

## Denka Cosmic RD-M

### Quick hardening cementitious grout for semi-rigid pavement

#### Description

**Denka Cosmic RD-M** is a quick hardening cementitious grout for semi-rigid pavement. It has excellent flow, flow retention, and strength development property; enabling rapid installation and early road operation. This material is suitable for flexible asphalt concrete pavement to ensure longer durability of the road.

#### Uses



Semi-rigid pavement with asphalt

#### Advantages

- Easy to mix and apply
- Excellent flow and flow retention
- Early setting and strength enables rapid construction and early operation of the road
- Suitable for pumping or pouring over a large range of application consistencies and temperatures
- Good strength development

#### Physical Properties (30°C)

|                                                                              |              |
|------------------------------------------------------------------------------|--------------|
| Flow value by P-Funnel, s<br>※ASTM C939                                      | 10-14        |
| Initial setting, hr<br>※EN 196-3                                             | < 6          |
| Compressive Strength, N/mm <sup>2</sup><br>1 days<br>28 days<br>※BS EN 12390 | > 40<br>> 90 |
| Flexural Strength at 28 days, MPa<br>※BS EN 12390                            | > 6          |

#### Application Instruction

##### 1) Standard Mix Ratio

8.25kg of clean water is required per 25kg bag of Denka Cosmic RD-M to achieve the desired consistency.

|                               | Denka Cosmic RD-M | Water   |
|-------------------------------|-------------------|---------|
| Plastic Bag                   | 25 kg             | 8.25 kg |
| Jumbo Bag                     | 500 kg            | 165 kg  |
| Unit Amount (m <sup>3</sup> ) | 1594 kg           | 526 kg  |

Refer to the mixing ratio guide for water: grout ratio.

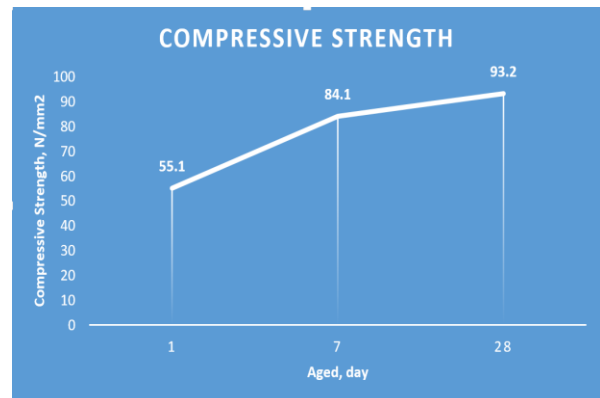
Mix for 1 to 2 minutes with a slow speed drill (max. 500 RPM)

After mixing, stir lightly with a spatula for a few seconds to release any entrapped air.

Pour the grout immediately into the prepared formwork. Level the grout using a trowel for finishing. Carry out curing for a predetermined time.

The use of a curing compound (e.g. Estocure R90) is recommended during the curing process.

**Note:** During actual work casting due to surrounding temperature etc, there might be a need to adjust the water content, as such it is recommended that the water content to be adjusted between 150kg to 180kg per 500kg Jumbo bag.



\*Eg: Compressive strength trend for Denka Cosmic RD-M

## Typical or Recommended Physical Properties of \*Semi-Rigid Composite

Typical or recommended semi-rigid composite sample\*\* and test results are to be taken as reference only.

| Properties                                                      | Target Specifications | Arbitrary test results |
|-----------------------------------------------------------------|-----------------------|------------------------|
| Compressive Strength @ 28 days, N/mm <sup>2</sup> (BS EN 12390) | 7 – 10                | >8                     |
| Flexural Strength @ 28 days, N/mm <sup>2</sup> (BS EN 12390)    | 3.5                   | >3.5                   |

\*Typical semi-rigid composite design:

Aggregate = ~92.9%  
 Filler = ~3.0%  
 Bitumen = ~3.6 – 4.6%

\*\* Open graded asphalt concrete void: 25 – 30% by volume.

Further notes: The semi-rigid composite sample design is to be decided by the relevant consultant or designer. Values above are for reference only.

### Cleaning

Wash all equipment with water after use.

### Technical Support

Denka offers technical support package to specifiers, end-users and contractors, as well as onsite technical assistance.

### Storage

**Denka Cosmic RD-M** has a shelf life of 6 months in unopened containers when kept in a dry store. Shelf life may be reduced in high humidity conditions

### Precautions

- Refer to the Safety Data Sheet (SDS) before use.
- Use ASAP after mixing as the mixed cement will rapidly harden.
- Wear protective gear (goggles, mask, gloves, and rubber boots) while handling the product. Do not dispose of the product in drains.
- If any part of the body comes into contact with **Denka Cosmic RD-M**, wash copiously with water as it is alkaline.
- 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.

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