

# **10.100 - PHYSICAL & CHEMICAL PROPERTIES**

## **GRADE - STANDARD**



### **High Reactivity Metakaolin (HRM)**

*Advanced Cement Technologies' PowerPozz™ HRM is a manufactured pozzolanic mineral admixture which significantly enhances many performance characteristics of cement-based mortars, concretes and related products.*

*PowerPozz™, derived from purified kaolin clay, is a white, amorphous, alumino-silicate which reacts aggressively with calcium hydroxide to form compounds with cementitious value.*

*Used at 5-15% replacement of cement by weight, PowerPozz™ will contribute to: increased strength, reduced permeability, greater durability and effective control of efflorescence and degradations caused by alkali-silica reaction (ASR) in concrete.*

**Description:** A white, manufactured, amorphous alumino-silicate with excellent physical, chemical and pozzolanic properties. Conforms to ASTM C-618, Class N Specifications for Natural and Calcined Pozzolans.

#### **Physical Properties:**

Specific Gravity:	2.60	D10	<2.0um
Physical Form:	Powder	D50	<4.5um
Color:	Off-White	D90	<25um
Brightness:	80-82 Hunter L	Bulk Density (lbs/ft <sup>3</sup> ):	20-25
BET:	15M <sup>2</sup> /gram	Bulk Density (g/cm <sup>3</sup> ):	0.4

#### **Chemical Composition, Wt.:**

SiO <sub>2</sub>	51-53%	CaO	<0.20%
Al <sub>2</sub> O <sub>3</sub>	42-44%	MgO	<0.10%
Fe <sub>2</sub> O <sub>3</sub>	<2.20%	Na <sub>2</sub> O	<0.05%
TiO <sub>2</sub>	<3.0%	K <sub>2</sub> O	<0.40%
SO <sub>4</sub>	<0.5%	L.O.I.	<0.50%
P <sub>2</sub> O <sub>5</sub>	<0.2%		

*All information, while provided in good faith, with every effort made to assure accuracy, is provided by Advanced Cement Technologies at no charge and without warranty--express or implied. Data given, unless otherwise stated, are based on standard testing procedures, which are available upon request. Variations do occur in individual tests, and the results stated herein cannot be taken as minima or maxima for specification purposes.*