

Kemfume

A Super Pozzolan Silica Fume High Performance Concrete Admixture

Description	Kemfume is a dry powder used as an admixture to Portland cement composition as a super-pozzolan. It is submicronic in size, and its highly reactive Kemfume is an essential ingredient for the production of high flow or self-compacting high strength concrete and low permeability at the same time
Where to use	The durability of Kemfume concrete is well documented. And recognizable as the standard by which high performance concretes (HPC) are measured. Using White Kemfume architectural and colored concretes can now benefit from the increased durability of HPC without affecting the desired color. Kemfume used in the following concrete constructing: • Structural concrete. • Pre-cast concrete. • To opening up extra rentable floor space in tall buildings.
Advantages	Kemfume is known as a glass hard, inert, hollow silica sphere in shape. • It is used to reduce the weight of plastics, rubbers, resins, cement...etc., in addition to other benefits in other situations. • Its spherical nature is particularly useful in increased filler loading and improved rheology. • Increased water & gas tightness. • Increased abrasion resistance. • Increased compressive strengths. • Improved cohesion and adhesion of mortar, grout, and shotcrete mixes. • High early strengths enable faster production schedules. • Improved bond strengths. • Chloride free – doesn't cause rust for concrete reinforcement.
Properties	
Material	Dry powder
Avg. Particle size (μ m)	< 0.5
Absolute density. (g/cm ³)	2.2 typical.
Coarse particles (+45 μ m)	3.21 typical
Reflectivity	+55%
Surface area (Sq .M/gm)	23 typical.
Particle shape	Spherical.
Bulk density (lb /cft)	27 avg.
Color	Light Grey
Curing	PROKEM recommends the concrete be cured for 24 hours after finishing operations are complete by using Kemcure curing compound. spray applied surface contact curing membranes should be used in all cases.
Mixing	Kemfume is added with the cement to the concrete at the batching plant before the gauging water.

Application	• Low dosages (<5%) of white Kemfume. May actually perform as a mild flow enhancer, replacing and freeing water from between cement grains. At higher dosages white Kemfume. 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 FM). White concrete in addition to architectural applications is commonly used for light reflectivity and • safety go hand – in – hand while improving durability properties white Kemfume 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 concrete should be handled and placed as conventional concrete.
Compatibility	• All admixtures may be used in the same concrete batch with Kemfume.
Cleaning	• Spillage of Kemfume can be removed with water.
Theoretical Dosage Rate	• Mix designs containing 5 to 20% Kemfume based on proportioned cement weight. Are common to achieve the desired fresh and hardened concrete properties. 1
Packaging	Available in 15 and 500 kg packs
Shelf life & Storage	Unlimited, it must be stored in dry conditions.
Health and Safety	• Kemfume is non-toxic. • Use gloves to avoid contact with skin. • Wear a face mask against dust if there is a heavy dust development. • If skin comes in contact, wash immediately with soap and water. • Do not dispose of into water of soil but according to local regulations. • Do not use solvents. • Eye contamination must be immediately washed with water, then seek medical treatment. • 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. Environmental Considerations Kemfume is environmentally safe.