

Kemfume HD

High Quality Natural Pozzolanic Powder

Description	Kemfume HD is a pozzolanic material has many synonyms like; Silica fumes, Amorphous silica dioxide powder, Condensed SiO ₂ fumes and has extremely positive effect on the properties of the fresh & hardened concrete. It is based on selected natural silica in defined high quality with high quality pozzolanic materials. Complies with ASTM C1240
Where to use	Normally used as a replacement to • Structural concrete. • Pre-cast concrete.
Advantages	• Increase density and strength of concrete • Reduces plastic dry shrinkage. • Provides protection against chemical attack. • Reduces the penetration of chloride ions in concrete. • Easily added to the batching plant without costly extra installation. • Soluble packing ensures safe environment and solve feeding & waste problems • Improve the fine aggregates grading and eliminate the gap grading problems through the finer portions.
Properties	
Bulk density	2.2 gm/Cm ³
Color	Grey
SiO content	> 90 %
Physiological effect	Natural
Thermal Stability	-10 °C to + 50 °C
Oversize	< 10%
Loss on ignition	< 1.5%
Moisture content	< 0.20%
Accelerated pozzolanic activity index	> 90.0%
Specific surface m ² /g	> 15.0 m ² /g
Alkali equivalent Na ₂ O	< 0.60%
Reduction of mortar expansion	> 80.0%
Sulfate resistance expansion	< 0.050% moderate expansion
Mixing	Kemfume HD is added with the cement to the concrete at the batching plant before the gauging water.

Application	• Low dosages (<5%) of Kemfume HD may actually perform as a mild flow enhancer, replacing and free water from between cement grains. • At higher dosages Kemfume HD will have a negative water demand on the mix and will require the use of water reducing admixture to control slump and workability as (Kemflow super F). • Kemfume HD will not discolor specially colored mortars, grouts, architectural casting. • Optimum mixing time 2 minutes. • The water quantity should be measured carefully according to the final consistency needed. • Kemfume HD concrete should be handled and placed as conventional concrete. Curing should be commenced immediately after placement. • Call PROKEM to discuss other available varieties of Kemfume HD products and their applications.
Theoretical Dosage Rate	5 - 10% from the cement weight depending on the required concrete /shotcrete requirements, other dosage may be used depending on mix design conditions.
Packaging	Bags 15Kg & 500 Kg
Shelf life & Storage	Unlimited if kept in a dry condition in the original unopened bags.
Health and Safety	• Kemfume HD is non-toxic. Any splashes to the skin should be washed immediately with water. • Splashes to the eyes should be washed immediately with water and medical advice should be sought. • Wear a face mask against dust if there is a heavy dust development. • Do not dispose of into water of soil but according to local regulations. • Non – hazardous, no problems during transport.
Additional Information	PROKEM provides the construction industry with a comprehensive range of construction chemicals and specialty products answering the queries of modern engineers for trouble free durable structure. PROKEM designs tailor made products should there be critical application that requires specific properties rather than our main range. For our customer's satisfaction. PROKEM reserves the right to change the properties of its products. All orders are accepted subject to our current term of sale & delivery. Users must always refer to the most recent issue of the local product data sheet for the product concerned, copies of which will be supplied on request. PROKEM extends technical services to include after sales support to assist users in a proper handling of our products.