

# HIGH REACTIVE METAKAOLIN

## METAKRETE

[www.20microns.com](http://www.20microns.com)

MetaCem grades of Calcined clays are reactive aluminosilicate pozzolan formed by calcining very pure hydrous China clay. Chemically MetaCem combines with Calcium Hydroxide to form Calcium Silicate and Calcium Aluminate Hydrates. Unlike other natural pozzolan MetaCem is water processed to remove unreactive impurities producing an almost 100 percent reactive material. The particle size of MetaCem is significantly smaller than cement particles. IS 456:2000 recommends use of Metakaolin as Mineral Admixture.

## TYPICAL PROPERTIES:

PROPERTIES	UNITS	METAKRETE
Color	-	Close To STD
Appearance	-	Off White Powder
Bulk Density	gm / ltr	270 - 370
Oil Absorption	gm/100gm	45 - 65
PSD-D(50)-50% Particles Below	μ	1.5 – 2.0
Residue on 325 Mesh	%	0.0 – 0.5
pH(10%AQ.SLURRY)	-	5.0 – 8.0
Moisture	%	0.0 – 0.5
Specific Gravity	-	2.5 -2.7

## CHEMICAL COMPOSITION - WT

SIO <sub>2</sub> Content	%	52 - 53
AL <sub>2</sub> O <sub>3</sub> Content	%	42 - 45
Fe <sub>2</sub> O <sub>3</sub> Content	%	0.47 - 0.63
CaO Content	%	0.8 -1.4
MgO Content	%	0.2 – 0.8

## BENEFITS

MetaCem is a thermally structured, ultrafine Pozzolan which replace industrial by-products such as Silicafume / Microsilica. Commercial use of Metakaolin has already begun in several countries worldwide. Blending with Portland Cement MetaCem improves the properties of Concrete and Cement products considerably by:

- Increasing Compressive & Flexural Strength
- Providing resistance to chemical attack
- Reducing permeability substantially
- Preventing Alkali-Silica Reaction
- Reducing efflorescence & Shrinkage

## APPLICATION

High Performance, High Strength and Lightweight concrete, Industrial-Commercial floor, Marine concrete, Precast Concrete for Architectural, Civil, Industrial and Structural, Shotcreting, Fibrecement & Ferrocement products, Glass Fiber Reinforced Concrete, Mortars, Stuccos, Repair Material, Pool Plasters.

INNOVATIVE LEADERSHIP

**20 MICRONS**  
L I M I T E D

APPLICATION EXPERTISE

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