



for Better Quality & Durability

## MICROSILICA

**CETEX MICROSILICA** is a super pozzolan - a finely powdered material which when added to cementitious matter increases durability and gives higher strength. It complies with **ASTM C1240**.

### ADVANTAGES

- ✓ Higher compressive strength by 10-20 %
- ✓ Reduces the rate of carbonation
- ✓ Lower permeability – resistance to penetration of water, chloride & other chemicals
- ✓ Lower free lime formation - delays ettringite and thaumasite formation
- ✓ Controls bleeding in fresh concrete
- ✓ Lower Heat of Hydration, which prevents formation of cracks.

### PROPERTIES

Appearance	Very fine powder
Colour	Grey
Odour	Odourless
Mean particle size	25 microns
SiO <sub>2</sub> – Silica	85 % minimum
Humidity	2 % maximum
Loss on ignition at 800°C	4 % maximum

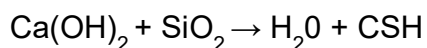
### HOW IT WORKS

**1. Pozzolonic effect :** When water is added to cement, hydration occurs as shown below:

Ordinary Portland Cement (OPC) + H<sub>2</sub>O → CSH (Calcium silicate hydrate) + Ca(OH)<sub>2</sub>(Free lime)

The free lime does not contribute to strength of concrete. When combined with carbon dioxide, it forms a soluble salt, which leaches through the concrete causing efflorescence, a familiar architectural problem. Concrete is also more vulnerable to chemical attack and deterioration.

When CETEX Microsilica is added, the following reaction takes place:



The reaction reduces the amount of calcium hydroxide in the concrete.

**2. Micro filler effect :** It is an extremely fine material, with an average diameter much finer than the cement. It gets well distributed in the cementitious paste, thus blocking the bleed-water channels.

### PACKING

Available in 25 kg Plastic bag or Jumbo Bag.