MICRO®

Silica Fume Slurry

RAMKA
CONSTRUCTION
CHEMICALS

MICRO® is a silica-fume slurry for improving concrete durability and reducing permeability. Silica fume densifies the concrete matrix, improves resistance to chloride and sulfate ingress, and significantly increases compressive, flexural and tensile strength.

Applications

- High-strength concrete (HSC)
- High-performance concrete (HPC)
- Shotcrete
- Self-compacting concrete
- Repair concrete
- Watertight, low-permeability concrete
- Low-heat mass concrete
- Abrasion-resistant concrete for decks, floors, overlays and dam spillways
- Blast-resistant concrete
- Concrete requiring low electrical conductivity and high electrical resistivity

Approvals / Standards

- ACI PRC 234-06
- Silica fume references: ASTM C1240 / INSO 13278.
- ASTM C1202
- BS 1881-122
- INSO 2930
- BS EN 12390-8

Guideline for Use

At the batching plant, mix MICRO with aggregate and approximately 75% of the mixing water for 1 minute, add cement and mix for 1 minute, then add the remaining water and other admixtures and continue mixing for 7 minutes. For limited ready-mixed volumes, add MICRO to the truck mixer at the site and mix at high speed for 7 minutes. A plasticizer is recommended for improved dispersion.

Dosage

3 to 16% by weight of cement, depending on project requirements and concrete application. For special projects the dosage may be increased to 25% by weight of cement. Any change outside the permitted range, or simultaneous use with other admixtures, requires RAMKA technical approval.

Storage

+10°C to +30°C; store in dry conditions away from direct sunlight.

Packaging

25 kg pail

Shelf Life

1 year from the date of production in the original packaging.

Health and Safety

Do not swallow and avoid contact with the eyes.
In case of accidental contact with the skin or eyes, rinse immediately with plenty of fresh water.
Refer to the Material Safety Data Sheet (MSDS).
Non-flammable.

Product Information

Chemical base	Silica fume
density	1.45±0.05 g/cm^3 at 20°C
Chloride ion	None

Advantages / Benefits

- Reduces cement content
- Increases modulus of elasticity
- Reduces permeability
- Improves resistance to alkali-silica reaction (ASR)
- Facilitates pumping and reduces wear on placing equipment
- Increases electrical resistivity and abrasion resistance
- Reduces cracking compared with dry-powder silica-fume addition
- Improves durability
- Can be used with different plasticizers
- Helps prevent thermal-stress cracking
- Improves resistance to chloride and sulfate ions
- Helps protect reinforcement and steel plates against corrosion

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