



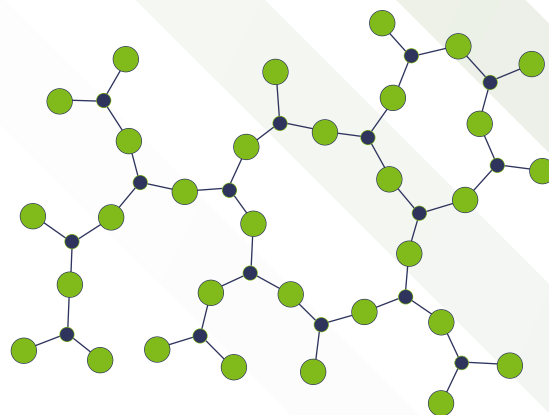
SILICRETE®



**Natural Pozzolanic
Material For Ultimate
Performance Concrete**

What is Silicrete®?

Silicrete® is a naturally occurring siliceous fine material with high amorphous SiO₂ content. **Silicrete®** is processed & ground down to a top cut of 40 microns. **Silicrete®** exhibits pozzolanic properties making it ideal for use in concrete mixtures, cement mortars & grouts where performance, workability & sustainability are required.



Applications of Silicrete®:

Silicrete® is perfect for use in structural concrete as a supplementary cementitious material (SCM) in the concrete mix improving workability & other fresh concrete properties. **Silicrete®** improves the durability & chemical attack resistance of concrete, and decreases the water & chloride permeability of concrete. It can be useful in non-structural concrete such as decorative concrete & non-load bearing concrete for partitions.

Physical Properties of Silicrete®:

			Physical Properties
Property	Unit	Value	Test Method
Blaine	cm ² /g	≈8000	EN 196-6:2010
> 45 μm	%	10% Max	
Specific Density	Kg/m ³	2.5-2.6	ASTM C-127
Accelerated Activity Index (7day)	%	>106	ASTM C 1240

Chemical Composition

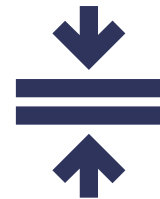
BS EN 196-2:2013

Component	wt%	≈	Compliance	Test method
SiO ₂	>90		AS 2350.2, ASTM C 1240 & EN 13263-1 15	
CaO	<0.8		-	
Al ₂ O ₃	4 Max		-	
Fe ₂ O ₃	0.3 Max		-	
SO ₃	0.08 Max		AS 3582.3	
Cl ⁻	0.1 Max		EN 13263-1	
L.O.I	2 Max		AS 3582.3, ASTM C 1240, EN 13263-1	

Advantages of Silicrete®:

Compressive Strength:

Silicrete® enhances the compressive strength of concrete due to increased homogeneity, high activity rate and silicon dioxide content. Depending on the mixture, **Silicrete®** can achieve an accelerated activity of (Up To 122%).



Concrete Workability :

Silicrete® enhances the workability of a wet concrete mixture due to a well fine particle size distribution. **Silicrete®** maintains workability retention without changing setting properties of concrete. Concrete containing **Silicrete®** is easier to place, consolidate and finish. Using **Silicrete®** minimizes water reducing admixture content for a workable mixture compared to other SCM's in high performance concrete.

Compatibility :

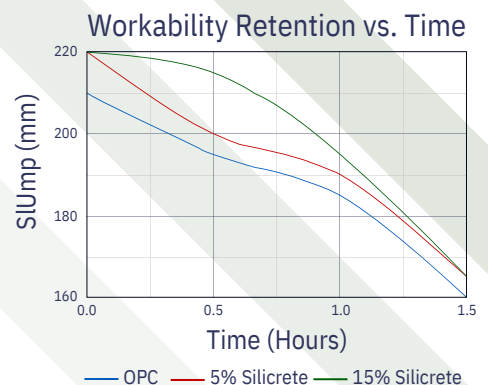
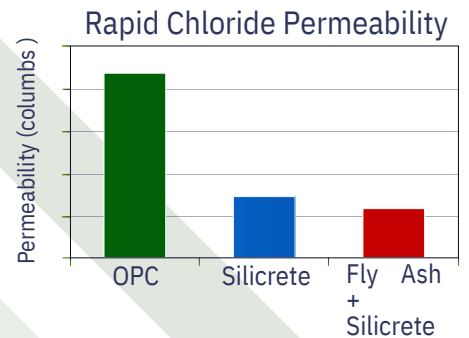
Silicrete® can be applied with all types of cement, fillers, aggregates, tile adhesives, grouts, mortars and additives. Silicrete exhibits superior properties when used with Fly Ash or GGBFS.

Reduces crack propagation:

Silicrete® lowers the heat of hydration and as a result lowers the risk crack propagation.

Durability:

Silicrete® can increase concrete resistance to chloride attacks and chemical attacks when applied at a ≥5% replacement rate of binder.



Silicrete® Application rate:

Silicrete® can be used at a replacement level of 5-12% (of Binder content), to obtain durable concrete with ultimate mechanical and physical properties. For dosage rates outside the recommended range, please consult us for technical support.

Silicrete® Supply & Storage:

Silicrete® is a non-hazardous material supplied in 25 kg paper bags or Jumbo bags. It is recommended to be stored under shelters or in silos.

Silicrete® Conformity:

Specifications are in compliance with the below listed international standards:

1. ASTM C 1240

Meets the standard for activity index, Sieve Analysis and chemical composition.

2. AS 3582.3

3. ASTM C618, Class N

Technical support:

We can provide the necessary technical support to customers to obtain the best results.

