



OIL SPILL EMULSIFIER™

DESCRIPTION

OIL SPILL EMULSIFIER is a product of superior quality, specifically designed for oil dispersion at sea, at shore and in port, either on-board or off-board. High standards and specifications have been incorporated in engineering this environmentally safe product.

ADVANTAGES AND CHARACTERISTICS

- ◆ Non-toxic to marine life.
- ◆ Highly effective for oil spills at sea, on seashores and on solid surfaces such as docks, decks, piers, wharfs, ship hulls etc.
- ◆ Actively promotes oil-dispersion into microscopic droplets, so that the maximum surface area can be treated with rapid bacterial degradation.
- ◆ Has been tested and approved by the various regulatory agencies.
- ◆ Cost effective and economical.
- ◆ Applicable to all mineral oils, crude oils, fuel oils, kerosene, white spirit and lubricant oils.

PHYSICAL PROPERTIES

OIL SPILL EMULSIFIER is a low viscosity liquid product containing surface active wetting agents and hydrocarbon solvents of very low toxicity, combined with a biodegradable oil-soluble, non-ionic emulsifying agent.

Appearance/Color	: Clear, colorless liquid
Odor	: Odorless
Specific gravity	: 0.77 - 0.81 gr/cm ³ at 20°C
Flash point	: 85°C
Aromatics	: <0.4%

PACKAGING

Order Number	: 832523 (25 ltrs), 832123 (210 ltrs)
Container	: Steel drum



MARICHEM®

APPLICATION AND USE

A. Dosing Procedure

At Sea

The quantity of **OIL SPILL EMULSIFIER** to be used depends on three main factors: the quantity of oil spilled, the type of oil spilled and the weather conditions (prevailing and forthcoming). However, experience and expertise have proved that an adequate volume of **OIL SPILL EMULSIFIER** to be used is 1 litre per 15–20 square meters (1 gallon per 75–100 square yards) as tested on a spillage of Kuwait crude oil.

At Shore

The quantity of **OIL SPILL EMULSIFIER** demanded in this case, depends on the size of contamination in the affected area. Repetition of the cleaning process may be necessary, until oil-spill elimination is complete.

On Ship: The quantity of **OIL SPILL EMULSIFIER** required here, is analogous to the case of shore contamination. That is, the application of the cleaning process should be carried out on the contaminated surface, as many times, as is required.

B. Cleaning Procedure

At Sea

1. Determine the size and kind of oil-spillage.
2. Prepare the tools necessary to apply the product, undiluted, as specified using the **MARICHEM OIL CLEAN KIT** equipment.
3. Spray the desired quantity of the product with the appropriate spraying equipment, over the oil spill.
4. Wait for a few minutes until oil spill has emulsified.
5. Is important to keep in mind that emulsification occurs when the **OIL SPILL EMULSIFIER**, the spilled oil and seawater are mixed.
6. In the case of a persistent/stubborn oil spill, repeat cleaning process until oil spill elimination is complete.

At Shore

1. Follow steps 1,2,3 as described in part **At Sea**.
2. Let it soak for a few minutes and remove from the treated area.
3. Rinse thoroughly by applying high pressure water source.
4. Repeat cleaning of contaminated area if necessary.

On Ship

1. Follow steps 1,2,3, as described in part **At Sea**.
2. After spraying and/or pouring, mix thoroughly using a brush, mop, sponge or any other stirring device feasible to move with rapid and irregular action.
3. Pour water over the treated surface and mix vigorously.

► IMPORTANT INFORMATION**A. Toxicity**

The following test results justify the **OIL SPILL EMULSIFIER** to be of low toxicity to marine life.

Test Object	Exposure Time	LC 50 (mg/l)
Brown Shrimp A (Crangon Crangon)	48 hrs	3,300
Brown Shrimp B (Crangon Crangon)	96 hrs	3,300–10,000
Limpet (C)	24 hrs	75,000

4. Rinse thoroughly by applying high pressure water source.
5. Repeat cleaning if necessary.

► **IMPORTANT NOTICE:** The crew that will perform the oil spill dispersion must take all the precautionary measurements required before the beginning of the process.

B. Tests and Licenses

OIL SPILL EMULSIFIER has been tested by **EFFEH and Associates Research Analysis Consultation** (Houston, Texas) and has been found to be non-toxic to microbes.

OIL SPILL EMULSIFIER has been tested and approved for use by the Environmental Protection Department of Hong Kong.

Furthermore, it has been tested and approved for use by China's regulatory agencies; The **Tsing Tao City Analytical and Testing Society** and **Tsing Tao University of Oceanography**, while it is officially licensed by the **Tsing Tao Safety Supervision Bureau**.

MARICHEM MARIGASES Worldwide Services has won the **2000 Seatrade Dubai International Maritime Award** in the category Countering Marine Pollution for the technical excellence of **OIL SPILL EMULSIFIER**.

! SAFETY AND HANDLING

HANDLING	Handle with care. Store in a dry, cool and well ventilated environment.
SAFETY	IMMEDIATE ACTIONS
Eye Contact	Avoid Eye contact. Otherwise, flush with plenty of water for a few minutes. Seek medical attention.
Skin Contact	Avoid Skin contact. Otherwise, wash contaminated area thoroughly with water. Seek medical attention.
Inhalation	Avoid inhalation of vapors. Otherwise, seek fresh air source at once. Seek medical attention.
If Swallowed	Avoid ingestion. Otherwise, consume a considerable quantity of water. Seek medical attention.
GENERAL INSTRUCTIONS	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.