

# ADVAMASTIC PU SEALANT

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

## DESCRIPTION

ADVAMASTIC PU SEALANT 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.

## RECOMMENDED FOR

Sealing joints in:

- ▶ Insitu concrete
- ▶ Expansion concrete plates
- ▶ Precast panels
- ▶ Brick and block work
- ▶ Water tanks and swimming pools
- ▶ Metal frames
- ▶ Aluminum windows and panels
- ▶ Irrigation channels
- ▶ Glass
- ▶ Granite and marble

## FEATURES AND 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 50%.
- ▶ Microorganism and fungus resistant.
- ▶ Excellent heat resistance, suitable for application where exposure to temperatures  $>60^{\circ}\text{C}$  take place.
- ▶ Resistance to cold: The sealant remains elastic even down to  $-40^{\circ}\text{C}$ .





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## LIMITATIONS

- ▶ Not recommended for direct application on unsound substrates. In this case, the substrate must be primed with PRIMER, 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.

## APPLICATION PROCEDURES

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

For many applications, primer is not required. In this 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.

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 provides 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 the sealant.

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

## CONSUMPTION

Linear meters per 600cc sausage

WIDTH \ DEPTH	5mm	10mm	15mm	20mm	25mm
5mm	24	12			
10mm			4	3	2.4
15mm					1.6



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## TECHNICAL SPECIFICATIONS

PROPERTY	UNITS	METHOD	SPECIFICATION
Specific Weight	gr/cm <sup>3</sup>	ASTM D1475 / DIN 53217 / ISO 2811, @ 20°C	1.45
Tack free time, @ 77°F(25°C) & 55% RH	hours	-	2
Cure Rate	mm/day)	-	2-3
Service Temperature	°C	-	-40 to 80
Hardness	Shore A	ASTM D2240 / DIN 53505 / ISO R868	6 - 24
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 2000hrs)
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> (N/mm <sup>2</sup> )	ASTM D4541	>20 (>2)
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.	
Packaging	cc	-	600/Sausage

The information given in this datasheet is based on both current development work and many years of field experience. Whilst every effort is made to ensure that the information is reliable, we cannot accept responsibility for any work carried out with our materials as we have no control over methods of application, site, conditions, etc.