



## PRODUCT DATA SHEET

**Df-1010**

### **DEFOAMER FOR THE PRODUCTION OF PHOSPHORIC ACID and PHOSPHATE FERTILIZERS (MAP, DAP and SPP)**



**DEFOAMER 1010**

**DEFOAMER WIDE pH RANGE**

#### **CHEMICAL- PHYSICAL CHARACTERISTICS**

Physical State (at 30°C)	Liquid
Color	Yellow to amber
Density g/cm <sup>3</sup> (at 30°C)	1.010-1.060
pH (sol. 5%)	6-7
Solubility in water at 5%	Soluble

#### **PROPERTIES- APPLICATIONS**

The Df-1010 is a product specifically formulated based in a mixture of anionic tensioactive agents, and additives to inhibit foam formation when manufacturing phosphoric acid by wet process.

Using this product prevents P<sub>2</sub>O<sub>5</sub> losses, caused by cells spills, badly washes of gypsum, or drags in evaporators; because it improves the gypsum crystals, and helps to have a better filtration therefore fewer problems of incrustations on the evaporators.

An additional quality of Df-1010 has is that it maintains equilibrium of organic matter between the acid from the first wash and the gypsum, in order for the gypsum to not provoke foam when it is discarded at sea. Df-1010 also contains an additive that breaks surface tension, resulting in the immediate water clarification.

#### **DOSAGE AND CONTROL**

The dosage and application of Df-1010 depends on the type of rock that is used. In order to control foam in Morocco's phosphate rocks, it is sufficient from 0.2 to 0.4 lts/ Ton P<sub>2</sub>O<sub>5</sub>. However if required a residual effect, to avoid loss of P<sub>2</sub>O<sub>5</sub> in evaporators and to achieve acting as a modifier of gypsum crystals, we recommend



using 0.1 to 0.2 lts/ Ton; being fully profitable in its use, since it decreases  $P_2O_5$  losses. In other types of rocks, as Florida, the dosage is based on the contents of carbonates, organic matter, and dosage could be doubled. This means the dosage should be between 0.4 to 0.8lts./Ton  $P_2O_5$ . The consumption also depends in the system operating conditions for the phosphoric acid manufacturing.

Although there is no simple method of the product's analysis, its efficiency can be checked by the absence of foam spills of the attacked cells. It also decreases  $P_2O_5$  in the gypsum effluents of the filter, and in the discharge of the vacuum ejectors of the evaporators, as well as the total elimination of the black foam from the gypsum when is released to the sea.

#### **HANDLING AND SAFETY**

Containers and equipment of carbon steel can be used to handle Df-1010.

Df-1010 may cause irritation in case of a prolonged contact with skin or eyes. Use goggles and rubber gloves for handling. Df-1010 may cause mild irritation in the intestinal tract if swallowed.

#### **PRESENTATION**

Df-1010 is available from 5, 55 gallon drums to 265 gallon IBC totes.

*\*Special prices in bulk quantities.*

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