

Concentrated Liquid Cooling Water Corrosion Inhibitor**PRODUCT DESCRIPTION**

PWT 544EXTRA is a CONCENTRATED liquid nitrite/borate based compound with organic corrosion control for use in re-circulating water systems.

DIRECTION FOR USE

- PWT 544 EXTRA is a highly effective corrosion inhibitor for all the common ferrous and non-ferrous metals in cooling water systems using distilled or fresh water.
- The stable microfilm coating that is provided prevents corrosion due to electrolytic action between dissimilar metals used in the system.
- The product was developed to overcome the inherent difficulties sometimes experienced by using chromate treatments and soluble oils.
- PWT 544 EXTRA has been field tested and found to have no detrimental effects on non-metallic substances such as seals, glands, packing, hoses, gaskets etc., normally used in these systems.
- The compound is alkaline and so will suppress acid based corrosion, which would otherwise result in corrosion damage such as pitting. However, the alkalinity control is such that even if the product is accidentally overdosed, the pH of the water will remain within limits, so that the metals, which would be affected by extremes of alkalinity or acidity, are protected.
- PWT 544 EXTRA combines and reacts with sludge, scale and rust deposits found in incorrectly treated cooling systems and will ensure their gradual removal in all but the most severely fouled systems.
- In cases where systems are contaminated with oil and/or scale they should be cleaned before starting to apply PWT 544 EXTRA. There are suitable products to carry out the cleaning. Degreasing should be carried out using PES30 and descaling using PR402A.
- The use of antifreeze is sometimes required if the vessel is to be laid up in cold areas and so PWT544 EXTRA can be used in conjunction with antifreeze products.

SAMPLING AND TESTING

The test kit provides the necessary equipment to carry out the control tests. Obtain a representative sample of the cooling water. Carry out the tests (following the instructions given in the test kit) and log the results on the log sheets provided. These log sheets should be returned to Account Office for review by Marine Chemical Specialists. It is important that regular testing is carried out to ensure levels of treatment are correct.

PHYSICAL PROPERTIES

Appearance: Yellow Liquid
Specific Gravity: 1.17 - 1.24
PH: 11.5 - 13.5

FEATURES AND BENEFITS

- Has the advantage of a liquid in ease of application and economy of use.
- By depositing a microfilm on the metal surfaces electrolytic corrosion is prevented.
- Controls deposit formation and sludge.
- Non chromate product
- Effective against cavitation erosion.
- Compatible with non-metals such as hoses, gaskets and seals.
- Maintains constant pH levels so metals such as copper and brass are not affected by high pH.
- Compatible with permanent types of antifreeze.
- Simple control tests.
- Synergised nitrite with organic inhibitor - no pitting danger at low levels.

Applications

The product can be used for corrosion inhibition in many types of closed recirculation systems such as:-

- Diesel engine cooling water systems.
- Compressor cooling water systems.
- Centralised cooling systems.
- Hot water heating systems.
- Chilled water systems.
- Transformer cooling systems.
- Fresh water ballast tanks.

For any further applications, please contact your Chemical representative.

DOSAGE AND CONTROL

Sacrificial (magnesium or zinc) anodes in the cooling system should be removed prior to adding the PWT 544 EXTRA treatment. These materials are unnecessary in systems treated with PWT 544 EXTRA treatment and can cause undesirable deposits in the circulating water system. Even though PWT 544 EXTRA treatment is effective in multimetal systems, certain aluminium alloys may be difficult to protect because they are highly anodic. The use of PWT 544 EXTRA treatment with these systems should be discussed with a local Performance representative prior to starting treatment.

DOSAGE

The system should be filled with distilled or fresh water and where freeze protection is necessary, the proper amount of ethylene glycol-based antifreeze should be added. Begin circulating the system and add PWT 544 EXTRA treatment at an initial dosage of 3.5 litres per tonne. This will provide a treatment level of a minimum of 1000ppm NaNO₂

Circulate the coolant in the system for 30 minutes after addition to insure good distribution and the establishment of the protective film.

PWT 544 EXTRA diesel engine water treatment may be used with waters that have hardness contamination, provided the total hardness levels are below 170 ppm (measured as P Alkalinity)k or as otherwise recommended by the engine manufacturer, whichever is less.

TESTING AND CONTROL

The proper level of PWT 544 EXTRA treatment can be maintained using the Mini Test Kit available from your representative. Tests should be conducted after adding treatment to confirm the Sodium Nitrite at minimum of 1000 ppm NaNO₂ is present. Normally testing once each week is satisfactory or whenever changes are noticed. Testing for chloride may be conducted to check makeup water quality. Chloride levels should not exceed 100 ppm, or the engine manufacturers recommendations, whichever is less.

Please note that while normal over treatment with PWT 544 EXTRA presents no problem, concentrations more than twice the recommendation minimum is unnecessary.

PWT 544 EXTRA treatment is compatible with ethylene glycol based antifreezes and non-metallic components such as hoses and seals. It is important to note that when testing systems containing antifreeze solutions, there may be test interferences. Contact your local representative for specific recommendations for your system.