AMERICAN COLLOID COMPANY
A MINERALS TECHNOLOGIES COMPANY

EST. 1927

TECHNICAL DATA SHEET

PANTHER CREEK®

SOUTHERN (CALCIUM) BENTONITE

PANTHER CREEK® IS A CONSISTENT, HIGH-QUALITY, LOW SWELLING, CALCIUM BENTONITE THAT 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 & BENEFITS

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

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PHYSICAL PROPERTIES
(5.0% CLAY, 2.5% WATER)

PROPERTY	TYPICAL VALUE
Green Compression Strength (psi)	11 – 16
Dry Compression Strength (psi, min)	60
Cation Exchange Capacity (meq/100g)	95 – 110
Soluble Calcium (meq/100g, min)	50
Moisture (%)	5 – 12
pH @ 6.25% solids	6 – 10
40 Mesh (% retained, max)	0 – 0.5
200 Mesh (% passing, min)	55

CHEMICAL ANALYSIS

PROPERTY	TYPICAL VALUE
Aluminum Oxide, Al_2O_3 (%)	15.0 – 21.0
Iron Oxide, Fe_2O_3, FeO (%)	5.4 – 9.0
Magnesium Oxide, MgO (%)	3.0 – 4.0
Calcium Oxide, CaO (%)	1.2 – 3.5
Sodium Oxide, Na_2O (%)	0.3 – 0.5
Potasium Oxide, K_2O (%)	0.65 – 0.9
Silicon Dioxide, SiO_2	55.0 – 65.0

VOLCLAY® ADDITROL® BOND PANTHER CREEK®

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