

**ONE-PART POLYURETHANE LOW MODULUS CONSTRUCTION SEALANT**

**DESCRIPTION**

U-Seal 907 is a one-component, gun-grade, non-sag polyurethane construction sealant. It cures under the influence of atmospheric moisture to form a high-performance compound with permanent elasticity and resistance to ageing and weathering.

**RECOMMENDED FOR**

- ▶ Sealing expansion and construction joints in vertical and horizontal applications
- ▶ Joints in precast elements
- ▶ External walling and cladding joints
- ▶ Weatherproofing of joints between brickwork, block-work, masonry, wood, concrete, metal frames
- ▶ Joints in walls, floors, balconies, around window or door frames
- ▶ Joints in water channels and suitable for hydraulic general sealing with contact with water
- ▶ Bridge and balcony parapets
- ▶ Retaining walls
- ▶ Metal roof and gutter sealing

**ADVANTAGES**

- ▶ Bonds and seals at the same time
- ▶ Permanently elastic; accommodates joint movement of  $\pm 50\%$
- ▶ Easy to gun with excellent tooling consistency
- ▶ Performant adhesion on all typical construction and industrial materials
- ▶ Good thixotropy - Non-sagging
- ▶ Non-staining on concrete and porous materials
- ▶ Excellent primerless adhesion on all typical construction and industrial materials
- ▶ Good resistance to ageing, weathering and immersion in cleansing agents, sea water, lime water
- ▶ Over-paintable with many water and solvent based paints (preliminary tests recommended)

**TECHNICAL CHARACTERISTICS**

Characteristics	Test Result	Test Method
<i>Appearance</i>	Non-sag thixotropic paste	
<i>Chemical nature</i>	Polyurethane	
<i>Color</i>	Grey, white, black. Other on request	
<i>Curing mechanism</i>	Moisture-curing	
<i>Curing through volume</i>	ca. 2 mm	At 23 °C (73,4 °F) and RH 50%
<i>Shore A hardness</i>	ca. 30	DIN 53505
<i>Density</i>	ca. 1,34 g/cm <sup>3</sup> (83,65 lb/ft <sup>3</sup> )	At 23 °C (73,4 °F) and RH 50%
<i>Tack-free time</i>	ca. 120 min	At 23 °C (73,4 °F) and RH 50%
<i>Elastic modulus at 100%</i>	ca. 0,4 N/mm <sup>2</sup>	ISO 37 DIN 53504
<i>Tensile strength</i>	ca. 1,5 N/mm <sup>2</sup>	ISO 37 DIN 53504
<i>Elongation</i>	ca. 750%	ISO 37 DIN 53504
<i>Joint Movement Capability</i>	$\pm 50\%$ of joint width	ASTM C920
<i>Application temperature</i>	5 to 40 °C (41 to 104 °F)	
<i>Temperature resistance</i>	-40 to 100 °C (-40 to 212 °F) with brief points at 120 (248 °F)	

**Note:** All data are average values obtained under laboratory conditions. Impractical use, temperature, humidity and absorption of the substrate may influence the above given values.

## ONE-PART POLYURETHANE LOW MODULUS CONSTRUCTION SEALANT

## DIRECTIONS FOR USE

**Surface Preparation:** Surfaces must be clean, dry, free of water, oil, grease or rust and of sound quality. Remove all loose particles or residues with a jet of compressed air, sandpaper or hard brush. Glass, metal and other non-porous surfaces must be free of any coatings and wiped clean with solvent. Pre-cast panels using form-release agents other than polyethylene film must be sandblasted or mechanically abraded and dust free. U-SEAL 907 has very good adhesion properties without the use of primer on most common building materials. Consequently, the use of the primer is not necessary if the support to be sealed is properly prepared and consolidated. However, varieties of brick, natural stone, plastics, paints, coatings and other treatments of surfaces often presents a difficult surface to which to adhere. Due to the number of unpredictable natures of these substrates, a preliminary test is recommended. If necessary, apply a coating of primer on the joint walls (U-Primer 110 for porous surfaces).

**For sealing purposes:** Recommended application temperatures: 15°-25°C (59 – 77 °F). For easier use or cold weather application we recommend the material to be stored at approximately 25°C (77 °F) prior to use. In order to guarantee free movement of the sealant in joints, it is imperative that the sealant does not adhere to the bottom of the joint, therefore for correct joint caulking, a closed-cell polyethylene bead (joint backing rod) PENETRON® BACKING ROD of suitable diameter is to be placed at the proper depth. If necessary, apply appropriate primer to joint sides and observe waiting time to avoid that trapped solvent, in condition of rising temperature, can blow bubbles in the uncured sealant. For best performance, sealant should be gunned into joint when the joint slot is at mid-point of its designed expansion and contraction. Firmly extrude sealant into the joint making sure that it is in full contact with the sides of the joint and with the backing rod at the bottom. Keep the nozzle in the sealant, continue on with a steady flow of sealant preceding the nozzle to avoid air entrapment. Avoid overlapping of sealant to eliminate entrapment of air.

