

## am FLEXSEAL

### DESCRIPTION

**am FLEXSEAL** is a surface applied capillary waterproofing slurry for new, existing concrete structures and mortar. It contains high-grade silica aggregates, cement and moisture-activated chemicals. **am FLEXSEAL** can effectively block the passage of water and ensure water tightness of the structure through forming of crystals in water bearing capillaries.

### USES

**am FLEXSEAL** can be used for water tanks, concrete foundations-slabs on grade and walls, water treatment reservoirs, marine structure, concrete pipes, elevator pits and equipment pits, bridge decks, tunnels and underground vaults, ramps, parking structures.

### ADVANTAGES

- Non-toxic, safe for use in food processing plants and potable water tanks
- Simple application (brush, dry-shake or spray application) .
- Becomes an integral part of the structure and provides a permanent treatment.
- Self-seals minor cracking.
- Provides water vapour permeability, waterproofs minor cracking.
- Effective against both positive and negative water pressure. Withstands extreme hydrostatic pressure.
- Protects reinforcing steel against corrosion
- Treatment applied to old and new concrete
- Economical to use.
- Finished surface can be over painted.

### METHOD OF USE

#### New Construction

For new construction, upon removal of formwork, **am FLEXSEAL** can be applied immediately as its curing process will also ensure the full hydration of concrete. Or using dry-broadcast method over the concrete after it has reached initial set / over prepared lean – concrete.

### Existing Construction

Structures subject to water ingress must be carefully inspected to determine its cause.

The careful sealing of existing cracks and joints before the application is extremely important for effective waterproofing results.

The penetration and rate of crystalline development will vary with the density and surface absorption of the concrete.

In powder form, **am FLEXSEAL** can be used as a dry shake on horizontal and vertical construction joints besides the uses of am Flexstop or am Flexswell. Use slurry form when mixed with water is also suggested.

### Surface Preparation

The concrete surface to receive **am FLEXSEAL** must have an “open pore” surface to allow penetration of **am FLEXSEAL**. Ensure all surface where **am FLEXSEAL** is to be applied must be free from oil, grease, wax, loose materials and any previous surface treatment, which may harmfully affect the adhesion. Areas with weak or honeycombed concrete, as well as hollow de-bonded render, must be repaired. Surface to be treated must be pre-wetted and still be damp at the time of application or to achieve saturated-surface-dry condition (SSD)

### Mixing

Depending on method of application adding approximately 5 to 8 litres of water to every 25kg bag or 20kg can of **am FLEXSEAL** and mix for approximately 3 to 5 minutes using mechanical mixer to get a lump-free, homogeneous and creamy consistency.

*For vertical surface application (with brush) or dry-shake application, the water may be reduced to minimize run off on the surface.*

Do not add additional water after initial mixing.

## Application

**am** FLEXSEAL can be applied by trowel, brush, spray method or dry-shake method onto the initial set concrete surface.

Apply **am** FLEXSEAL in 2 coats at right angles with brush. The second coat should be applied while the first coat is firm, but still 'green', which is usually about 3 to 4 hours after the application of first coat (dependent on temperature).

Note: If subsequent decoration is required onto the treated surface, the **am** FLEXSEAL should be first protected by a cement/sand render.

**am** FLEXSEAL could be used as finished layer with steel trowel or power float machine and trowelled into the concrete during final finishing .

## Curing

The slow drying of **am** FLEXSEAL is to ensure homogeneous curing and high waterproofing characteristics. **am** FLEXSEAL must be protected from rapid drying due to high temperature or strong wind, and cure by plastic sheet or mist spraying with water after 3-5 hours from final layer and keep spraying of water from min 3 days to 1 week. Note that curing compound is not suitable to be used with **am** FLEXSEAL system.

Tanks and other retaining structures may be filled 24 hours after final application of **am** FLEXSEAL as the crystal growth is accelerated by water pressure.

## HANDLING

**am** FLEXSEAL should be stored in a dry place under shade, free from moisture contact. Remove splashes from skin with water. In case of eye contact, wash with plenty of water. If irritation persists, seek immediate medical attention.

## CONSUMPTION

2.0 to 5.0 kg/m<sup>2</sup> by brush or trowel depends on ne gaive waterproofing or porosity waterproofing, surface conditions and wastage.

- ◊ Without rebars: 1.5-3 kg/m<sup>2</sup>
- ◊ Without installed rebars: 3 - 5 kg/m<sup>2</sup>
- ◊ Construction joints: 0.5 kg/m<sup>2</sup>

**am** FLEXSEAL may not reliably seal cracks and joints that experience constant or repeated movement. It is an effective waterproofing system for rigid concrete structures that are subject not to flexing or movement.

## PACKING

**am** FLEXSEAL is supplied in 25 kg bag, in 20kg pail.

## SHELF LIFE

**am** FLEXSEAL has a shelf life of 12 months in original packing.

SPECIFICATIONS	
Composition	Cement, silica sand, additives
Appearance	Grey
Density <ul style="list-style-type: none"> <li>• Dry</li> <li>• Mixed</li> </ul>	1320 kg/m <sup>3</sup> 1920 kg/m <sup>3</sup>
HDB's requirements(%)	
Water Penetration(mm) <5	4.2
Water Absorption < 5.0	4.6
Setting Time @ 30°C	
Initial	Approx. 90 mins
Final	Approx. 110mins
Chloride content AASHTO 260	100% No Chloride
Pull off bond strength	> 1.7 N/mm <sup>2</sup>
Compressive strength ASTM C- 39	10% increase (> 45 Mpa @ 28 days)
Application temperature	> 5°C
Toxicity	Non toxic



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