

## Product Description

A 1400°C (2550°F) castable for general applications. General low cement applications where medium strength and good thermal shock resistance is required.

| Properties  | Vibrotek 42  |
|---|--------------|
| Region of Manufacture   | Europe       |
| Bond Type   | Hydraulic    |
| Method of application   | Cast         |
| Maximum Service Temperature, °C (°F)                                      | 1400 (2550)  |
| Estimated weight of dry material/ m <sup>3</sup> of construction, kg (lb) | 2350 (146.7) |
| Water addition, % by weight   | 6 - 7.5      |
| Maximum grain size, mm  | 6            |
| Packaging in bags, kg (lb)  | 25 (55)      |

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| Density, kg/m <sup>3</sup> (pcf), ASTM C134                                 |              |
|---|--------------|
| oven dried, 110°C (230°F)   | 2200 (137.3) |
| Cold crushing strength, MPa (psi), ASTM C133                                |              |
| oven dried, 110°C (230°F)   | 80 (11600)   |
| after 5 hours, 1000°C (1832°F)  | 60 (8700)    |
| Permanent linear change, %, ASTM C113                                       |              |
| after 5 hours, 1000°C (1832°F)  | -0.3         |
| after 5 hours, 1400°C (2550°F)  | +/-0.5       |
| Thermal conductivity, W/m•K (BTU•in./hr•ft <sup>2</sup> •°F), ASTM C201/417 |              |
| 400°C (752°F)   | 1.48 (10.27) |
| 600°C (1112°F)  | 1.49 (10.34) |
| 800°C (1472°F)  | 1.51 (10.48) |
| 1000°C (1832°F)   | 1.51 (10.48) |
| Chemical composition, %   |              |
| Alumina, Al <sub>2</sub> O <sub>3</sub>                                     | 42           |
| Silica, SiO <sub>2</sub>  | 50           |
| Ferric oxide, Fe <sub>2</sub> O <sub>3</sub>                                | 2.2          |
| Calcium oxide, CaO  | 3.8          |

### Instruction for Use

Highest strength is obtained with castable refractory by using the least amount of clean mixing water that will allow thorough working of material into place by vibrating.

A mechanical mixer is required for proper placement (paddle type mortar mixers are best suited). After adding the recommended water mix for at least 4 minutes, place the material within 20 minutes after mixing. For maximum strength cure 24 hours in a damp condition before initial heat-up. New castable installation must be heated slowly the first time.

### Storage and Shelf Life

- Should be stored in dry conditions, unopened packaging on pallets. Do not store on ground. Keep out of rain and damp conditions.
- Shelf life is of twelve months with original packaging, double shrink film and dehydrating agent provided if the monolithic is stored under these recommended conditions.

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