



Product Data

10/05: 2827

VERSAFLOW[®] 45/AL ADTECH[®]

Description: A fireclay low cement castable designed specifically for aluminum metal contact applications and back-up linings. Contains AL inhibitor for increased metal penetration resistance. Flowable feature enables material to be vibcast, poured or pumped with slight adjustment to water content.

Uses: Primarily back-up linings in lower sidewalls and hearths of aluminum melting and holding furnaces. Can be used in metal contact applications such as lower sidewalls and hearths, ramps, door sills/jamb, troughs and transport crucibles.

Chemical Analysis: (Approximate)
(Calcined Basis)

| | | |
|--------------|--------------------------------------|-------|
| Alumina | (Al ₂ O ₃) | 44.2% |
| Silica | (SiO ₂) | 48.0 |
| Lime | (CaO) | 3.2 |
| Iron Oxide | (Fe ₂ O ₃) | 0.8 |
| Titania | (TiO ₂) | 1.9 |
| Magnesia | (MgO) | 0.2 |
| Alkalies | (Na ₂ O+K ₂ O) | 1.0 |
| Other Oxides | | 1.0 |

Conventional Casting

| <u>Physical Properties: (Typical)</u> | <u>English Units</u> | <u>SI Units</u> |
|--|--|--|
| Maximum Service Temperature | 2500°F | 1371°C |
| Material Required | $\frac{\text{lb}}{\text{ft}^3}$ 140 | $\frac{\text{g}}{\text{cm}^3}$ 2.24 |
| Approximate Amount of Water Required to Cast Weight - % | 6.4% | |
| Bulk Density After 230°F (110°C) | 145 | 2.32 |
| Permanent Linear Change After 1500°F (816°C) | -0.2% | |
| After 2500°F (1371°C) | -0.1% | |

(Continued)



Product Data

VERSAFLOW® 45/AL ADTECH® (Continued)

| | | |
|--|--------------------------|------------|
| Modulus of Rupture | <u>lb/in²</u> | <u>MPa</u> |
| After 230°F (110°C) | 1600 | 11.0 |
| After 1500°F (816°C) | 1900 | 13.1 |
| Cold Crushing Strength | | |
| After 230°F (110°C) | 10000 | 69.0 |
| After 1500°F (816°C) | 9000 | 62.1 |
| 72 Hour Aluminum Cup Test | | |
| Using 7075 Aluminum Alloy @ 1500°F (816°C) | | |
| Penetration | | None |
| Adherence | | Weak |

The test data shown are based on average results on production samples and are subject to normal variation on individual tests. The test data cannot be taken as minimum or maximum values for specification purposes. ASTM test procedures used when applicable.