

Superwool® Pumpable

Product Data Sheet

Product Description

Superwool Pumpable is composed of Superwool bulk fibers, organic polymers, inorganic binders and other proprietary ingredients. This product is a pliable, low shrinkage, putty-like material that is supplied wet and premixed, ready for installation. This product has been specially formulated to be pumped into areas where refractory and/or insulation has degraded and left voids in the lining system. It will readily flow to fill these voids and will provide a monolithic, inorganic insulating system that is resistant to thermal and mechanical breakdown.

Features

- Pliable, putty-like material composed of low biopersistent fibers, proprietary ingredients and inorganic binders
- Ready to use
- Resistant to thermal and mechanical breakdown
- Non-wetted in molten aluminium

Applications

- Molten aluminum launders
- Fibrous patching/back-up material
- Pumped to repair backup insulation in boilers (hot or cold)

Installation

The HS-100 Extrusion Pump is a piston extrusion pump which has been modified to pump Kaowool® and Superwool pumpable materials in a fast, efficient manner. These modifications optimize the pump's capabilities to provide a complete delivery system.

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| Product Name | | Superwool Pumpable |
|--|--|--------------------|
| Fiber Class | | AES |
| Material Grade | | Pumpable |
| Physical Properties | | |
| Color | | off white |
| Continuous Use Temperature, °F | | 1900 |
| Continuous Use Temperature, °C | | 1038 |
| Classification Temperature, °F | | 2000 |
| Classification Temperature, °C | | 1093 |
| Density , dried @ 230°F, pcf | | 26 |
| Density , dried @ 110°C, kg/m3 | | 416 |
| Density , wet, pcf | | 75 |
| Density , wet, kg /m3 | | 1201 |
| Yield, cubic ft / gal | | 0.13 |
| Yield, cubic m / L | | 0.004 |
| Shelf life, months | | 12 |
| Chemical Analysis, % weight basis after firing | | |
| Alumina, Al ₂ O ₃ | | 5 |
| Silica, SiO ₂ | | 64 |
| Calcium oxide + Magnesium oxide, CaO + MgO | | 29 |
| Other | | 2 |

Availability

| Products | <u>5 gallon pail</u> |
|--------------------|----------------------|
| Superwool Pumpable | X |

The product(s) represented are intended for industrial refractory applications. The values and application information in this datasheet are given for guidance only. The values and the information given are subject to normal manufacturing variation and may be subject to change without notice. Morgan Advanced Materials – Thermal Ceramics makes no guarantees and gives no warranties about the suitability of a product, and you should seek advice to confirm the product's suitability for use with Morgan Advanced Materials.

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| Mastics Product Name | Superwool Pumpable |
|---|--------------------|
| Modulus of Rupture, MOR, dried, PSI | |
| 230°F | 84 |
| 1200°F | 85 |
| 1500°F | 131 |
| 1800°F | 192 |
| Modulus of Rupture, MOR, dried, MPa | |
| 110°C | 0.58 |
| 649°C | 0.59 |
| 816°C | 0.9 |
| 982°C | 1.32 |
| Compressive strength @ 5% deformation, dried, psi | |
| 230°F | 78 |
| 1200°F | 37 |
| 1500°F | 38 |
| 1800°F | 68 |
| Compressive strength @ 5% deformation, dried, MPa | |
| 110°C | 0.54 |
| 649°C | 0.26 |
| 816°C | 0.26 |
| 982°C | 0.47 |
| Compressive strength @ 10% deformation, dried, psi | |
| 230°F | 92 |
| 1200°F | 56 |
| 1500°F | 83 |
| 1800°F | 142 |
| Compressive strength @ 10% deformation, dried, MPa | |
| 110°C | 0.63 |
| 649°C | 0.39 |
| 816°C | 0.57 |
| 982°C | 0.98 |
| Permanent Linear Shrinkage, % 24 hours | |
| 1200 °F (684 °C) | -0.3 |
| 1500 °F (816 °C) | -1.7 |
| 1800 °F (982 °C) | -1.7 |
| 2000°F (1093 °C) | -2 |

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