

# Low Cement Castables

## Product Data

### VIBROCAST 55RSP

**VIBROCAST 55RSP** is a 55% Alumina, Andalusite/Mullite based low cement castable designed for pumpcasting. This product can be pumped using conventional piston pumps as well as smaller rotor-stator pumps. Rotor Stator pumps allow low volume Shotcrete installations to be carried out using equipment which is readily available and of relatively low cost. **VIBROCAST 55RSP** has excellent strength, alkali and abrasion resistance. **Pump Cast Data;**

**Maximum Service Temperature:** 1700°C (3100°F)

**Bulk Density:**

|                         |                               |                                  |
|-------------------------|-------------------------------|----------------------------------|
| Dried to 110°C (220°F)  | 2400 - 2500 kg/m <sup>3</sup> | (150 – 156 lbs/ft <sup>3</sup> ) |
| Fired to 815°C (1500°F) | 2370 - 2470 kg/m <sup>3</sup> | (148 – 154 lbs/ft <sup>3</sup> ) |

**Cold Crushing Strength:**

|                         |                                |                     |
|-------------------------|--------------------------------|---------------------|
| Dried to 110°C (220°F)  | 690 - 1100 kg/cm <sup>2</sup>  | (10000 – 16000 psi) |
| Fired to 815°C (1500°F) | 1100 - 1450 kg/cm <sup>2</sup> | (16000 – 21000 psi) |

**Modulus of Rupture:**

|                         |                              |                   |
|-------------------------|------------------------------|-------------------|
| Dried to 110°C (220°F)  | 140 - 220 kg/cm <sup>2</sup> | (2000 – 3200 psi) |
| Fired to 815°C (1500°F) | 220 - 290 kg/cm <sup>2</sup> | (3200 – 4200 psi) |

**Erosion Loss:**

|                         |   |
|-------------------------|---|
| Fired to 815°C (1500°F) | Less than 8 cc<br>(Typical loss 5-7 cc) |
|-------------------------|---|

**Permanent Linear Change(%):**

|                         |                |
|-------------------------|----------------|
| 110°C to 815°C (1500°F) | -0.1 to -0.3 % |
|-------------------------|----------------|

**Conductivity or “K” Factor:**

| Mean Temp.      | W/mK | BTU/ft <sup>2</sup> /HR/°F/in |
|-----------------|------|-------------------------------|
| 540°C (1000°F)  | 1.58 | 11.0                          |
| 815°C (1500°F)  | 1.58 | 11.0                          |
| 1095°C (2000°F) | 1.58 | 11.0                          |

**Typical Chemical Analysis(%):**

| Al <sub>2</sub> O <sub>3</sub> | SiO <sub>2</sub> | Fe <sub>2</sub> O <sub>3</sub> | TiO <sub>2</sub> | CaO | Alkalies |
|--------------------------------|------------------|--------------------------------|------------------|-----|----------|
| 54.6                           | 39.5             | 0.8                            | 1.2              | 1.5 | 0.37     |

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