

## General Information

As one of **VCEM** family members, P8000 is an ultra-fine powder ground from granulated blast-furnace slag using the state-of-art grinding technology. The average particle size is well below 5 microns, or Blaine fineness is between 800 ~ 900 m<sup>2</sup>/kg, which is 2-3 times higher than common ground granulated blast-furnace slag (GGBS).

During manufacturing process, P8000 is intensively treated with proprietary additives to further enhance its reactivity. As a result of ultra fineness and high reactivity, P8000 is superior to GGBS in producing quality concrete, mortar and grouts where high early strength development is desired.

## Applications

- **High strength concrete (HSC)** with improved workability.
- **High performance concrete (HPC)** with improved workability, high early strength, low permeability and enhanced durability.
- **Shotcrete** with improved workability and high early strength.
- **High strength mortar** where improved workability, high strength and enhanced durability are required.
- **High strength grout** with improved workability, fluidity and high strength.

## Benefits

- Improve cohesion/resistance to segregation
- Enhance compressive strength
- Reduce permeability
- Improve corrosion resistance
- Improve resistance to chloride, sulphate and various other forms of chemical attacks

## Recommendation of Use

- P8000 is generally recommended to substitute 5% to 25% (by mass) of Portland cement in the above fields of application.
- An appropriate dosage should be determined by the user through trial tests in order to satisfy the required performance of the intended application.

## Typical Technical Data

Chemical Composition		
CaO (%)	37.0	
SiO <sub>2</sub> (%)	32.5	
Al <sub>2</sub> O <sub>3</sub> (%)	15.0	
MgO (%)	9.5	
Fe <sub>2</sub> O <sub>3</sub> (%)	0.7	
Chloride Content (%)	0.025	
Insoluble Residue (%)	0.5	
Loss on Ignition (%)	2.0	
Sulphur as S <sup>2-</sup> (%)	0.8	
Sulfate as SO <sub>3</sub> (%)	0.2	
Proprietary Reactivity-enhancer	< 1%	
Blaine Fineness and Particle Size Distribution		
Blaine Fineness (m <sup>2</sup> /kg)	870	
Particle Size Distribution	D <sub>90%</sub> (μm)	8.5
	D <sub>50%</sub> (μm)	3.3
	D <sub>25%</sub> (μm)	1.8

## Packaging

P8000 is generally supplied in 25 kg bag. It is also available in other suitable packaging as per request.

## Storage

P8000 should be kept in dry and cool place in sealed bag with shelter protection from rain and direct sunlight.

## Handling

P8000 is very fine and direct contact may cause eye and respiratory irritation. Do not get it in eyes and avoid prolonged skin contact. Wash thoroughly with water after handling. For details, refer to its MSDS.

# P8000

Super-Reactive Ultrafine Slag Powder

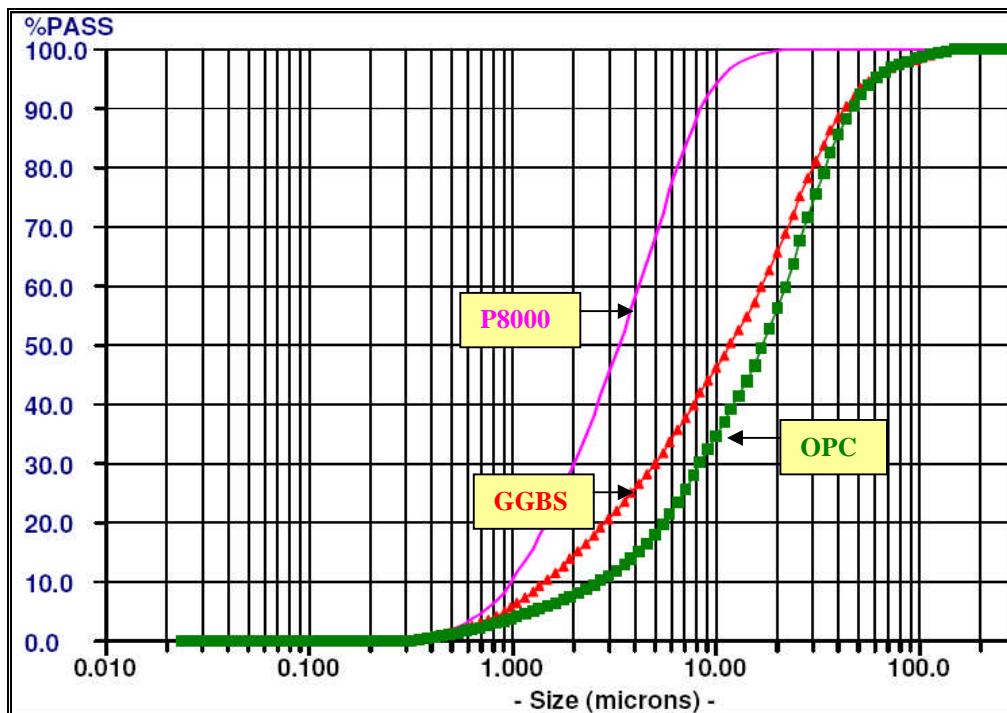


Identification Number: 022 003  
Eco Friendly Building Material

## Comparison of P8000, GGBS and OPC

PHYSICAL PROPERTIES	PRODUCT		
	P8000	GGBS	OPC
Appearance	Near white ultra-fine powder	Near white fine powder	Grey fine powder
Specific Gravity	2.8 - 3.0	2.8 - 3.0	3.1 - 3.2
Bulk Density	0.9-1.1 mt/m <sup>3</sup>	1.0-1.2 mt/m <sup>3</sup>	1.2-1.5 mt/m <sup>3</sup>
Blaine Fineness	8700 cm <sup>2</sup> /g	4500 cm <sup>2</sup> /g	3300 cm <sup>2</sup> /g
Particle Size Distribution	D <sub>97</sub> <13µm; D <sub>50</sub> <3.5µm	D <sub>97</sub> <60µm; D <sub>50</sub> <15µm	D <sub>97</sub> <90µm; D <sub>50</sub> <20µm
Compressive Strength* (BS 6699: 1992)	*Mortar prisms were cured in water at 27±2°C, according to Singapore Standard SS397: Part 1: 1997.		
3 days	28.0	16.0	30.0
7 days	41.0	35.0	42.0
28 days	58.0	53.0	53.0

## Particle Size Distribution (P8000, GGBS and OPC)



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