



DRI-VIBE[®] 434A

General Information

DRI-VIBE[®] 434A is an alumina-based dry vibratable refractory designed to be installed by mechanical vibration. DRI-VIBE[®] 434A is recommended for hearth applications in forging and heat treating furnaces, where the low initial heat set temperature and the increased strength at higher temperatures offer significant advantages over conventional DRI-VIBES. DRI-VIBE[®] 434A is volume stable and resists cracking caused by thermal cycling, which is an important factor in furnaces where scale can fill thermal cracks.

DRI-VIBE[®] 434A is totally dry and can be rapidly heated to operating temperatures without fear of thermal shock or steam spalling. The optimal packing properties of DRI-VIBE[®] 434A results in a dense, high-strength matrix.

Chemical Analysis

| | |
|--------------------------------|-------|
| Al ₂ O ₃ | 54.9% |
| SiO ₂ | 38.3% |
| TiO ₂ | 2.7% |
| Fe ₂ O ₃ | 0.9% |
| Alkalies | 1.4% |
| Other | 1.8% |

Maximum Use Temperature

1650°C (3000°F)

Material Required

2.32 g/cm³ (145 lbs/ft³)

Grain Size

4.75 mm (4 mesh) and finer

Installation Methods

Dry ram/Vibrate

Standard Packaging

25 kg (55 lb) multi-wall paper bags

| Temperature | | PLC* | MOR | | HMOR | | K-factor** | |
|-------------|------|------|-----|------|------|-----|------------------------------------|----------------------------------|
| (°C) | (°F) | | MPa | psi | MPa | psi | W·m ⁻¹ ·K ⁻¹ | BTU·in ft ² ·hr·°F |
| 150 | 300 | -0.1 | 5.0 | 725 | - | - | 1.34 | 9.31 |
| 540 | 1000 | -0.2 | 1.8 | 260 | - | - | 1.42 | 9.82 |
| 980 | 1800 | -0.2 | 8.0 | 1160 | 3.0 | 430 | 1.44 | 10.0 |
| 1315 | 2400 | 0.0 | 9.2 | 1330 | 3.3 | 480 | 1.47 | 10.2 |

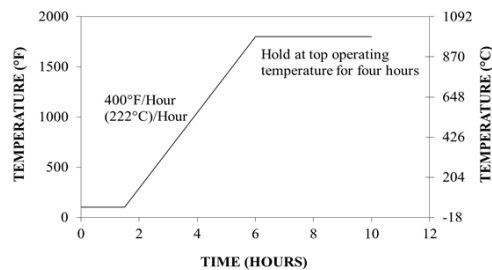
*Permanent linear change after firing

**Estimated

Sintering Data

| | |
|-----------------------------------|----------------|
| Initial Heat Set Temperature | 150°C (300°F) |
| Intermediate Heat Set Temperature | 760°C (1400°F) |
| Final Heat Set Temperature | 980°C (1800°F) |

Sintering Schedule



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, aluminosilicate, 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.

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