

VOLCLAY[®] DC-2 WESTERN (SODIUM) BENTONITE

PRODUCT DESCRIPTION

Volclay[®] 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.

American Colloid Company processes Volclay[®] DC-2 Western Bentonite at locations in Wyoming and South Dakota. It 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 foundrymen to meet the demand for quality castings.

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 prevent 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.

VOLCLAY[®] DC-2 WESTERN BENTONITE FEATURES

- 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

PROPERTIES OF VOLCLAY® DC-2 WESTERN BENTONITE
(5.0% Clay, 2.5% water)

Green Strength (psi)	9.0 - 11.0
Dry Strength (psi)	100 - 155
Hot Strength @ 1650 F (psi)	550 - 775
(5% clay, 95% silica sand, 2.5% moisture based on dry batch weight)	
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

TYPICAL CHEMICAL ANALYSIS

Silica, SiO ₂ (%)	57.0 - 62.0
Alumina, Al ₂ O ₃ (%)	18.0 - 21.0
Iron Oxide, Fe ₂ O ₃ , FeO (%)	2.8 - 3.5
Magnesia, MgO (%)	2.3 - 3.2
Lime, CaO (%)	0.7 - 1.2
Soda, Na ₂ O (%)	2.1 - 2.7
Potash, K ₂ O (%)	0.4 - 0.6