

## HYPERSEAL®-EXPERT-150

### One component, polyurethane-based, low modulus joint sealant ideal for use in high humidity conditions

#### DESCRIPTION

**HYPERSEAL®-EXPERT-150** is a novel low modulus expansion joint sealant, especially formulated to ensure bubble free cure even at very high temperature and humidity climatic conditions. The product displays excellent thixotropy allowing its use even in very large expansion joints.

It cures by reaction with atmospheric humidity to produce a joint sealant with a **50% joint movement accommodation factor** and excellent adhesion on substrates traditionally problematic for PU sealants, e.g. glass, aluminum, steel, polycarbonate, etc. The extrusion rate and tooling of the sealant remain the same throughout a very wide range of temperature and humidity conditions.

#### COMPLIANCE WITH

- ISO-11600,
- Type F - class: 25LM,
- DIN-18540-F,
- ASTM C920,
- U.S. Federal Specification TT-S-00230C,
- Type II Class A.

**HYPERSEAL®-EXPERT** is **CE** certified according to **EN 15651-1** (Sealants for Facades) and **15651-4** (Sealants for Floor Joints with Foot traffic).

#### RECOMMENDED FOR

Sealing joints in:

- in-situ concrete,

- precast concrete panels,
- brick and block work,
- water tanks and swimming pools,
- metal frames,
- aluminum windows and panels,
- irrigation channels,
- glass,
- granite & marble.

#### LIMITATIONS

- Not recommended for direct application on unsound substrates.



In this case, the substrate must be primed with **MICROPRIMER®-PU**, which will re-enforce the concrete and produce a strong durable substrate for sealant application.

- Highly porous substrates, dusty surfaces or poorly compacted concrete, must have their porous bond area surfaces thoroughly sealed to avoid the possibility of air bubbles being blown into the uncured sealant if the substrate temperature rises.

#### FEATURES & BENEFITS

- No bubbling/swelling upon curing in difficult climatic conditions.
- Excellent Thixotropy
- Excellent adhesion on almost any type of surface, with or without the use of special primers.
- Excellent extrusion, tooling and storage stability over wide range of climatic conditions.
- Excellent chemical resistance, suitable for sealing joints in swimming pools and chemically treated water.
- Low modulus, joint movement accommodation

## HYPERSEAL<sup>®</sup>-EXPERT-150

50%.

- Microorganism and fungus resistant.
- Excellent heat resistance, suitable for application where exposure to temperatures >60°C take place.
- Resistance to cold: The sealant remains elastic even down to -40 °C.

### APPLICATION PROCEDURE

Clean joint thoroughly, and ensure that no oil, grease and wax contaminants, silicone remains are present.

For many applications, primer is not required. In the case of application on very porous substrates, bond area surfaces thoroughly to avoid the possibility of air bubbles being blown into the uncured sealant if the substrate temperature rises. The recommended primer is **MICROPRIMER<sup>®</sup>-PU**.

Apply backing material such as open cell polyurethane or a closed cell polyethylene backing rod. Although both types of backing rod are recommended, care must be taken when using the closed cell polyethylene rod that the outer skin not be punctured as in rising temperature conditions it may cause bubbling. Backing rod application is important as it ensures that the correct width to depth ratio is achieved to provide a firm backing against which the sealant can be tooled off.

Slide the sealant into the applicator gun, cut off the very end of the sealant packaging and fit the

gun with the nozzle that has been cut to deliver the right bead size.

Extrude the sealant into the joint ensuring that no air is trapped in the joint.

Tooling is recommended immediately after the application of sealant.

The ratio width to depth should be 2:1 subject to a minimum depth of 10mm

### CONSUMPTION

Linear meters per 600cc sausage:

| WIDTH \ DEPTH | 5mm       | 10mm      | 15mm     | 20mm     | 25mm       |
|---------------|-----------|-----------|----------|----------|------------|
| 5mm           | <b>24</b> | <b>12</b> |          |          |            |
| 10mm          |           |           | <b>4</b> | <b>3</b> | <b>2.4</b> |
| 15mm          |           |           |          |          | <b>1.6</b> |

### PACKAGING

600cc sausage.  
300cc cartridge

### SHELF LIFE

12 months minimum for 600 cc sausages and 6 months for 300 cc cartridges in the original packaging when stored in dry places and at temperatures of 5-25 °C. Once opened, use as soon as possible.

