



## LIME CLEANER™

### DESCRIPTION

**LIME CLEANER** is a concentrated acid-based liquid product designed to attack and eliminate limestone, caustic lime deposits and dry lime stains from cargo tanks and other large common metal surface installations. **LIME CLEANER** is formulated with strong acids, surface-active agents and special corrosion inhibitors, sufficient enough to neutralize strong alkaline-caustic conditions.

### ADVANTAGES AND CHARACTERISTICS

- ◆ Ideal for the removal of limestone, birdlime and dry lime stains from all common metal tanks and installations.
  - ◆ Acts quickly and thoroughly.
  - ◆ Applicable to all metal surfaces and parts except those being galvanized and those made of Tin, Zinc, Aluminum and Lead.
  - ◆ A water-soluble, non-flammable liquid mixture.
  - ◆ Can be used to safely neutralize strong alkaline liquids and solids.
  - ◆ No known effect on rubber or plastic compounds.
  - ◆ May be combined with a specific range of other products.
  - ◆ Replaces the use of other products, which fail to treat awkward situations like the removal of salt deposits and other hard deposits such as rust.
  - ◆ Cost effective, easy to apply and use.
- ▶ **According to MARPOL 73/78** bulk carriers are only permitted to use cleaning agents, which had been approved and evaluated by the International Maritime Organisation (IMO).
  - ▶ **LIME CLEANER** was evaluated in accordance with MEPC.1/Circ. 590 through IMO's Working Group on the Evaluation of Safety and Pollution Hazards of Chemicals (ESPH Working Group) and found to meet the requirements of regulation 13.5.2 of Annex II of MARPOL 73/78.
  - ▶ **LIME CLEANER** is not harmful to the marine environment as per MARPOL MEPC 63 Annex V Amendment [MEPC. 71/17/Add.1 Annex 21, Resolution MEPC 295 (71)].

### PHYSICAL PROPERTIES

**LIME CLEANER** is a concentrated aqueous solution consisting of a blend of acids, special surfactants and specific corrosion inhibitors.

Appearance/Color	: Clear, colorless liquid
Specific gravity	: 1.20 - 1.30 gr/cm <sup>3</sup> at 20°C
Solubility in water	: Appreciable
pH value	: 1.0 - 2.0
Odor	: Acidic

### PACKAGING

Order Number	: 833017 (30 ltrs)/832117 (210 ltrs)
Container	: Plastic jerrican / Plustic drum

### APPLICATION AND USE

#### A. Dosing Procedure

**LIME CLEANER** must be used in quantities proportional to the cargo hold surface area that is to be covered, the extent of contamination, the available downtime and the application method being used. Therefore, the actual quantity needed cannot be prescribed beforehand, since the operator is the best placed person, to decide the required quantity, analogous to the situation at hand.

#### B. Cleaning Procedure

**LIME CLEANER** may be applied by two methods, injection and soaking.

**Injection** is a method where a high - pressure machine, suitable to process chemical solutions, is used with a 50% **LIME CLEANER**/water solution to inject directly onto the tank surface area. Then, the solution must be left to act for 15 minutes followed by thorough rinsing using a high-pressure water supply source. Thereafter, the surface must be left to dry.

Note that percentage dilutions may vary depending on the thickness and hardness of the deposited lime layer.

**Soaking** is a method where **LIME CLEANER** is used undiluted and applied with conventional methods such as an elongated thick and hard brush, a hard sponge etc. Once applied, **LIME CLEANER** must be left to soak for 30 minutes. Thereafter, thorough rinsing with water is necessary, followed by leaving the surface to



dry. Usually, this method is applicable to heavily contaminated small and large cargo hold surface areas and installations.

#### ► IMPORTANT INFORMATION

**LIME CLEANER** is considered a highly corrosive product. Operators must consult the Safety and Handling instructions table before use.

### ! SAFETY AND HANDLING

<b>HANDLING</b>	Handle with care. Store in a dry, cool and well ventilated environment.
<b>SAFETY</b>	<b>IMMEDIATE ACTIONS</b>
<b>Eye Contact</b>	Avoid Eye contact. Otherwise, flush with plenty of water for a few minutes. Seek medical attention.
<b>Skin Contact</b>	Avoid Skin contact. Otherwise, wash contaminated area thoroughly with water. Seek medical attention.
<b>Inhalation</b>	Do not breathe gas/vapors. Otherwise, seek fresh air source at once. Seek medical attention. In case of insufficient ventilation, wear suitable respiratory equipment.
<b>If Swallowed</b>	Avoid ingestion. Otherwise, consume a considerable quantity of water. Do not induce vomiting. Seek medical attention.
<b>GENERAL INSTRUCTIONS</b>	Avoid spillage, splashing and mishandling. Precautionary measures for body protection are strongly recommended before use.

#### Read the Material Safety Data Sheet before using this product.

For detailed information on safety and health, please refer to Material Safety Data Sheet and/or Product Label.

MARICHEM MARIGASES Worldwide Services or any subsidiary or associated companies warranties of merchantability and competence, if any, along with any expressed warranties concerning this merchandise, shall not be actionable or pertinent or effective if the good is used contrarily or differently to the directions herein and in no other way due to impending hazards from inappropriate use of the good explained herein. Merchandise might vary insubstantially depending on country of origin. The information provided concerning merchandise is exclusively presented to the customer.