MINERALS TECHNOLOGIES Metalcasting

TECHNICAL DATA

Panther Creek®
Southern (Calcium) Bentonite

Product Description

Panther Creek® is a consistent, high-quality, non-swelling calcium bentonite that, like Volclay® western bentonite, belongs to the montmorillonite family of clays. At equal levels of additions, moisture and mulling, Panther Creek® bentonite provides greater green compression strength than western bentonite, fireclay or other clay materials. Panther Creek® molding sand mixtures have lower hot retained strength than western bentonite. This lower inherent retained strength aids in shakeout and reduces stress-related defects. Lumps, caking and excess loss of sand at shakeout are also minimized or eliminated.

The mold sand mixtures that contain Panther Creek® require less squeeze pressure or blow pressure to make uniformly compacted molds. Adding the product to molding sands often reduces mechanical penetration and improves mold density. The mixtures are easy to pneumatically transport and flow freely from silos, bins and hoppers. Using Panther Creek® creates very flowable molding sand that is easy to ram and has excellent shakeout properties. It is a very popular choice for foundry personnel. Panther Creek® enhances the production of detailed, intricate castings produced in gray iron, ductile iron, malleable iron and nonferrous alloys. It is an excellent choice in either jobbing or high production operations.

Features and Benefits

- Excellent shakeout
- Excellent ramming characteristics
- Excellent flowability
- High green compression strength
- Low dry and hot compression strength
- Consistent quality

Chemical Analysis

Property	Value
Silica, SiO_2	56.0-59.0
Alumina, $A1_2O_3$	18.0-21.0
Iron Oxide, FeO, Fe_2O_3	5.4-9.0
Magnesia, MgO	3.0-3.3
Lime, CaO	1.2-3.5

Property	Value
Soda, Na_2O	0.3-0.5
Potash, K_2O	0.64-0.75
Chemically Combined Water, H_2O	5.5-6.5
Alkalinity-pH	6.0-10.0
% Passing 200 Mesh Sieve No. 150	Min. 50.0

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ADDITROL VOLCLAY HEVI-SAND®

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