

## FEATURES & BENEFITS

VANTAGE® line of ball clays is designed to produce increased strength and plasticity in plastic forming and extrusion operations. VANTAGE clays are easily dispersed in water for direct slip make down by blunging. They are ideal for use in slurries, filter pressing and extrusion processes, mulling prior to extrusion, and spray drying. In all applications, the rapid pick up and equilibration of process fluids with these clays help minimize batching and blending time.

A complete range of VANTAGE clay blends is available to achieve diverse formulation and processing objectives. Excellent suspension properties and rheological stability, and compatibility with the complete range of fluxes and non-plastics, affect both product and productivity. Their plastic properties over a wide moisture range produce bodies which can withstand the rigors of automated processing and handling without cracking or deformation. Predictable forming characteristics, including moisture retention, shrinkage, firmness and strength, make VANTAGE valuable components in body formulations ranging from decorative and table wares to electrical porcelain.

The VANTAGE series of ball clays are mined and processed under rigid Covia QIP<sup>SM</sup> statistical quality assurance programs. The result is consistent mineralogy, chemical and physical properties, predictable results in demanding refractory applications.

## CHEMICAL AND ANALYTICAL DATA

*Typical Mean Values. These Do Not Represent a Specification.*

Mean Percent By Weight On Oxide Basis	VANTAGE® Grades	
	RD	WT
Silicon Dioxide (SiO <sub>2</sub> )	65.0	59.0
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	16.5	25.0
Titanium Dioxide (TiO <sub>2</sub> )	0.9	1.2
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	7.5	2.4
Calcium Oxide (CaO)	0.3	0.3
Magnesium Oxide (MgO)	1.0	0.7
Potassium Oxide (K <sub>2</sub> O)	2.5	2.9
Sodium Oxide (Na <sub>2</sub> O)	0.8	0.2
Loss on Ignition (LOI)	5.5	7.9
Carbon (%C)	0.2	0.3
M.B.I (meq/100g)	7.3	9.0
SSA m <sup>2</sup> /g	20.2	19.5
pH @10% Solids	7.0	5.0
M.O.R. (Dried @ 110°C) (lbf/in <sup>2</sup> ) Extruded rods of 100% clay	1300	1000

## PARTICAL SIZE ANALYSIS AND PROPERTIES

Typical Mean Values. These Do Not Represent a Specification.

	Mesh Size	VANTAGE® Grades	
	MICRONS	RD	WT
Typical mean % retained on individual sieves	<20	81	97
	<10	67	89
	<5	56	75
	<2	43	52
	<1	35	39
	<0.5	28	27

## SHIPPING/ORDERING INFORMATION

- Shipping Point: Huntingburg, IN
- Availability: Bulk, IBC, 50 lb Paper Bag  
Truck

### CUSTOMER SERVICE

US & Canada: 1-800-243-9004

Fax: 1-800-243-9005

Worldwide: 1-203-442-2500

Fax: 1-203-972-1378

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GRADE NUMBERS INDICATE RELATIVE VALUES OR RESULTS. THEY ARE NOT A SPECIFICATION OR WARRANTY OF PERFORMANCE.

HEALTH HAZARD WARNING: Prolonged inhalation of dust associated with the materials described in this data sheet can cause delayed lung injury including Silicosis, a progressive, disabling and sometimes fatal lung disease. IARC and NTP have determined that crystalline silica can cause lung cancer in humans. Risk of injury is dependent on the duration and level of exposure. Follow OSHA or other relevant safety and health standards for the form of crystalline silica called Quartz. Current safety data sheet, containing safety information, is available and should be consulted before usage.

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Silica/Silica Containing

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