



# **BISEAL® FUME**

## **SILICA FUME ADMIXTURE FOR CONCRETE AND MORTAR**

### **DESCRIPTION**

**BISEAL® FUME** is a powder admixture, based on densified silica fume, which is added in order to provide cohesion and reduce bleeding of fresh concrete and mortar mixes, and to increase highly its mechanical strength once hardened.

### **APPLICATION FIELDS**

- Obtaining very high quality concrete and mortars.
- High early and ultimate strength concrete and mortars.
- Concrete and mortars with greatly improved chemical resistance and long-term durability.
- Shotcrete using both wet and dry processes.
- Offshore and marine structures.

### **ADVANTAGES**

- Increases flexural and compressive strength.
- Reduces segregation of fresh concrete.
- Improves workability and rheology of fresh concrete.
- Reduces permeability and porosity of hardened concrete.
- Increases chemical attack resistance against aggressive conditions.
- Reduces rebound in shotcrete works.

### **APPLICATION INSTRUCTIONS**

#### **Mixing of the product**

It is supplied ready to use, to mix with the cement and aggregates before water is poured. Due to the extreme fineness of **BISEAL® FUME** and in order to avoid an increase in water demand, the use of a high-

range water-reducing admixture such as **BISEAL® SPF** (Technical Bulletin nº.: 98) added with mixing water is recommended, which also will help to pump the concrete. Also, a replacement of fine aggregates can be done to reduce water demand. Trial mixes should be carried out to fix optimum dosage and effect.

#### **Curing**

Proper curing procedures must be followed to protect against plastic shrinkage cracking. Curing agents such as **MAXCURE®** (Technical Bulletin nº.: 49) should be applied immediately after finishing is completed. Also wet curing with wet burlap or plastic sheet from five to seven days is highly recommended.

#### **CONSUMPTION**

- High strength concrete and long-term durability: 10% aprox. by mass of cement.
- General construction purposes: 5 – 10 % aprox. by mass of cement.
- Shotcrete: 5 % aprox. by mass of cement.

#### **PACKAGING**

**BISEAL® FUME** is supplied in 20 kg sack.

#### **STORAGE**

Twelve months in its unopened original packaging, in a dry and covered place, with temperatures above 5 °C.

#### **SAFETY AND HEALTH**

**BISEAL® FUME** is non-toxic and non-flammable. Avoid contact with eyes and skin. Use safety goggles, mask and gloves. In

case of skin or eye contact, wash with warm water.

## TECHNICAL DATA

|  |                        |
|--|------------------------|
| APPEARANCE                                 | Dark grey/black powder |
| RELATIVE DENSITY (g/cc)                    | 0,66                   |
| FINENESS                                   | 90% < 1 µm             |
| SPECIFIC SURFACE AREA (m <sup>2</sup> /gr) | > 24                   |
| SiO <sub>2</sub> CONTENT (%)               | > 90                   |
| CI CONTENT (%)                             | < 1                    |
| POZZOLANIC ACTIVITY INDEX (28 days)        | > 100                  |

## GUARANTEE

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. **DRIZORO®, S.A.** reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorised by us. We shall not accept responsibility exceeding the value of the purchased product. The data shown on consumptions, measurement and yields are for guidance only and based on our experience. These data are subject to variation due to the specific atmospheric and jobsite conditions so reasonable variations from the data may be experienced. In order to know the real data, a test on the jobsite must be done, and it will be carried out under the client responsibility. We shall not accept responsibility exceeding the value of the purchased product. For any other doubt, consult our Technical Department. This version of bulletin replaces the previous one.



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