Technical brochure and composition
“rb bertomeu” Mg Colloidal
Magnesium carboxylate soluble in hydrocarbons

Vanadium, Sodium and SO₃ corrosion inhibitor for Heavy Fuel Oil and crude oil in Gas Turbines, Boilers, Furnaces and big marine engines.
It neutralizes the inlays and corrosions caused by Vanadium, Sodium and SO₃ and it reduces the ashes' acidity.

Composition:
The “rb bertomeu” Mg Colloidal additive contains 72-picometer Magnesium molecules (Technical Document RB-8) (pm: 10⁻¹² meters) with an surface area of ≈1,800 m²/gram soluble in the fuel, plus nanoparticles of [MgO or Mg(OH)₂] of <100 nanometers (nm:10⁻⁹ meters) with surface area of ≈ 400 m²/gram and organic solvents in a colloidal dispersion.
Magnesium molecules fully react with Vanadium and Sodium, do not generate residues or ash and do not cause scale in the gas circuit.
Oxide or Magnesium Hydroxide particles smaller than 100 nanometers are 1000 times smaller and are more reactive than micrometer particles of <2 microns.

Applications:
Soluble in Heavy Fuel Oil and Crude Oil for boilers, furnaces, gas turbines and big engines.

Goal:
To prevent slag, deposits, inlays and corrosions caused by Vanadium, Sodium, and Sulphur and to reduce the ashes’ acidity.

Effects:
It neutralizes corrosion at the combustion chamber and in the high and low temperature circuit.
It inhibits the consistent and hard slags formed at the combustion chamber and inlays at the high-temp. gas areas.
It transforms slags, deposits and inlays into fine, inconsistent residues that are easily removed by blowing and in scheduled maintenance. Increases the ashes’ pH and reduce the acid corrosion.

PHYSICAL PROPERTIES
Magnesium contents in weight..........................................................20%, 26% and 28% Mg Wt/Wt
Magnesium carboxylate molecules size .....................................100% of 72 pm
Particle size of MgO or Mg(OH)₂ ..................................................99,9% <100 nm
Physical state ..............................................................Liquid. Soluble in hydrocarbons
Color..............................................................White
Characteristic odor ..............................................................Mild hydrocarbon odor
Flash point..............................................................> 65°C (C.C.)
Viscosity at 25°C (100°F) (cSt) ..................................................< 150
Pour point (°C) ...........................................................<-18
Density at 15°C (59°F) (Kg/m³) ..............................................1100 – 1300
Solubility in fuel oil and crude oil .........................................Soluble
Solubility in water ..............................................................Insoluble
Water content (% Wt/Wt) ............................................................Nil
Expiration .................................................................1 year

INJECTION POINT: The addition must take place in the inlet pipe to the storage tank using a metering pump.
DOSE: According to Vanadium, Sodium and Sulphur contents in the fuel and according to the thermal machine.
If you have any technical or commercial question, please fill-in and send this form. Please also use it if you want us to help you to establish the recommended dose.

PRESENTATION: 1000-liters HD-PE IBC. 220-liters metal drums with 4 drums per pallet.
TRANSPORT AND ENVIRONMENT:
Catalogued as NON-hazardous for ADR/RID, ADN, IMDG and IATA transportation.
Catalogued as NON-hazardous for the environment.
MANUFACTURER AND COUNTRY OF ORIGIN: Manufactured by “rb bertomeu” in Spain (European Union)

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