary statements

WARNING

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H410 - Very toxic to aquatic life with long lasting effects

EUH031 - Contact with acids liberates toxic gas

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P264 - Wash hands thoroughly after handling P271 - Avoid use in a confined area

P273 - Avoid release to the environment

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/attention

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P312 - Call a POISON CENTER or doctor/physician if you feel unwell P391 - Collect spillage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed P405 - Store locked up

P501 - Dispose of contents/container in accordance with national and international regulations

SECTION 3: Composition / information on ingredients

Components	CAS No.	Weight %
DICHLOROISOCYANURIC ACID, SODIUM SALT OF	2893-78-9	35-65
SODIUM CARBONATE	497-19-8	10-15
EXCIPIENTS	---	22-55

SECTION 4: First aid measures

Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a poison control center, or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
Most important symptoms and effects, acute or delayed	
- Eye Contact	This material is corrosive to the eye. Direct contact may cause severe irritation, pain and burns, possibly severe, and permanent damage including blindness. The degree of injury depends on the concentration and duration of contact.
- Skin contact	Direct contact with wet material or moist skin may cause severe irritation, pain, and possibly burns. Dry material is less irritating than wet material. This material is not a skin sensitizer based on studies with guinea pigs.
- Inhalation	This material contained in this tablet in solid form is not expected to produce respiratory effects. Particles of respirable size are generally not encountered. The respirable fraction for the tablet active ingredient is typically less than 0.1% by weight for the granular and extra granular grades. If it is ground or otherwise in a powdered form, effects similar to a corrosive substance may occur. May cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. If significant or prolonged exposure occurs, pulmonary oedema may develop, either immediately or more often within a period of 5-72 hours. The symptoms may include tightness in the chest, dyspnea, frothy sputum, cyanosis, and dizziness. Physical findings may include moist rales, low blood pressure and high pulse pressure. Severe cases may be fatal.
- Ingestion	Not a likely route of exposure. Harmful if swallowed. Ingestion may cause immediate pain and severe burns of the mucous membranes. There may be discoloration of the tissues. Swallowing and speech may be difficult at first and then almost impossible. The effects on the oesophagus and gastrointestinal tract may range from irritation to severe corrosion. Oedema of the epiglottis and shock may occur
Note to physician	No specific antidote. Treat symptomatically and supportively. Probable mucosal damage may contraindicate the use of gastric lavage.
Medical conditions aggravated by exposure	Eye disorders, respiratory disorders, skin disorders and allergies

SECTION 5: Fire - fighting measures

Suitable extinguishing media	Large amounts of water may be needed and the flow of water should not be stopped until the fire/reaction has stopped.
Extinguishing media not to be used	Avoid using dry chemicals, carbon dioxide or halogenated extinguishing agents.
Unusual fire and explosion hazards	When heated to decomposition, may release poisonous and corrosive fumes of nitrogen trichloride, nitrogen, cyanogen chloride, phosgene, chlorine and CO.
Fire fighting procedure	Cool containers with water spray. Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished.

SECTION 6: Accidental release measures

Personal precautions	Avoid contact with skin, eyes and clothing. Chemical safety goggles Chemical resistant gloves
Methods for cleaning up	Hazardous concentrations in air may be found in local spill area and immediately downwind. If spill material is still dry, do not put water directly on this product as a gas evolution may occur. Do not close containers containing wet or damp material. Do not transport damp or wet material.
Environmental precautions	Prevent flow of material into water source and begin monitoring available chlorine and pH immediately.
- Soil	Do not contaminate spill material with any organic materials, ammonia, ammonium salts or urea. Clean up all spill material with clean, dry dedicated equipment and place in a clean dry container.
- Water	This material is heavier than and soluble in water. Stop flow of material into water as soon as possible. Begin monitoring for available chlorine and pH immediately.
- Air	Vapors may be suppressed by the use of water fog.

SECTION 7: Handling and storage

Handling	Avoid contact with skin, eyes, and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing the substance. Use respiratory protection when exposure is possible. Vapour space in a closed container may contain a slight amount of chlorine gas and compounds from decomposition of the product.
Storage	Store in a dry, cool (< 25°C), wellventilated area away from incompatible materials (see "materials to avoid"). Do not allow water to get into the container

SECTION 8: Exposure controls / personal protection

Exposure Limits :	Components	ACGIH-TLV Data	OSHA (PEL) Data
	DICHLOROISOCYANURIC ACID, SODIUM SALT OF 2893-78-9	Not determined	Not determined
	SODIUM CARBONATE 497-19-8	Not determined	Not determined

Ventilation requirements	This material should be handled in a well-ventilated area. Use local exhaust as necessary, especially under dusty conditions.
Personal protective equipment:	
- Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment.
- Hand protection	Chemical resistant gloves, PVC or nitrile recommended
- Eye protection	Chemical safety goggles
- Skin and body protection	Use protective clothing impervious to this material.
Hygiene measures	Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

SECTION 9: Physical and chemical properties

Appearance	White to off white tablets
Odor	Slight chlorine.
pH	5-6
Boiling point/range	Not applicable
Flash point	Not applicable
Evaporation rate (ether=1)	Not applicable under standard conditions
Flammability (solid, gas)	Not flammable
Vapor pressure	
Vapor density	Not applicable under standard conditions
Solubility:	Not applicable under standard conditions
- Solubility in water	Completely miscible

Partition coefficient (n-octanol/water)	Log Kow - 0
Auto-ignition temperature	Not applicable
Decomposition temperature	225-250°C (437-482°F)

SECTION 10: Stability and reactivity

Reactivity	Contact with small amounts of water may result in an exothermic reaction with the liberation of toxic fumes.
Stability	Stable under normal conditions
Possibility of hazardous reactions	Contact with acid liberates toxic gases. If heated by outside source to temperatures above 240°C (464°F), this product will undergo decomposition with the evolution of noxious gases.
Conditions to avoid	Heating above decomposition temperature. Contamination with moisture, organic matter or other chemicals may start a chemical reaction with generation of heat, liberation of hazardous gases, and possible generation of fire and explosion.
Materials to avoid	Strong acids and/or alkalines. Reducing agents. Combustible material. The active ingredient in this preparation is a strong oxidising agent. The preparation of concentrated solutions or slurries is not recommended. Avoid contact with water on concentrated material in the container. Also avoid contact with easily oxidisable organic material: ammonia, urea or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite and alkalis.
Hazardous decomposition products	Nitrogen trichloride, nitrogen, cyanogen chloride, phosgene, chlorine and CO.

