



Product Data Sheet

Meencem 48 is a light coloured rapid hardening Calcium Aluminate Cement (CAC) processed in Rotary Cement Kiln processed from purest raw materials. Meencem Calcium Alumina Cement gives early strength and improve refractory and physical properties like abrasion resistance rapidly. Meencem differs substantially from the usual Portland cements due to its manufacturing process, chemical composition and rapid strength gain. The unique properties of Meencem Alumina Cements are:

- ✓ Giving higher early strengths
- ✓ Used as Cementitious additive in formulated products
- ✓ Used as hydraulic binder for refractory
- ✓ Accelerator in concrete
- ✓ Improve Refractoriness
- ✓ High abrasion resistance
- ✓ Resistance to Acidic corrosion

Application areas

- ✓ Heavy duty industrial floors
- ✓ Warehouse flooring area
- ✓ Oil well cementing
- ✓ Replacement of road slabs
- ✓ Transfer bays area
- ✓ Construction Chemicals
- ✓ Mortars and Repair compounds

Production Process of Meencem

Meencem Alumina Cement is produced by melting selected raw materials (High grade Bauxite and Calcium Carbonate) in rotary kilns, after cooling, the clinker is grounded with Alumina grinding media in ball mills making finer particle size distribution.

Technical data

The following information represents typical values for the quality control carried out in our plant.

Meencem 48	Typical values in %
Al ₂ O ₃	48% min
CaO	37% max
SiO ₂	7% max
Fe ₂ O ₃	5% max
MgO	0.5 max
So ₃	1 max
Tio ₂	2 max
Total Alkalis	0.5% max

Mineralogical composition

Meencem contains mainly Monocalcium Aluminate (CA). This mineral phase is responsible for the high early strength. When mixed with water Meencem forms calcium aluminate hydrates as its hydration products

Mineral phases of Meencem 48

Main mineral phase	CA, CA ₂
Minor Mineral phase	C ₂ AS, C ₁₂ A ₇

Physical Properties of Meencem 48

Colour	Beige to brown
Appearance	Free Flowing Dense powder
Residue on 90 µm Sieve	10% max
Bulk Density	1.1 ~ 1.3 g/cc
Specific Gravity	3.20
Refractoriness in Cement	➤ 1300°C

Setting time & Consistency

The setting time is performed by creating a cube of neat cement in a standard size mould of 70.6mm using 0.85 times the water required to create a paste of standard consistency. Potable/distilled water is used during testing.

Initial Set	110-130 mins.
Final Set	220-240 mins.
Consistency	33 ± 3

Strength Development

After setting, strength develops very rapidly. Meencem is a cement with very high early strength and high compressive strength. After one (1) day, the compressive strength is higher than that of high grade Portland cements

Development of strength [MPa]

Time	24 Hours
Compressive Strength	➤ 35 min

Testing Procedures

All tests are conducted using Indian Standard 4031 procedures for the physical testing of cement.

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