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Technical Data Sheet

CEMSEAL JT100EM

HIGH PERFORMANCE JOINT SEALING & WATERPROOFING MEMBRANE

DESCRIPTION

CEMSEAL JT100EM is a high-performance Thermoplastic Elastomeric Rubber Joint Sealing and Waterproofing Membrane specially designed for sealing expansion joints, construction joints and cracks subjected to high movement.

Manufactured from specially formulated cross-linked thermoplastic elastomeric rubber membrane with UV stabiliser, CEMSEAL JT100EM provides outstanding flexibility, durability and waterproofing performance for concrete structures exposed to demanding environmental conditions.

FEATURES AND BENEFITS

- Joint sealing and waterproofing in one integrated system
- Excellent flexibility for high movement joints
- High tensile strength and elongation
- Excellent puncture and tear resistance
- Heat weldable to create continuous waterproof joints
- UV and weather resistant
- Resistant to sewage water, salt water, hydrocarbons, oils and fuels
- Suitable for submerged applications
- Hydrostatic water pressure resistance up to **7 Bar**
- Suitable for horizontal and vertical applications
- Factory-fabricated intersections available
- Easy cutting, welding and installation
- Compatible with various waterproofing and waterstop systems
- Suitable for new construction and repair applications

RECOMMENDED USE

- Expansion joints
- Construction joints
- Concrete cracks
- Water retaining structures
- Reservoirs
- Swimming pools
- Podium decks
- Roof slabs
- Wet areas
- Tunnels
- Bridges
- Precast structures

PRODUCT PROPERTIES

Colour	Grey
Material	Cross-linked Thermoplastic Elastomeric Rubber with UV Stabiliser
Roll Size (JT100EM-200)	200 mm × 25/30 m
Roll Size (JT100EM-300)	300 mm × 20/25 m
Shelf Life	5 Years
Storage Temperature	+10°C to +40°C
Service Temperature	-25°C to +95°C
Application Temperature	+5°C to +50°C
Welding Temperature	Approx. 200°C
Hydrostatic Water Pressure	7 Bar

TECHNICAL PROPERTIES

Properties	Test Method	Typical Value
Tensile Strength	ASTM D412	~14 MPa
Elongation at Break	ASTM D412	~ 450%
Tear Strength	ASTM D624	~ 58 kN/m
Hardness	ASTM D2240	Shore A 85
Puncture Resistance	ASTM E154	> 1000 N
Peel Strength	ASTM D903	> 1100 N/m
Hydrostatic Water Pressure Resistance	ASTM D5385	No leakage at 7 Bar

SUBSTRATE REQUIREMENT AND PREPARATION

The substrate and supporting structure must be of sufficient structural strength for application of waterproofing build-up. The substrate shall be smooth, clean, free of dust, curing compound, mould release agent, laitance, loose particles and other contaminants. All joints shall be prepared and filled with suitable filler or sealant. Any honeycomb, crack or damage to the concrete substrate shall be repaired with suitable cement mortar. The acceptable concrete substrate shall be in accordance with ICRI Concrete Surface Profile 1 to 5. Expansion joint edges should be chamfered approximately 5-10 mm to remove sharp corners.

APPLICATION

The membrane shall be bonded using CEMSEAL JT Epoxy Adhesive (two-component epoxy adhesive).

General installation includes:

1. Mark installation position
2. Apply epoxy adhesive to substrate
3. Position membrane
4. Embed membrane into adhesive
5. Apply second adhesive layer over fixing edges
6. Remove masking tape
7. Protect membrane until final floor finishes are completed

Where floor toppings, screeds or tiles are to be installed, broadcast fine quartz sand onto the fresh epoxy surface to improve mechanical bonding.

MEMBRANE JOINTING

Adjacent membrane rolls shall be overlapped approximately **50 mm** and heat welded using hot-air welding equipment at approximately **~200°C**.

After welding:

- Apply uniform pressure using hand roller
- Remove trapped air
- Allow joint to cool
- Avoid bending until fully cooled

Factory-made corner and intersection pieces are available for faster installation.

STORAGE AND SHELF LIFE

Store in original unopened packaging under dry conditions between **10°C and 40°C**, protected from direct sunlight.

Shelf life: **5 years** when stored correctly.

HEALTH AND SAFETY

Refer to the latest Safety Data Sheet (SDS) before use.
During hot-air welding, adequate ventilation should be provided, especially in confined spaces. Suitable PPE and respiratory protection should be used where necessary.

LIMITATIONS

- Not intended for direct vehicular traffic without suitable protection.
- Protect membrane from sharp objects and mechanical damage.
- High hydrostatic pressure applications should be used together with an appropriate waterstop system.
- Positive-side slab and wall applications should be supported by suitable joint filler board.
- Verify compatibility with adjacent sealants and waterproofing systems

BASIS OF TECHNICAL DATA

All technical data provided in this Technical Data Sheet are based on laboratory tests. Actual performance may vary due to factors beyond our control.

Disclaimer:
The information and any recommendations relating to the application and end-use of all CEMSEAL products are provided in good faith based on CEMSEAL's knowledge and experience of the products. In applications, the differences in materials, and variances of substrates and actual site conditions can vary such that no warranty in respect of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be taken as inferred either from this information, or from any written recommendations, or from any other advice offered by CEMSEAL. The proprietary rights of third parties must be observed. All orders are accepted subject to our sale terms and conditions. All users should always refer to the most recent and up to date issue of the Technical Data Sheet for the product concerned, which is available on request. It is recommended that products should always be properly stored, handled and applied under tested and recommended conditions.

For More Information:

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