SECTION 11: Toxicological information

Note:	The toxicological data refer only to the active ingredient unless otherwise specified
Acute toxicity:	
- Rat oral LD50	>2000 mg/kg (the product as a whole)
- Rabbit dermal LD50	>5000 mg/kg
- Rat inhalation LC50	0.27-1.17 mg/L/4h
- Dermal irritation (rabbit)	Moderate irritant
- Eye irritation (rabbit)	Severe irritant
Dermal sensitization	Not a sensitizer
Chronic toxicity	Chronic inhalation exposure may cause impairment of lung function and permanent lung damage. Based on animal studies, exposure to concentrations of monosodium cyanurate at the solubility limit may cause cardiovascular, kidney and urinary bladder effects.
Mutagenicity	Not mutagenic by the Ames Test.
Carcinogenicity	Not known to be a carcinogen. Not classified by IARC, OSHA, EPA. Not included in NTP 13th Report on Carcinogens
Reproductive toxicity	No data available

SECTION 12: Ecological information

Note:	The environmental toxicity data mentioned below are from studies conducted on the active ingredient.
Aquatic toxicity :	
- 96 Hour-LC50, Fish	0.13-0.36 mg/l (Rainbow trout) 0.25-1.0 mg/l (Bluegill sunfish) 1.21 mg/l (Inland silverside)
- 96 Hour-EC50, Marine Invertebrate	1.65 mg/l (96h, Mysid shrimp)
- 48 Hour-EC50, Marine Invertebrate	0.196 mg/l (Water flea)
Avian toxicity:	
- Oral LD50, Bobwhite quail	1732 mg/kg
- Oral LD50, Mallard duck	1916 mg/kg
- Dietary LC50, Mallard duck	>10,000 ppm
- Dietary LC50, Bobwhite quail	10,000 ppm

Persistence and degradability	The materials used in this preparation will not persist in the environment. The free available chlorine from Sodium dichloroisocyanurate is rapidly consumed by reaction with organic and inorganic materials to produce chloride ion. The stable degradation products are chloride ion and cyanuric acid. Sodium Dichloroisocyanurate is subject to hydrolysis. Cyanuric acid produced by hydrolysis is biodegradable.
Bioaccumulative potential	Trichloroisocyanuric acid hydrolyses in water liberating chlorine and cyanuric acid. These products are not bioaccumulative
Note:	Not considered to be PBT or vPvB

SECTION 13: Disposal considerations

Waste disposal	Avoid access to streams, lakes or ponds. Observe all federal, state and local environmental regulations when disposing of this material. Do not transport damp or wet material. Neutralise materials to a non-oxidising state for safe disposal.
Disposal of Packaging	Clean Container and dispose of according to local and national regulations

SECTION 14: Transportation information

Independent tests, carried out by TNO Prins Maurits Laboratory, conducted according to the procedure as described in the United Nations Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, third revised edition, test O.1. have demonstrated that the product is not oxidizing for transport

DOT	Not regulated for non bulk shipments For bulk shipments regulated as: UN No. 3077 Proper shipping name: Environmentally hazardous substance, solid, n.o.s (contains Sodium dichloro-s-triazinetrione) Class: 9 - Miscellaneous Hazardous Material Packing Group: III Label: 9 Note: Certain shipping modes or package sizes may have exceptions from the transport regulations and may be classified as Consumer Commodity and Limited Quantity. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.
-----	--

SECTION 15: Regulatory information

USA	All the ingredients in this preparation are listed in the EPA TSCA Inventory. This product is registered under FIFRA
- EPA Registration no.	69470-37-91038
- Emergency overview in accordance to EPA Master Label	DANGER Corrosive Causes irreversible eye damage Harmful if swallowed, inhaled or absorbed through the skin Strong oxidizing agent
CERCLA/SARA - 302 ext. haz. substances	This material contains hazardous substance (Adipic Acid) as defined by CERCLA/SARA and the Reportable Quantity (RQ) is 5000 lbs.
- SARA (311, 312)	This product is categorized as an immediate health hazard, and fire and reactivity physical hazard (Sodium dichloroisocyanurate)
- Massachusetts Right-to-Know Hazardous Substances list	Listed (Adipic Acid, Sodium dichloroisocyanurate)
- New Jersey Right-to-Know Hazardous Substances list	Listed (Adipic Acid, Sodium dichloroisocyanurate)
- Pennsylvania Right-to-Know Hazardous Substances list	Listed (Adipic Acid, Sodium dichloroisocyanurate)
Canada	Listed in DSL

WHMIS hazard class	For Sodium dichloroisocyanurate: C oxidizing materials D1B Toxic material causing immediate and serious toxic effects D2B Toxic materials causing other toxic effects For Sodium Carbonate: E corrosive material D2B Toxic materials causing other toxic effects
EU	All ingredients are reported in EINECS

SECTION 16: Other information

All sections reformatted in accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

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 www.lobachemie.com.