

**D.C.W.T. POWDER™****DESCRIPTION**

**DIESEL COOLING WATER TREATMENT POWDER** is a solid mixture of specific corrosion and scale inhibitors, applied for the prevention of corrosion and scale to all marine diesel engines for the treatment of the cooling water. It is the equivalent powder product of **D.C.W.T. NON CHROMATE**.

Furthermore, it can be applied to other cooling and heating closed re-circulating water systems in order to prevent rust and scale development. The application of **D.C.W.T. POWDER** adjusts the pH value in a range where the desired protection of the metallic surfaces is achieved. Treatment of the cooling water with **D.C.W.T. POWDER**, in relation to the quantity involved is highly effective, offering a decisive cost advantage.

**ADVANTAGES & CHARACTERISTICS**

- ◆ Prevents corrosion and scale formation.
- ◆ Prevents acid attack.
- ◆ A chromate-free product.
- ◆ It is not an oil compound and does not create foaming.
- ◆ Protects various metal surfaces and is compatible with non-metals.
- ◆ Increases the engine's efficiency.
- ◆ Prevents scale overheating and maintains regular heat transfer.
- ◆ Has no effect on rubber and plastic compounds, hoses.
- ◆ Compatible with glycol-based antifreeze and sealing products.
- ◆ Cost effective, easy to handle and apply.

**PHYSICAL PROPERTIES**

**D.C.W.T. POWDER** is a non-Chromate, Nitrite-based powder compound with a deposit modifier, pH stabilized.

<b>Appearance/Color</b>	: Light yellow, crystalline granulated powder
<b>Specific gravity</b>	: 1.15–1.20 gr/cm <sup>3</sup> at 20°C
<b>pH value (1% solution)</b>	: 8.5–10.0
<b>Odor</b>	: Odorless
<b>Solubility</b>	: Soluble in water

**PACKAGING**

Order Number	: 672504 (25 kgrs)
Container	: Steel drum

**APPLICATION AND USE****A. Dosing procedure**

Initially, a quantity of 3kgrs per ton of distilled or fresh water must be used.

However, correct dosing can and must be determined, after the testing of water samples, using the **MARICHEM NITRITE TEST KIT**.

For optimum results, a nitrite concentration of 1,200–3,600ppm in the cooling system is recommended.

The following dosage rates (as appearing in Table 1) should be applied anytime the Nitrite concentration is not within the satisfactory levels.

**B. Feeding Procedure**

After the quantity of **D.C.W.T. POWDER** to be dosed is determined and before the introduction of the product into the system, it must be dissolved in sufficient volume of water until the dissolution of the powder is complete.

Thereafter, feed the solution into the expansion tank or through a metering pump, these are responsible for the circulation of the solution into the cooling water system.

Moreover, the engineer has to make sure that a proper distribution of the solution is accomplished and that a protective film is created. Only then the treatment is complete.

After the application and while the cooling water system is in operation, let the solution circulate for approximately 2 hours. Then, test the Nitrite concentration in the water using the **MARICHEM NITRITE TEST KIT**. Repeat the testing procedure and make up with **D.C.W.T. POWDER** solution in order to stabilize the Nitrite concentration in the water due to losses/leakage of the system.

For optimum results a nitrite ions concentration of 1,200–3,600ppm in the cooling system is recommended. The engineer has to make sure that a proper distribution of the solution is accomplished and that a protective film is created.

For a better level of corrosion protection in the system, the use of **CHLORICOOOL WT TEST KIT** is suggested, for



measuring the chloride ions concentration. The chloride ions concentration must be maintained below the level of 60ppm. The concentration of chloride ions could be controlled by partial drain and make up with fresh water.

Moreover, the pH value must be checked within certain intervals. The satisfactory pH value level is 8.5–10. The desired corrosion and scale inhibition can be achieved within that range.

### APPROVALS AND CERTIFICATIONS

D.C.W.T. POWDER is approved by the following Engine manufacturers:

WARTSILA NSD

ALSTOM ENGINES

**TABLE 1: Nitrite ions (NO<sub>2</sub><sup>-</sup>) concentration in ppm & requested D.C.W.T. POWDER dosage**

Quantity of Nitrite (NO <sub>2</sub> <sup>-</sup> ) ppm as appearing in the Nitrite test kit, in a dilution of the cooling water	1–5	5–10	10–15	15–20	20–60	Over 60
Quantity of Nitrite (NO <sub>2</sub> <sup>-</sup> ) ppm in the cooling water	0–300	300–600	600–900	900–1200	1,200–3600	Over 3,600
D.C.W.T. POWDER dosage per ton of water	2.5 kgrs	2 kgrs	1.5 kgrs	1 kgr	Satisfactory	Partial Drain required

### ! SAFETY AND HANDLING

<b>HANDLING</b>	Handle with care. Store in a dry, cool and well ventilated environment.
<b>SAFETY</b>	IMMEDIATE ACTIONS
<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>	Avoid inhalation of vapors. Otherwise, seek fresh air source at once. Seek medical attention.
<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.