

Uniseal 280 Pouring Grade

Polyurethane Joint Sealant

Description

A two component polyurethane sealant characterised by its inbuilt flexibility, even at low temperatures, excellent adhesion and resistance to a wide range of chemicals. Uniseal 280 is a tough and durable sealant, designed for aged concrete and suitable for heavy traffic loading. Available in both Gun and Pouring grades.

Advantages

- Available in Black or Grey
- Cold applied
- Self levelling
- Resistant to oil, fuel, hydraulic fluids
- Tolerant to climatic conditions
- Simple application
- Good movement accommodation
- Total joint movement 10% (± 5%)

Guide to Quantities

Joint Size (mm)	Litres per metre run	Metre run per litre
10 x 10	0.10	10.00
13 x 13	0.17	5.92
15 x 15	0.22	4.44
20 x 15	0.30	3.33
20 x 20	0.40	2.50
25 x 20	0.50	2.00
25 x 25	0.62	1.60
30 x 25	0.75	1.33
30 x 30	0.90	1.11

Chemical Resistance

Petrol	Resistant
Diesel Fuel	Resistant
Aviation Fuel	Resistant
Kerosene	Resistant
Dilute Acids	Resistant
Dilute Alkalis	Resistant
Lubricating Oils	Resistant
Skydrol	Resistant
White Spirit	Resistant
Aromatic Solvents	Not Resistant
Chlorinated Solvents	Not Resistant

Substrate Preparation

All joints should be dry, sound, free from dirt, dust and grease. Cleaning should be undertaken by wire brushing or grinding. Joint sides must be parallel and straight.

Before positioning a bond breaker ensure that the expansion joint filler is tightly packed and no gaps or voids exist at the base of the slot to be sealed.

Priming

Vertical surfaces should receive one coat of Uniseal Primer P2, then allowed between 30 minutes and 2 hours to dry.

Mixed Uniseal 280 should be applied when primer is tack free, normally within 2 hours @ 20°C.

(Note: If application of Uniseal 280 is delayed for more than two hours after priming, joints should be re-primed.



Technical properties of Uniseal 280 Pouring Grade

Properties	Standard	Performance Requirement	Declared Value
Appearance			Pigmented pourable resin
Base polymer			Polyurethane
Application temperature			5°C to 35°C
Service temperature			-20°C to 70°C
Pot life			50-70 minutes @ 20°C 2 hours @ 5°C
Tack free time	EN 14187-2		5 hours
Cure time			Will accept traffic in 24 hours Full cure in 7 days
Viscosity	EN ISO 3219		16250 centipoise
S.G.	EN ISO 2811-1		1.25
Loss of volume	EN ISO 10563	≤5 %	3.0 %
Change in mass and volume after immersion in liquid chemicals	EN 14187-4	<-25 % by mass, no increase <30 % by volume	-10 % -20 %
Shore 'A' hardness			70
Resistance to hydrolysis Shore 'A' hardness	EN 14187-5	Change in Shore A hardness <±50 %	81 (±15 %)
Tensile strength	BS 2782-3		10 MPa
Elongation	BS 2782-3		100 %
Elastic recovery	EN ISO 7389	>70 %	75 %
Adhesion - concrete	EN 1542		2.2 MPa
Adhesion - Steel			6.5 MPa
Artificial weathering	EN 14187-8	<±20 %	+15 %
Adhesion/cohesion properties after immersion in liquid chemicals	EN 14187-6 Class C	No failure	No failure
Movement accommodation factor (MAF)	BS 60936		10 % (±5 %)

Technical data shown are statistical results and do not correspond to guaranteed minima.

All testing performed at 20°C, unless otherwise stated.

Curing at low temperature may take up to 10 days to fully cure.

Light colours may exhibit colour shade variations on exposure to light.

1 N/mm² = 1 MPa

1 kN/mm² = 1 GPa

Mixing and Application

The sealant should not be applied at temperatures below 5°C or if rain is expected.

Use of masking tape will help to obtain a clean finish.

Add the entire contents of hardener to the base container and mix using a slow speed drill with helical type paddle. Mix for 3–5 minutes until a homogeneous mix is obtained. Care should be taken to prevent unmixed material remaining on the sides or base of the container.

Mixed sealant is pour-applied into the primed joint slot to finish 5mm below the running surface. Monitor sealant level and top up immediately if required.

For aesthetic purposes very light tooling of the joint material as it gels releases surface bubbles and enhances appearance.

Packaging

Uniseal 280 is available in 4 litre twin pack units.

Uniseal Primer P2 is available in 1 and 5 litre tins.

Nuwash is available in 5 and 20 litre drums.

Cleaning of Tools

Tools should be cleaned with Nuwash solvent as soon as possible after use.

Storage

The shelf life is 12 months when stored unopened in dry, normal conditions and away from direct sunlight. Protect from frost.

Health & Safety

Product Safety Data Sheets (SDS) are available from Nufins. SDS sheets are provided to help customers satisfy their safe handling, use and disposal needs as well as assist with any conformance requirements made locally by health and safety regulations.

SDS are continually updated to provide the latest information to our customers. We therefore recommend contacting our head office to obtain the most recent and accurate SDS before handling and using any product.

Limitations

Uniseal Primer P2 is flammable. Use only in well ventilated areas and do not smoke or expose to naked flames or other sources of ignition.

Disclaimer

The information contained herein is to the best of our knowledge true and accurate and is given in good faith but without warranty. The user will be deemed to have satisfied themselves independently as to the suitability of our products for their own particular purpose. In no event shall Nufins be liable for consequential or incidental damages.

Users must always refer to the most recent issue of the Technical Datasheets, copies of which will be supplied on request.

Technical Support

Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors. Technical contacts are available to provide further information and arrange demonstrations.