Technical Data Sheet

MEGASEAL EPP

High Performance Heavy Duty Epoxy Polyurethane Sealant

Description:

MEGASEAL EPP is a two part, flexible, resilient, self levelling polyurethane based sealant modified with special epoxy resins. Once mixed it becomes a flowable product that can be easily poured into horizontal joints. The cured sealant presents high resistance to chemicals, abrasion and recommended to be applied in heavy duty application.

MEGASEAL EPP can be used externally and internally to seal and caulk both moving and non-moving joints and cracks, when a high performance sealant is required. It can accommodate small amount of movement in expansion and contraction but can take high compressive stresses.

Uses:

- Car parking joints, warehouses, compression joints parking decks.
- Loading bays and marina work areas.
- Sealing internal floor joints of heavy wheeled, traffic areas and places subjected to heavy industrial use.
- Harsh environments subject to sea water splashes.
- Pharmaceutical and food processing plants.
- Poured concrete expansion and control joints.
- Sewage water treatment facilities.
- Swimming pools and water features.

Advantages:

- Two component, chemically cured faster than most one-part sealants.
- Self-levelling grade for horizontal applications.
- High abrasion and chemical resistant. Compatible with chemical factories and waste water treatment plant.
- Excellent adhesion to concrete substrates.
- Permanent and uniform water tight seal.
- Suitable for use in wide joints.
- Good mechanical properties for heavy duty, limited movement applications.
- Load bearing for support under heavy wheel load.
- Suitable for extreme weather conditions.

Instructions for Use:

Surface Preparation:
Proper surface preparation is essential to grant a good bonding between the sealant and the substrate. All the side surfaces of the joint must be dry, smooth, clean, free from dust, laitance or loose materials. To ensure proper cleaning, it is highly recommended to use compressed air or a wire brush in order to remove further dirt, oil stains and other contaminants. New concrete or cementitious surfaces should be allowed to cure and have moisture content not exceeding 4%.

Surface defects at edges and corners of the joints should be repaired using appropriate MATEX Repair Products. Allow the repairing product to cure as specified in the data sheet. Ensure that the side surface of the joint is totally dry before applying the primer. On sound, clean, well prepared totally dry joint surfaces, primer is not required. In case that primer is needed, use MEGAPRIME for porous surfaces and MEGAPRIME SP for non-porous surfaces. Apply the primer to both side of the joint faces prior to installation of backer rod or bond breaking. Apply a thin coat of primer as too much primer may act as bond breaker. Allow the primer to be tack free prior to application of the sealant.

Joint design:
MEGASEAL EPP may be applied for joints to accommodate a movement of ±10% in a width between 6 and 40mm. Width of joints should be twice as much of depth for joints greater than 13 mm in width. Width and depth for joints less than 13 mm in width should be equal. To control joint depth, use MEGASEAL CORD closed backer rod. If joint depth does not allow for backer rod, use polyethylene bond breaker tape to prevent three-sided adhesion.

Mixing:
MEGASEAL EPP is a two component system that must be mixed at the time of application. Mix the contents of component A (Base) with a low speed mixer for one minute to homogenize the contents of the container. Slowly add the contents of part B (Hardener) to Part

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A (base) container while mixing in progress. Mix the materials thoroughly with low-speed mixer (200-300 RPM) for an interval of 4 minutes confirming a homogenous, color consistent, lump free mixture is reached. Scrape down sides of container as much as possible during mixing and avoid lifting mixing blade out of material to minimize entrapment of air. As it is a pouring grade product, allow the material to rest for 3 minutes before application to release entrapped air. Knock by wooden spatula on sides of the container to assist in release of air bubbles.

Application:
Apply a masking tape to the sides of the joint before priming, to preserve the joint edges from contamination. Ensure that the expansion joint filler or backing rod is tightly backed and avoid any gaps or spaces at the base of the sealing slot, prior to positioning of the bond breaker tape. The backer rod shall be of diameter which is at least 20% larger, but not greater than 33% of the total joint width to ensure that it remains in compression. The use of a bond breaker tape is not required in expansion joints containing polyethylene foam joint filler. For construction or contraction joints, polyethylene bond breaker tape must be used.

Ensure continuous filling for the joint and do not allow gaps during the application. Allow the sealant to settle and remove the excess from the sides of the joint then tool the surface to get a smooth finish. Do not use soapy water or other liquids when tooling. Ensure the masking tape is removed immediately on completion of joint finishing works.

Standards:

- BS 5212: Part 1
- ASTM C 920, Type M, Grade P Class 12
- ASTM D412

TECHNICAL PROPERTIES	
Appearance	Free flowing paste
Density	1.21 ± 0.03 kg/lit
Viscosity	Free flowing
Pot Life	60 minutes
Application Temperature	+5°C to +35°C
Initial Cure at Standard Condition	24 hours
Full Cure at Standard Condition	7 days
Elongation (ASTM D412)	90%
Tensile Strength (ASTM D412)	2.0 N/mm2
Shrinkage (ASTM D157)	NIL
Shore A Hardness (ASTM D2240)	70 ±5
Movement Capability	15%
Service Temperature	-5°C to +80°C

*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

Consumption:

The approximate linear meter consumption per liter can be determined from the following formula:

$$\text{Sealant consumption per linear meter} = \frac{W \times D}{1000}$$

W= Joint width (mm), D= Joint depth (mm)

Packaging:

MEGASEAL EPP is available in 4 liter two parts metal containers.

Storage Conditions:

Store in original packing in dry conditions away from direct sunlight. Temperature of storage area not to exceed 25°C

Shelf Life:

MEGASEAL EPP can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

Cleaning:

Clean the used tools with ARMOSOLVENT immediately after completing the job and before the product dries. Hardened material can only be removed mechanically.

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Remarks:

- Do not apply on damp or contaminated surfaces.
- Joint movement should not exceed ± 10% of joint width when installed in 2:1 W:D ratio.
- Paint compatibility with sealant should be tested prior to painting.
- Joint depth should not exceed the width.

Health and Safety:

Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapour or spray mist.

FIRST AID:

Eyes:	In the event of accidental splashes, flush with warm water and seek medical advice.
Skin:	Wash skin thoroughly with soap and water
Inhalation:	Remove to fresh air, keep patient rested
Ingestion:	Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer to MEGASEAL EPP Material Safety Data Sheet.

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