

# Technical brochure and Cost of treatment

## "rb bertomeu" beco F1/ASF Concentrated

Since 1996

Since 2018 Concentrated Additive

Complete treatment of Fuel Oil and Crude Oil with a high content of Vanadium and MCR-Micro Conradson Residues, for big Diesel engines.

**Vanadium and Sodium corrosion inhibitor with Molecular Magnesium. Dispersant** of the MCR-Micro Conradson Residues. It **optimizes** the combustion, **reduces** sludge by 55%, **reduces** the fuel consumption and **saves** maintenance costs.

### EFFECTS

**Dispersant** of carbons and asphaltenes which [reduces sludge](#) by 55% and the trigger rate at the water treatment plants. **It keeps the filters clean. Desemulsifier**, it decants the water and [removes](#) algae and fungi. **Stabilizer** that slows the fuel degradation. **Detergent**, it keeps clean injectors, **improves combustion** and [reduces the emission of unburned particles](#) by 80%. Soluble Magnesium which [inhibits corrosion](#). **Neutralizes** the incrustations and corrosion caused by Vanadium and Sodium in valves and turbos.

The sum of all the effects provides a 3% [fuel saving](#) and, as a result, the CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>x</sub> emissions are also reduced at the same rate of 3%.

### COMPOSITION

- >70% [Soluble Magnesium carboxylate / Magnesium Organic salts of Fatty acids \(molecules-trade secret\) soluble in hydrocarbons.](#) [see point a-1]
- >20% **Dispersants**, surfactants, stabilizers, detergents, corrosion inhibitors, demulsifiers, and biocides. [see points b-1 to b-7]
- <10% **Organic solvents.** [see point c-1]
- Density: 0.900 Kg/L

**a-1) Soluble Magnesium carboxylate / Magnesium Organic salts of Fatty acids (molecules-trade secret) soluble in hydrocarbons.**

**b-1) Dispersants**, which cause the uniform separation of particles of asphalts, coals and other solids which the fuel oil contains, minimizing sludge formation.

**b-2) Surfactants**, which reduce the surface tension of the fuel and achieve better pulverization.

**b-3) Stabilizers**, which detain the ageing and normal degradation of the fuel, and avoid the increase in sediments by increasing the size of the small particles in suspension.

**b-4) Detergents**, which reduce the formation of coal deposits and flow loss in the injectors, and maintain an excellent pulverization.

**b-5) Corrosion inhibitors**, which protect the metal parts of the fuel circuits.

**b-6) Demulsifiers**, which accelerate the speed of separation of the water, to the bottom of the storage tank, for ease of removal.

**b-7) Biocides**, which help maintaining the integrity of fuels, preventing the bacterial and fungal contamination in the storage tanks.

**c-1) Organic solvents** with flash point > 65 °C. (C.C.)

More information in our technical document: [RB-28 Soluble Mg \(molecules\) vs Corrosion in engines and gas turbines.](#)

### DOSAGE / ADDITION POINT:

The addition must take place in the inlet pipe to the storage tank.

**Heavy fuel oil**, according to **Vanadium ppm** and Micro Conradson Residue, **M.C.R. %**

MCR %	≤ 10%	12%	13%	14%	15%
Vanadium ppm	35	50	100	150	200
Kg / MT of fuel	0.15	0.21	0.32	0.43	0.54
Additive:fuel ratio	1:6666	1:4762	1:3125	1:2326	1:1852

For higher M.C.R. content, complement with the ["rb bertomeu" beco F-Plus Concentrated](#) additive.

## COST OF TREATMENT ACCORDING TO THE FUEL AND THE SUPPLIED QUANTITY OF ADDITIVE

<b>Cost of treatment for fuel oil with MCR ≤ 10% and Vanadium &lt; 35 ppm (Suggested dose 0.15 Kg/MT of fuel)</b>				
beco F1/ASF Concentrated additive. 1 Kg	25.30 €/Kg	20.80 €/Kg	10.92 €/Kg	10.37 €/Kg
Package	5 L	25 L	4 drums x 200 L	IBC x 1000 L
Cost of treatment for 1 MT of fuel	3.795 €/MT	3.120 €/MT	1.638 €/MT	1.555 €/MT

Prices and conditions:

- Tax base
- Freight paid to destination in mainland Spain and the Balearic Islands
- Export: Incoterms 2020 FCA Air and Sea FOB, from Barcelona
- Export: **Express shipment by air 1-2 weeks to any worldwide destination**
- Prices valid until December 30, 2020
- NC-TARIC code: 3811 90 00

If you have any technical or commercial question, please fill-in and send this [form](#).

### PRESENTATION

1000-liters HD-PE IBC, 230-liters metal drums, 25-liters and 5-liters HD-PE Jerrycans.

### TRANSPORTATION

Cataloged for transportation ADR/RID, ADN, IMDG and IATA: **Class 9, P.G. III, UN 3082**

### MANUFACTURER AND COUNTRY OF ORIGIN

Manufactured by "rb bertomeu" in Spain (European Union).

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