



MARICHEM OIL SPILL DISPERSANT™

DESCRIPTION

MARICHEM OIL SPILL DISPERSANT is the new, 3rd generation dispersant, approved as **Type II** and **Type III** from the **Greek General Chemical State Laboratory**. It can be used concentrated or diluted to a ratio of 1:10 depending on the contamination level. It is an efficient and environmental friendly product containing no hydrocarbons. It has been specifically designed for oil dispersion at sea, at shore and in port, either on-or-off board.

ADVANTAGES AND CHARACTERISTICS

- Non toxic to marine life.
- Converts oil spills to hydrophilic droplets that are easily biodegradable.
- Minimizes environmental damage.
- Does not contribute further to pollution.
- Cost effective and economical.
- Easy to handle and apply.
- Applicable to mineral oils, crude oils, fuel oils, kerosene, white spirit and lubricant oils.

PHYSICAL PROPERTIES

MARICHEM OIL SPILL DISPERSANT is a low viscosity liquid product containing surface-active wetting agents combined with a biodegradable oil-soluble, non-ionic emulsifying agent.

Appearance / Color : Yellow liquid

Density (g/ml) : 1.00–1.05 gr/cm³ at 20 °C

Odor : Characteristic ether like odor

Flash Point : 90 °C

pH : 7

PACKAGING

Order Number : 832076 (30 ltrs),
832176 (210 ltrs)

Container : Plastic jerrican,
plastic drum

APPLICATION AND USE

A. Dosing Procedure

At Sea: The quantity of **MARICHEM OIL SPILL DISPERSANT** 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 **MARICHEM OIL SPILL DISPERSANT** to be used is 1 litre per 15–20 m² (1 gallon per 75–100 square yards) as tested on a spillage of Kuwait crude oil.

At Shore: The quantity of **MARICHEM OIL SPILL DISPERSANT** 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: Follow the Procedure as per Paragraph **At Shore**.

B. Cleaning Procedure

At Sea:

1. Determine the oil-spillage size and kind.
2. Prepare the tools necessary to apply the product, undiluted, as specified, using the **MARICHEM OIL CLEAN KIT** equipment.
3. Spray the required 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. In the case of a persistent/stubborn oil spill, repeat cleaning process until oil spill elimination is complete.

IMPORTANT:

Emulsification occurs when the **MARICHEM OIL SPILL DISPERSANT**, the spilled oil and seawater are mixed.

At Shore:

1. Follow steps 1, 2, 3 as described in part **At Sea**.
2. Let it soak for few minutes and remove from the treated area.
3. Rinse thoroughly by applying high pressure water source and collect residual using **MARICHEM OIL SPILL KIT**.
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.
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.

IMPORTANT INFORMATION

Toxicity

According to the **European Union (EU)** laws, the **MARICHEM OIL SPILL DISPERSANT** is in the class of chemical dispersants that fulfill the limits of non-toxicity for a chemical dispersant substance. The lethal concentration 50 (LC 50) for aquatic micro-organisms has been tested and found to be equal

to 0.03%, after 24 hours of exposure. This value is within the acceptable limits of non-toxicity from **EU** directives.

The test for non-toxicity has been performed in the laboratories of the **Greek Institute of Oceanographic and Fishing Research of the Ministry of Research and Technology**, which are the official governmental laboratories for non-toxicity tests.

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 several minutes. Seek immediate medical attention.
Skin Contact	Avoid Skin contact. Otherwise, remove contaminated clothes. Rinse and wash thoroughly with water and soap.
Inhalation	Avoid inhalation of vapors. Otherwise, seek fresh air source at once. Seek medical attention.
If swallowed	Avoid ingestion. Otherwise, rinse mouth. Seek immediate 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.

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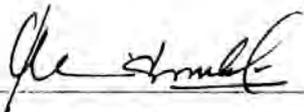
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to certify receipt of the 2004 Dubai International Maritime Award for

Countering Marine and Atmospheric Pollution - Technical

at the Dubai International Maritime Awards Presentation Dinner
on Monday 6 December 2004

Signed  Date December 2004
Efthimios Mitropoulos, Chairman of the panel of Judges

The 2004 panel of judges comprised:

Chairman: Efthimios Mitropoulos, Secretary-General, International Maritime Organization (IMO)
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