## HYPERSEAL<sup>®</sup>-EXPERT-150

### TECHNICAL SPECIFICATIONS

| PROPERTY  | UNITS                                      | METHOD  | SPECIFICATION                   |
|---|--|---|---------------------------------|
| Specific weight   | gr/cm <sup>3</sup>                         | ASTM D1475 / DIN 53217 / ISO 2811,<br>@ 20 °C | 1.45                            |
| Tack free time, @ 77 °F (25 °C) & 55% RH  | hours                                      | -   | 2.5-3.5                         |
| Cure Rate   | Mm/day                                     | -   | 2-3                             |
| Service temperature   | °C   | -   | -40 to 80                       |
| Hardness  | Shore A                                    | ASTM D2240 / DIN 53505 / ISO R868             | ±27                             |
| Modulus at 100% elongation  | (N/mm <sup>2</sup> )                       | ASTM D412 / EN-ISO-527-3                      | 0.3                             |
| Elongation  | %  | ASTM D412 / EN-ISO-527-3                      | >700                            |
| QUV Accelerated Weathering Test(4hr UV, at 60°C (UVB-Lamps) & 4hr COND at 50°C) | -  | ASTM G53                                      | Passed (after 2000hr).          |
| Thermal Resistance (100 days, 80°C)   | -  | EOTA TR011                                    | Passed                          |
| Toxicity  | -  | -   | No restrictions after full cure |
| Resilience  | %  | DIN 52458                                     | >90                             |
| Hydrolysis (8% KOH, 15 days @ 50°C)   | -  | -   | No elastomeric property change  |
| Hydrolysis (H <sub>2</sub> O, 30 days-cycle 60-100°C)                           | -  | -   | No elastomeric property change  |
| HCl (PH=2, 10 days @RT)   | -  | -   | No elastomeric property change  |
| Adhesion to concrete  | kg/cm <sup>2</sup><br>(N/mm <sup>2</sup> ) | ASTM D4541                                    | > 20<br>(> 2)                   |

## HYPERSEAL<sup>®</sup>-EXPERT-150

### EU-Declaration of Performance

In accordance with Annex III of Regulation (EU) No.305/2011  
(Construction Product Regulation)

For the product "HYPERSEAL<sup>®</sup> EXPERT"

**No: CPR-5113/850/14-3**

**CPR-5113/850/14-4**

**The notified body (0761):**

**Materiaiorufarsai (MPA)**

**fur das Bauwesen**

**BeethovenstratBe 52**

**D-38106 Braunschweig**

### EN 15651 – part 1 & part 4

The product is used as a single-component, polyurethane-based joint sealant for façade elements and for walkways.

| Essential characteristics   | Performance | Harmonized technical specification |
|---|-------------|------------------------------------|
| Reaction to fire  | Class E     | EN ISO 11925-2                     |
| Elastic recovery (%)  | >70%        | EN ISO 7389                        |
| Resistance to flow (mm)   | ≤3mm        | EN ISO 7390                        |
| Tensile properties – secant modulus- at 23°C  | ≤0.4MPa     | EN ISO 8339                        |
| Tensile properties – secant modulus- at -30°C   | ≤0.9MPa     | EN ISO 8339                        |
| Tensile properties at maintained extension  | NF          | EN 8340                            |
| Adhesion/cohesion properties at variable temperature  | NF          | EN ISO 9047                        |
| Loss of mass/volume   | ≤10%        | EN ISO 10563                       |
| Tensile properties at maintained extension after immersion in water (4 days)                  | NF          | EN ISO 10590                       |
| Tensile strength (movement capacity 50%)  | NF          | EN ISO 8340                        |
| <b>Outdoor Requirements:</b>  |             |                                    |
| Tensile properties at maintained extension after immersion in water (28 days)                 | NF          | EN ISO 10590                       |
| Tensile properties at maintained extension after immersion in saltwater (28 days)             | NF          | EN ISO 10590                       |
| Adhesion/cohesion properties after exposure to heat, water and artificial light through glass | NF          | EN ISO 11431                       |

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