

Denka Subshot Mortar Type-N

Premixed Mortar for Spray Mortar Application (Dry and Wet shotcrete application)

Description

DENKA SUBSHOT MORTAR TYPE-N consists of cement, size-controlled aggregates and special cement additives. The sprayed mortar can achieve excellent bonding and early strength, enable low dust generation and low rebound during spraying. The spraying of the mortar requires a system equipped with mixing and pumping equipment. This is suitable for both dry and wet shotcrete application.

Denka Subshot Mortar Type-N shall be applied together with **Denka Natmic AF-S** as fast set spray mortar system.

Uses

Denka Subshot Mortar Type-N is suitable for the following applications:

- Mining application for stabilizing and strengthening (e.g: tunnel wall, underground workshop)
- Repair of existing tunnels
- Support for small cross-section tunnels
- Reinforcement for unconsolidated ground
- Ground support after TBM excavations

Advantages

- Fast-setting property
- Low dust generation and low rebound
- Excellent compressive strength, bond strength and flexural strength over the long term from early on
- Excellent resistance to inflow
- Compact system design and easy operation
- Enable for wet and dry type of shotcrete

Physical Properties

Initial Setting Time, min	< 10
Compressive Strength, N/mm ²	
12 hours	> 10
28 days	> 35

Application Instruction

Surface Preparation

Substrate must be structurally sound, clean and free from laitance, oil, dust, grease, paint, corrosion and any other deleterious substances. Steelwork should be thoroughly cleaned and primed.

Immediately prior the application of spray mortar, the dust and any other deleterious substances should be removed by water or compressed air.

Mixing

Dry process

Introduce both powder and water at the nozzle for mixing.

Wet process

Premix the powder and water, then pump the mixture to the nozzle.

Mix design for dry and wet process:

Denka Subshot Mortar Type-N	: 25kg
Water	: minimum 11% (2.75kg)
	: maximum 13% (3.25kg)
Denka Natmic AF-S	: 2%~4%(0.5kg~1.0kg)

Placing

The mixed mortar should be sprayed continuously to a uniform required thickness. Multiple layers spraying is not recommended.

Curing

Denka Subshot Mortar Type-N is a cement based spray mortar. It must be appropriate cured immediately after finishing in accordance with good concrete practice or Estocure curing compound is recommended for this usage.

Note : Shrinkage cracks shall depend on the curing method. As such applicators need to be prepared to have a good curing product or method to mitigate shrinkage and cracks.

Cleaning

Denka Subshot Mortar Type-N should be removed from tools and equipment immediately after use with adequate water.

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Packing & Size

Denka Subshot Mortar Type-N	25 kg bag
Denka Natmic AF-S	280 kg drum

Yield

Denka Subshot Mortar Type-N with Denka Natmic AF-S	12.8 litre per bag depending on water addition
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Coverage

Denka Subshot Mortar Type-N with Denka Natmic AF-S	0.25 m ² per bag at 50mm thick
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These figures are for guidance only. Actual coverage will depend on the texture and porosity of the surface being covered.

Technical Support

Denka offers a technical support package to specifiers, end-user and contractors, as well as on site technical assistance.

Storage

Denka Subshot Mortar Type-N should be stored at room temperature. Keep dry out of direct sunlight.

If these conditions are maintained and the product is unopened, then a shelf life of 12 months can be expected

Precautions

Gloves and goggles should be worn. Any splashes to the skin or eyes should be washed off with plenty of clean water. In the event of prolonged irritation, seek medical advice. Since it content of solvent, stay it away from fire. Application areas must be well ventilated.

Additional Information

Denka Construction Solutions Malaysia Sdn Bhd offers a wide range of complementary products which includes waterstops, waterproofing products, grouts, anchors, specialized flooring products. In addition, a wide range of products formulated for repair and refurbishment of spalled concrete are available.



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