



DURACON[®] 32

VIBRATION CAST

General Information

DURACON 32[®] is a mullite based, vibration cast mix that exhibits excellent hot strength and good thermal cycling characteristics. Its high purity and low porosity provide good corrosion resistance making this product ideal for high temperature boilers, upper side walls and roofs in aluminum furnaces, transfer equipment linings for iron holding, and as a general purpose low cement castable.

Chemical Analysis

| | |
|--------------------------------|-------|
| Al ₂ O ₃ | 63.1% |
| SiO ₂ | 31.6% |
| TiO ₂ | 2.1% |
| CaO | 1.3% |
| Fe ₂ O ₃ | 1.1% |
| Alkalis | 0.2% |
| MgO | 0.2% |

| | |
|-------------------------|--|
| Maximum Use Temperature | 1760°C (3200°F) |
| Material Required | 2.54 g/cm ³ (158 lb/ft ³) |
| Grain Size | 6 mm (3 mesh) and finer |
| Installation Methods | Casting/Vibration |
| Standard Packaging | 25 kg (55 lb) multi-wall paper bags |

VIBRATION CAST DATA

| Temperature | | Density | | Linear Expansion | MOR | | CCS | | HMOR | | K-factor* | | Abrasion Resistance |
|-------------|------|-------------------|--------------------|------------------|------|------|-------|-------|------|------|------------------------------------|--|---------------------|
| (°C) | (°F) | g/cm ³ | lb/ft ³ | % | MPa | psi | MPa | psi | MPa | psi | W·m ⁻¹ ·K ⁻¹ | BTU·in ft ² ·hr ⁻¹ ·F | cm ³ |
| 110 | 230 | 2.55 | 159 | - | 14.4 | 2095 | 75.0 | 10880 | - | - | - | - | - |
| 260 | 500 | - | - | - | - | - | - | - | - | - | 1.90 | 13.2 | - |
| 540 | 1000 | - | - | - | - | - | - | - | - | - | 1.86 | 12.9 | - |
| 815 | 1500 | 2.54 | 158 | -0.3 to 0.0 | 23.9 | 3465 | 106.2 | 15410 | 39.1 | 5675 | 2.06 | 14.5 | 6 |
| 1090 | 2000 | 2.54 | 158 | -0.5 to -0.0 | 24.4 | 3545 | 108.3 | 15710 | 34.2 | 4956 | 2.25 | 15.6 | - |
| 1400 | 2550 | 2.52 | 157 | -0.1 to 0.5 | 25.6 | 3720 | 104.1 | 15095 | - | - | 2.12 | 14.7 | - |
| 1480 | 2700 | - | - | - | - | - | - | - | 5.0 | 720 | - | - | - |
| 1600 | 2910 | 2.53 | 158 | 0.0 to 1.0 | 23.7 | 3432 | 160.5 | 23275 | - | - | - | - | - |

SET TIMES AND WATER REQUIREMENTS

| | |
|-----------------------|------------------|
| Water Required | Vibration |
| Working Time | 4.0-5.5% |
| Initial Set | up to 1 hr |
| Final Set | 2 - 6 hours |
| | 5 - 12 hours |

Allied Mineral Products, Inc. supplies a complete line of monolithic refractories for industrial applications. For more information or a complete evaluation of your refractory requirements, please contact your local Allied representative.

Warning: Contains aluminum oxide, aluminosilicates, cement, and silica. The International Agency for Research on Cancer (IARC) has classified crystalline silica inhaled in the form of quartz or cristobalite carcinogenic to humans. Refer to Material Safety Data Sheet for additional information and disposal instructions. Avoid breathing dust. Wear NIOSH approved respirator during installation, removal, and disposal of product to prevent inhalation of dust. Avoid contact with skin and eyes. Cement powder or freshly mixed castable may cause eye and skin irritation. Steam spalling, which can lead to personal injury, may result from improper drying and firing procedures. In case of eye contact, flush immediately and repeatedly with water and consult a physician. For safest use and optimum performance, proper practices must be followed.

(DCON32)
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