



Metacon Metakaolin

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Technical Data Sheet

DESCRIPTION:

METACON METAKAOLIN is a high reactivity, silica based pozzolona which complies with the requirements of ASTM C 618N. It is manufactured by the processing of specially selected pozzolanic ingredients under controlled conditions. It reacts with free lime produced during the hydration process of cement to form additional cementitious products.

BENEFITS:

- Economic and superior manufactured alternative to Microsilica
- Reduces permeability and the penetration of chloride ions.
- Achieves very low RCP results
- Increases chemical resistance
- Prevents of alkali-silica reactivity
- Reduces efflorescence
- Reduces drying shrinkage
- Improves strength and toughness
- Improves colour and appearance
- Can be used in conjunction with white cement without affecting colour of finished product.

RECOMMENDED USAGE:

- In pre-cast and architectural elements
- In high performance concrete
- In concrete for marine structures
- In concrete for use in aggressive environments

METACON METAKAOLIN can be used as either an alternative to microsilica or as a supplemental cementitious material depending on the desired properties of the hardened concrete mix.

The normal usage levels are as follows:

3-5 % for use in triple blend mixes

5-8 % optimum replacement for achieving low RCP, water penetration and absorption results.

8-20 % of cement content – for optimum chemical resistance and efflorescence control

PHYSICAL ANALYSIS:

Appearance:	Off-white
Loss on Ignition:	0.5 – 1.5%
Lime Reactivity (Chapelle Test):	740 – 1,000 mg/gm
pH (10% solids):	4.0 – 5.0
Specific Gravity:	2.6
Bulk Density, kg/ltr:	0.4 – 0.5
Blaine value (cm ² /g):	22,000 – 25,000

CHEMICAL ANALYSIS (Mass %):

Characteristics	Results
SiO ₂	52.0 – 54.0
Al ₂ O ₃	44.0 – 46.0
Fe ₂ O ₃	0.60 – 1.20
TiO ₂ (max)	0.65
CaO (max)	0.09
MgO (max)	0.03
Na ₂ O (max)	0.10
K ₂ O (max)	0.03

PACKAGING:

METACON METAKAOLIN is supplied in 25 kg and 650 kg jumbo bags and bulk.

STORAGE:

When supplied in bags store in original closed bags and in a dry ventilated area. When supplied in bulk, store in closed bulk silos.

METACON METAKAOLIN has a shelf life of not less than 12 months when stored correctly.

TECHNICAL ADVICE:

The Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

SAFETY PRECAUTIONS:

Refer to the Material Safety Data Sheet (MSDS) for Metacon Metakaolin.



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