TECHNICAL DATA

VOLCLAY® DC-2
Western (Sodium) Bentonite

Product Description

Volclay® DC-2 Western Bentonite began as volcanic ash millions of years ago. After weathering from rains and pressure by megatons of seawater, volcanic ash was transformed into what we know today as Sodium Bentonite. Volclay® DC-2 Western Bentonite is processed at locations in Wyoming and South Dakota and is classified, dried, and sized according to type. Volclay® DC-2 Western Bentonite is a high-quality, green sand binder accepted world-wide by the foundry industry. It is a foundry-proven product that provides the performance expected by today's foundry personnel to meet the demand for quality castings.

Application

Volclay® DC-2 Western Bentonite is the preferred binder for production of green sand iron and steel castings. It is also selected in the production of copper base and aluminum castings when extra performance is needed. Because it is more durable than other bonding materials. Volclay® DC-2 Western Bentonite requires less replacement when sand mixtures are re-bonded. Volclay® DC-2 Western Bentonite bonded sand mixtures offer high dry compression strength and high hot compression strength to revent sand erosion, cuts, washes, inclusions, burn-on and scabs.

Molding sand practice is based on having low clay content coupled with low temper water. Volclay® DC-2 Western Bentonite meets these parameters. It imparts excellent dried and fired strengths to molding sand where high temperature pouring occurs. Volclay® DC-2 Western Bentonite's unique capability to hold water prevents mold surface erosion by molten metal. It also provides excellent strength and toughness to molding sand mixtures, enabling good draw of the pattern.

Features and Benefits

- Provides highest tensile properties
- Combats friability
- Excellent dry and hot properties
- Increases durability and toughness
- Controls expansion problems
- Quick green compression strength development
- High, quick dry compressive strength
- Intermediate hot strength
- Low viscosity

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ADDITROL VOLCLAY HEVI-SAND

Revised – February 2016

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Volclay® DC-2 Western (Sodium) Bentonite

Physical Properties (5.0% clay, 2.5% water)

Property	Value
Green Strength (psi)	9.0 – 11.0
Dry Strength (psi)	100 – 155
Hot Strength @1650 F (psi)	550 – 775
Methylene Blue (meq/100g)	100 – 135
Soluble Calcium (meq/100g)	14 – 26
Moisture (%)	7.0 – 11.0
pH @ 6.25% solids	8.5 – 10.5
40 Mesh (% retained, max)	0.0 – 0.5
200 Mesh (% passing, min)	74.0 – 90.0
Apparent Viscosity (cps)	2 – 15

Chemical Analysis

Property	Value
Alumina, Al_2O_3 (%)	18.0 – 21.0
Iron Oxide, Fe_2O_3, FeO (%)	2.8 – 3.5
Magnesia, MgO (%)	2.3 – 3.2
Lime, CaO (%)	0.7 – 1.2
Soda, Na_2O (%)	2.1 – 2.7
Potash, K_2O (%)	0.4 – 0.6

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