**Finishing indications and limitations:** Sealant should be tooled to a smooth finish ensuring a full contact to the sides and back up material into the joint, this will also contribute in breaking the air bubbles which may be formed inside the sealant. Masking tape should be used where sharp exact joint lines or exceptionally neat lines are required. Remove the tape whilst the sealant is still soft.

**Coverage** 6 linear meters of 1 x 1 cm joint per 600 mL cartridge.

## SPECIAL CONSIDERATIONS

U-Seal 907 may be painted. However, some coatings may crack if movement occurs, preliminary tests recommended. Avoid exposure to high levels of chlorine (avoid to seal joints in chlorinated swimming pools). Do not cure in the presence of curing silicone sealants. Avoid contact with alcohol and other solvent cleaners during cure.

Do not apply when moisture or vapour transmission condition exists from the substrate as this can cause bubbling within the sealant. White colour tends to yellow slightly when exposed to ultraviolet rays. The ultimate

performance of U-Seal 907 depends on good joint design and proper application with joint surfaces properly prepared.

Clean the tools used with acetone or solvent.

Cured material can only be removed mechanically.

Contact PENETRON ROMANIA for further information, regarding your project.

## PACKAGING

U-SEAL 907 can be purchased in Alu-cartridge 310 mL (19 in<sup>3</sup>) (12 cartridges per box) or Alu-PE bags 600 mL (37 in<sup>3</sup>) (20 bags per box).

## STORAGE / SHELF LIFE

U-Seal 907 can be stored for 12 months in its original packaging (unopened container) at 10°C - 25°C (50 °F - 77 °F) in a cool, dry place. The storage temperature should not exceed 25°C (77 °F) for extended periods of time. Keep away from wet areas, direct sunlight and heat sources.

## SAFE HANDLING INFORMATION

Avoid skin and eye contact. If in eye, flush immediately with lots of water and seek medical advice. If skin contact occurs, remove immediately and wash with soap and water. KEEP OUT OF REACH OF CHILDREN. For further information please refer to Safety Data Sheet. Each Safety Data Sheet contains health and safety information for the protection of your employees and your customers.

## CERTIFICATION

## Certified according to:

EN 15651-1/4 TYPE F INT/EXT CC/ PW INT/EXT CC  
ASTM C920 Type S Grade NS Class 50 Use T2, M, A, O, L.

## Compliant to:

ISO 11600 Type F Class 25 sub-class LM;  
LEED iEQc 4.1; SCAQMD Rule 1168; BAAQMD Reg 8  
Rule 51



2538  
EN 15651-1  
EN 15651-4  
NPT srl  
Via G.Rossa 2  
Loc. Crespellano – 40053 Valsamoggia (BO)  
Italy  
14  
U-SEAL 907

One component polyurethane  
for the application in facade and pedestrian walkways  
Type F EXT-INT CC / PW EXT-INT CC  
Conditioning: Method A  
Substrate: Mortar M1

## ONE-PART POLYURETHANE LOW MODULUS CONSTRUCTION SEALANT

Pre – treatment with U-Primer 110 (mortar)

Reaction to fire: Class E

Release of chemicals dangerous to the environment and health:

NPD

Water tightness and air tightness

a) Resistance to flow:  $\leq 3$  mm

b) Loss of volume:  $\leq 10$  %

c) Tensile properties at maintained extension after water immersion: Not failure

d) Tensile properties at maintained extension: Not failure

e) Tensile properties at maintained extension at  $-30^{\circ}\text{C}$ : Not failure

f) Tensile properties (secant modulus) at  $23^{\circ}\text{C}$ :  $\leq 0.4$  N/mm<sup>2</sup>

g) Tensile properties (secant modulus) at  $-20^{\circ}\text{C}$ :  $\leq 0.6$  N/mm<sup>2</sup>

h) Tensile properties (secant modulus) at  $-30^{\circ}\text{C}$ :  $\leq 0.9$  N/mm<sup>2</sup>

i) Adhesion/cohesion properties at maintained extension after 28days water immersion: Not failure

j) Adhesion/cohesion properties at maintained extension after 28days salt water immersion: Not failure

k) Tear resistance: Not failure

l) Durability: Pass

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