

HYPERSEAL®-50FC-S

Unique one component polyurethane-based fast curing sealant / adhesive, based on the HYPERSEAL® dual polyurethane hybrid technology with outstanding thixotropic properties.

DESCRIPTION

HYPERSEAL®-50FC-S is a fast curing joint sealant, general purpose adhesive that has been specifically formulated to contain both PU and silylated PU technology, thus giving rise to a sealant, which includes the best properties of both technologies. The material has been modified in order to give enhanced thixotropic properties

HYPERSEAL®-50FC-S cures rapidly through reaction with atmospheric humidity to produce a sealant with excellent early grab adhesion even on substrates traditionally problematic for PU sealants, e.g. aluminum, steel, polycarbonate etc. Additionally, the sealant has been modified in order to have extrusion profile identical to Hybrid PU or MS technology.

RECOMMENDED FOR

Sealing joints in:

- metal frames,
- aluminum windows and panels,
- glass,
- granite & marble,
- flooring applications.

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.

- Very 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.
- **HYPERSEAL®-50FC-S** is suitable for UV exposure, however if colour retention and no chalking is required, it is recommended that the sealant be painted with good quality acrylic paint.

FEATURES & BENEFITS

- 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.
- Microorganism and fungus resistant
- Application under water immersion possible
- 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.

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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-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. Wide joints will require more than one pass of the application gun to

make sure that sealant is in full contact with the sides and bottom of 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	5 mm	10 mm	15 mm	20 mm	25 mm
5mm	24	12			
10mm			4	3	2.4
15mm					1.6

PACKAGING

600cc sausage.

SHELF LIFE

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

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TECHNICAL SPECIFICATIONS

PROPERTY	UNITS	METHOD	SPECIFICATION
Tack free time	min	-	< 90
Cure Rate	Mm/day	-	3-4
Service temperature	°C	-	-40 to 80
Hardness	Shore A	ASTM D2240 / DIN 53505 / ISO R868	±45
Modulus at 100% elongation	(N/mm ²)	ASTM D412 / EN-ISO-527-3	0.7
Elongation	%	ASTM D412 / EN-ISO-527-3	>700
Tensile strength at break @ 23 °C	(N/mm ²)	ASTM D412 / EN-ISO-527-3	> 2
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	>80
Hydrolysis (8% KOH, 15 days @ 50°C)	-	-	No elastomeric property change
Hydrolysis (H ₂ 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 ² (N/mm ²)	ASTM D4541	> 20 (> 2)

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