

### 1: IDENTIFICATION

<b>Chemical Name</b>	2-chloroethyl trimethylammonium chloride	<b>Trade Name</b> LIHOSTAR
<b>Synonyms</b>	Chlormequat Chloride 50% SL	<b>Molecular Formula</b> C <sub>5</sub> H <sub>14</sub> Cl <sub>2</sub> N
<b>Uses</b>	Plant Growth Regulator	
<b>Manufacturer/ Supplier</b>	Ulink AgriTech Pvt. Ltd. Office Nos. 001 And 002, Ground Floor Wing "A" And Nos. 003 And 004 Ground Floor Wing "B", Nyati Tech Park, Wadgaon Sheri, Pune - 411014, Maharashtra	
<b>Emergency Contact</b>	9503095030	<b>E -mail</b> <a href="mailto:info@agrostar.in">info@agrostar.in</a>

### 2: COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Name	CAS #	Percent or Content (w/w)
Chlormequat chloride	999-81-5	50%
Other Ingredients	-	Q.S

### 3: HAZARD IDENTIFICATION

#### Classification of the Substance or Mixture:

According to Regulation (EC) No 1272/2008 [CLP] Metal. Corr. Acute Tox. 3 (oral) Aquatic Chronic 3

#### Label Elements:

Globally Harmonized System, EU (GHS) Pictogram Code: GHS05, GHS06

Signal Word: Danger

#### Hazard Statement:

H290 May be corrosive to metals. H301 Toxic if swallowed. H412 Harmful to aquatic life with long lasting effects.

*EUH401 To avoid risks to human health and the environment, comply with the*

**Precautionary Statement:** P101, P102, P103, P234, P264, P301 + P310, P330, P390, P405, P406, P501

According to Regulation (EC) No 1272/2008 [CLP] - Hazard determining component(s) for labelling: chlormequat chloride

#### Other Hazards:

According to Regulation (EC) No 1272/2008 [CLP] refer section 12 - Results of PBT and vPvB assessment.

### 4: FIRST AID MEASURES

**General:** Have the product container, label or safety data sheet while seeking medical attention, a poison control center or physician, or going for treatment.

**Inhalation:** Move person to fresh air and keep warm and at rest in a position comfortable for breathing. If necessary, administer oxygen. If breathing stops, perform artificial respiration. Immediately seek medical attention if symptoms are severe or persist.

**Ingestion:** Rinse mouth immediately and then drink plenty of water, induce vomiting, seek medical attention immediately and show this container or label.

**Skin Contact:** Product is Irritant/corrosive to skin. In case of skin contact, immediately wash skin area with plenty of water and soap. Seek medical attention immediately.

**Eye Contact:** Rinse immediately with plenty of water for several minutes. After 5 minutes remove contact lenses if present and continue rinsing with plenty of water. Continue to rinse with eyelid wide open for at least 15 -20 minutes. Seek medical attention if irritation develops.

**Symptoms and Effects, Both Acute and Delayed:** The most important known symptoms and effects are described in the labelling (refer section 2) and/or in section 11. Further important symptoms and effects are so far not known.

**Note to Physician:** No specific antidotes available. Treat according to symptoms (decontamination, vital functions).

### 5: FIRE FIGHTING MEASURES

**Extinguishing Media:** Water Spray, Foam, Dry Powder, Carbon Dioxide

**Unsuitable Extinguishing Media:** Water jet

**Specific Hazard:** In case of fire, hydrogen chloride, carbon dioxide, carbon monoxide, nitrogen oxides, organochloric compounds can be released. Avoid breathing combustion products. Otherwise no special precautions necessary. The substance/product is non-combustible. Product is not explosive.

**Special Procedures:** Do not discharge extinguishing water into the drain or water bodies. If risk of water pollution occurs, notify appropriate authorities. Move containers away from area if it can be done without risk. If possible without risk, remove containers from fire zone, cool with jets of water to avoid product decomposition and the development of substances potentially hazardous to health. Collect the extinguishing water which must not be discharged into the sewers. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products.

**Protection of Fire Fighters:** Wear self-contained breathing apparatus and chemical-protective clothing.

### 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

**Environmental Precaution:** Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

**Methods for Cleaning -up:** For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). For large amounts: Dike spillage. Pump off product. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Wear suitable protective equipment.

### 7: HANDLING & STORAGE

**Handling:** Ensure adequate ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. No special measures necessary if stored and handled correctly. Remove contaminated clothing and protective equipment before entering eating areas.

**Storage:** Store in dry, cool and well -ventilated area away from heat and direct sunlight. Keep in original container and tightly closed when not in use. Keep out of reach of children. Do not contaminate water, food or feed by storage or disposal. Use normal safety procedure and good personal hygiene. Storage stability: Storage duration: 60 Months

### 8: EXPOSURE CONTROL/PERSONAL PROTECTION

**Engineering Measures:** Use local exhaust ventilation to keep airborne concentrations of dust below permissible exposure limits. Handle in accordance with good industrial hygiene and safety practice.

**General Protection:** Avoid contact with eyes and skin. After use and before eating, drinking and smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing.

**Personal Protection:** Follow all precautions and instructions on the label. In all other cases the following recommendations would apply.

