PRODUCT DATASHEET: Micro Silica (Densified Fumed Silica)

About:

Microsilica is a densified powdered admixture with strong pozzolanic properties, designed for use alongside plasticizers and superplasticizers in the production of high-performance concrete, mortars, and grouts.

Composed of amorphous silicon dioxide, Microsilica consists primarily of extremely fine, sub-micron spherical particles, as well as agglomerates formed from these spheres. It exhibits high reactivity within cementitious and ceramic bonding systems.

While some particles remain as individual spheres, the majority are found in agglomerated form This broad particle size distribution enhances particle packing density, improving the overall efficiency of the mix. Microsilica appears as a densified, dry, grey powder and is recognized for its amorphous, highly reactive nature. When used in Portland cement-based systems, it significantly boosts strength, workability, durability, and other key performance characteristics.

Unlike mineral silicas like quartzite, which are relatively inert, Microsilica is **highly amorphous** and quickly reacts with calcium hydroxide—a byproduct of cement hydration—making it an exceptionally active pozzolanic material.

SPECIFICATIONS:

| COMPOSITION | PERCENTAGE |
|-------------------------|------------------|
| BULK DENSITY (kg/m3) | 700-800 kg/m3 |
| H2O | 0.5 |
| LOI | >0.90 % |
| SiO2 | 85 %+ |
| Al203 | 0.80 %+ |
| Fe2O3 | 2.50 %+ |
| CaO | 1.29% |
| MgO | 0.75% |
| Alkalies as Na2O | - |

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