

AF-D1 RF is an accelerated shotcrete or concrete mix containing special, high-alumina cement and silica fume. It is designed to produce superior heat and thermal-cycling resistant characteristics.

## USES

- Furnace linings
- Chimney linings
- Furnace foundations
- Ore-pass linings
- Other high temperature and thermal-cycling areas

## ADVANTAGES

### 1. Resistance to high temperature and thermal-cycling

The high performance cement used in this mix provides improved resistance to thermal shock and thermal cycling for areas with exposure to extremely high temperatures.

### 2. Abrasion resistance

The properties provided by the special high performance cement used in AF-D1 RF provides abrasion resistance 2 times higher than similar mixes using normal Portland cement.

### 3. Early strength development

AF-D1 RF reaches initial set after 2-3 hours. However, after this period of time strength gain develops rapidly providing 24 hour compressive strength results similar to 28 day results of mixes using normal Portland cement.

## TECHNICAL DATA

The following data is representative of typical values achieved under laboratory conditions. Results obtained in the field may vary from those stated.

### COMPRESSIVE STRENGTH

#### ASTM C 1604 & ASTM C 42

<b>1 Day</b>	40 MPa (5800 psi)
<b>3 Day</b>	45 MPa (6525 psi)
<b>7 Day</b>	48 MPa (7000 psi)
<b>28 Day</b>	58 MPa (8400 psi)

### HEAT & THERMAL-CYCLING RESISTANCE

Withstands temperatures up to 1000 °C (1832 °F)

## LIMITATIONS

The performance of this mix relies heavily on the abilities of the nozzleman. Personnel should be trained in proper shotcreting techniques. It contains accelerators and silica fume. Caution against fall-outs should however be exercised when shooting thick passes (greater than 10 cm or 3 inches).

## PACKAGING

This mix is normally packaged in 30 KG (66 lb) triple-lined bags, 1000 KG (2200 lb) bulk bags or 1500 KG (3300 lb) bulk bags, polywrapped on wooden pallets. Special packaging for Marine shipping is available upon request.

## SAFETY PROCEDURES

AF-D1 RF contains calcium aluminate cement. Normal safety-wear such as rubber gloves, dust mask and safety glasses used to handle conventional cement based products should be worn. Safety Data Sheets are available upon request.

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**Warranty:** This product is designed to meet the performance specifications outlined in this product data sheet. If the product is used in conditions for which it was not intended, or applied in a manner contrary to the written recommendations contained in the product data sheet, the product may not reach such performance specifications. The foregoing is in lieu of any other warranties, representations or conditions, expressed or implied, including, but not limited to, implied warranties or conditions of merchantable quality or fitness for particular purposes, and those arising by statute or otherwise in law or from a course of dealing or usage of trade. [REV.0003\_2458717.5]

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