**Respiratory Protection:** Wear suitable respiratory protection for lower concentrations or short-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic, alkaline compounds and toxic particles (e. g. EN 14387 Type ABEK-P3).

**Skin Protection:** Wear suitable protective working clothing including long sleeved shirt, long pants, gloves, apron, protecting boots, chemical-protection suit to avoid skin contact. Any clothing or other absorbent material which has been drenched or heavily contaminated must be discarded.

**Hand Protection:** Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC) or Viton. Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374.

**Eye Protection:** Wear safety glasses with side shields or goggles for eyes protection should be used. Safety showers and eyewash should be easily available.

## 9: PHYSICAL/CHEMICAL PROPERTIES

**Appearance:** Suspension

**Colour:** Yellowish to brown

**pH:** approx. 5 - 7

**Odour:** Faint odour, amine-like

**Solubility in Water:** Soluble

**Physical State:** Liquid

**Density [g/cc]:** 1.09

**Explosion Hazard:** Based on the chemical structure there is no indicating of explosive properties.

**Melting Point:** approx 0°C.

**Fire Promoting Properties:** Based on its structural properties the product is not classified as oxidizing.

**Boiling Point:** approx 100°C

## 10: STABILITY & REACTIVITY

**Stability:** Stable under normal circumstances.

**Material to Avoid:** Strong acids strong bases and strong oxidants.

**Hazardous Decomp. Products:** No hazardous decomposition products if stored and handled as prescribed/indicated.

**Conditions to Avoid:** Heat and direct sunlight.

**Hazardous Reactions:** No hazardous reactions if stored and handled as prescribed/indicated.

## 11: TOXICOLOGICAL INFORMATION

**Acute Toxicity:** Assessment of acute toxicity: Of high toxicity after single ingestion. Virtually nontoxic by inhalation. Of low toxicity after short-term skin contact.

*Literature data. The data on toxicology refer to the active ingredient.*

LD50 human (oral): 50 - 200 mg/kg

LD50 rat (oral): 590 mg/kg

LC50 rat (by inhalation): > 4.03 mg/l 5 h. No mortality was observed. An aerosol was tested.

LD50 rat (dermal): > 4,000 mg/kg

**Skin Corrosion/Skin Irritation:** Non-Irritant

**Severe Eye Damage/Eye Irritation:** Non-Irritant

**Respiratory or Skin Sensitization:** Non-Sensitizing.

**Mutagenicity:** Mutagenicity tests revealed no genotoxic potential.

**Aspiration Hazard:** No aspiration hazard expected.

**Carcinogenicity:** The results of various animal studies gave no indication of a carcinogenic effect.

**Reproductive Toxicity:** The results of animal studies gave no indication of a fertility impairing effect.

**Specific target organ toxicity (STOT) – Single exposure:** Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

**Specific target organ toxicity (STOT) – Repeated exposure:** No substance-specific organotoxicity was observed after repeated administration to animals.

**Other Relevant Toxicity Information:** Misuse can be harmful to health.

*Remark: The product has not been tested. The statement has been derived from the properties of the individual components.*

## 12: ECOLOGICAL INFORMATION

The product is considered dangerous for the environment and has toxicity to aquatic organisms with long -term negative effects for the aquatic environment

**Chlormequat chloride:** Fish LC50 (96h) [mg/L]: >100

Daphnia magna LC50 (96 h) [mg/L]: 31.7

Lemna gibba EC50 (7 d) [mg/l] (growth rate): 28.0

Chronic toxicity to fish: No observed effect concentration (21 d) 43.1 mg/l, Oncorhynchus mykiss

Chronic toxicity to aquatic invertebrates: No observed effect concentration (21 d) 2.44 mg/l, Daphnia magna

**Persistence and Degradability:** Readily biodegradable (according to OECD criteria).

**Bioaccumulative Potential:** Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

**Mobility in Soil:** The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

**Results of PBT and vPvB Assessment:** The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

## 13: DISPOSAL CONSIDERATION

**Waste -disposal Procedures:** Dispose of this product only according to the label. Do not contaminate drains, streams, rivers or waterways with the chemical or used container. Must be sent to a suitable incineration plant, observing local regulations.

**Contaminated Packaging:** Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

## 14: TRANSPORT INFORMATION

**UN No.:** 2922

**Proper Shipping Name:** CORROSIVE LIQUID, TOXIC, N.O.S. (contains CHLORMEQUAT CHLORIDE) CORROSIVE ON ALUMINIUM

**Land Transport (ADR/RID):** Class - 8, 6.1, Packaging group -III, Environmental Hazards -No

**Sea Transport (IMO/IMDG):** Class - 8, 6.1, Packaging group -III, Marine Pollutant -No

**Air Transport (IATA/ICAO):** Class - 8, 6.1, Packaging group -III, Environmental hazards: No Mark as dangerous for the environment is needed

## 15: REGULATORY INFORMATION

**Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:**

**Prohibitions, Restrictions and Authorizations-** Annex XVII of Regulation (EC) No 1907/2006: Number on List: 3

Restrictions of Regulation (EC) No 1907/2006, Annex XVII, do not apply for the intended use(s) of the product given in this MSDS.

To avoid risks to man and the environment, comply with the instructions for use.

**Chemical Safety Assessment-** Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

## 16: OTHER INFORMATION

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