

DENKA BEFORM

Cementitious Quick Hardening Additive

Description

DENKA BEFORM is a quick hardening additive that can be used in concrete mixing in plants to reduce the need for steam curing. Also, **DENKA BEFORM** is also effective as a hardening accelerator in wet-type construction materials.

Features

- Handling time can be adjusted to between 20 minutes and 2 hours by using general setting modifiers such as tartaric acid or dedicated setting modifier DENKA SETTER D-300
- Excellent initial strength (10-30MPa can be obtained in 6 hours)
- Excellent crack resistance
- Reduced self-shrinkage and drying shrinkage due to expansion characteristics

Applications

- Quick-hardening grout
- Self-leveling material
- Quick-hardening repairing material
- Decorative mortar
- Instant demoulding of small products

Packaging and General Information

- Packaging: 20kg bags
- Appearance: Grey-white powder
- Specific weight: 2.87~2.93
- Blaine specific surface area: 6000cm²/g
- Additive amount: 15~20% by cement weight

Physical Properties of Mortar

General properties (typical values)

- Quick hardening additive (QHA): DENKA BEFORM, other CAC (Calcium aluminate cement)
- Retarding agent: DENKA SETTER D-300 for BEFORM, Tartaric acid for CAC
- Sand: ISO sand
- Water: tap water
- Base mix proportion; Binder/Sand = 1.0/1.5, Water/Binder = 0.30
- Length change; uniaxial confined method, cured in the water at 20°C after 1 day

| OPC | Binder | | Retarding agent (QHAX%) | Flow with 25 drops (mm) | Handling time(min) | Compressive strength (MPa) | | |
|-----|---------|-------|-------------------------|-------------------------|--------------------|----------------------------|---------|-------|
| | Product | Ratio | | | | 3 hours | 6 hours | 1 day |
| 100 | — | — | — | 153 | 300 | — | — | 32.0 |
| 90 | BEFORM | 10 | 0.26 ¹ | 209 | 55 | 7.1 | 15.4 | 35.9 |
| 85 | | 15 | 0.26 ¹ | 212 | 56 | 11.4 | 24.4 | 45.4 |
| 75 | | 25 | 0.28 ¹ | 215 | 68 | 16.3 | 37.5 | 73.2 |
| 80 | CAC | 20 | 0.11 ² | 187 | 29 | 6.8 | 8.3 | 11.8 |
| 20 | | 80 | 0.27 ² | 162 | 30 | 5.1 | 18.4 | 55.2 |
| 10 | | 90 | 0.13 ² | 168 | 30 | 19.6 | 43.5 | 59.5 |

¹DENKA SETTER D-300

²Tartaric acid

Handling Precautions

- Refer to the Safety Data Sheet (SDS) before use.
- Wear protective gear (goggles, mask, gloves, and rubber boots) while handling the product. Do not dispose of the product in drains.
- Once opened, the product should be used up completely. Otherwise, reseal for storage.
- The product should be stored in a dry area, indoors, and out of direct sunlight.
- For further information, please contact DENKA.

Limitation of Liability

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