

A Polyurethane Resin For Elastic Sealing Of Dry Cracks

Guardian PU-ELASTIC is a two component, solvent and phthalate free, polyurethane system consisting of a resin component **Guardian PU-ELASTIC**. The system is ideal for the elastic sealing of cracks in concrete structures.

USES & ADVANTAGES

Guardian PU-ELASTIC can be used directly into dry cracks, if water leakage must be stopped first. **Guardian PU-ELASTIC** can be used in combination with Guardian PUE 100/E101 which will first stop the water and or react the water away after which the injection of **Guardian PU-ELASTIC** can be carried out.

Typical areas of use are :-

- The elastic sealing of cracks in concrete structures such as basements, tunnels etc.
- The sealing of cracks and joints and leaks in other structures.
- As injection material for injection hoses.

Advantages include:-

- • Good adhesion on dry concrete.
- • Low viscosity, therefore a good penetration into the crack.
- • Can be applied as one or as two component.
- • The curing time can be adjusted relatively simply.
- • The cured material is resistant to hydrolysis.

PROPERTIES

Guardian PU-ELASTIC			
Colour :	yellow	brown	
SG :	1.04-1.06	1.12-1.14	(ASTM D1475)
Viscosity at 25°C, mPa.s:	30-60	10-30	(ASTM D2196)
at 77°F, lb/ft.s	0.02-0.04	0.054-0.094	
Pot life at 25°C (77°F) :	60-70 min.		
Gel time at 25°C (77°F) :	70-90 min.		

APPLICATION

Although **Guardian PU-ELASTIC** is a two component system it can be used as a one component system.

Used as One Component System.

Step 1 : Add the required amount of **Guardian PU-ELASTIC** to the **Guardian PU-ELASTIC**.

Step 2 : Mix it thoroughly until a homogeneous mixture has been obtained, which will be the case after about 2 minutes.

Step 3 : The mix can be pumped by means of a single component injection pump. Keep in mind that the gel time of the system is 70-90 minutes at 25°C (77°F).

After the injection the pump should be cleaned with **Guardian PU Purge**.

In the case of a two component application it is possible to speed up the reaction time to obtain faster curing. For this purpose Guardian supplies a special catalyst, **Guardian Cat 42**, to be added to the **Guardian PU-ELASTIC**.

The following table clearly indicates the influence of adding **Guardian Cat 42** to the **Guardian PU-ELASTIC** on the gel time of the mixture.

(**Guardian Cat 42** is a special catalyst for accelerating the reaction time of **Guardian PU-ELASTIC**)

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Dosage of Guardian Cat 42 in % by weight of Guardian PUE200	Material Temperature		
	5°C (41°F)	21°C (70°F)	30°C (86°F)
	Reaction Time		
0%	~ 90 min	~ 90 min	~ 80 min
0.20%	~ 45 min	~ 40 min	~ 29 min
0.40%	~ 35 min	~ 30 min	~ 18 min
0.60%	~ 25 min	~ 25 min	~ 12 min
0.80%	~ 16 min	~ 15 min	~ 9 min
1.00%	~ 12 min	~ 11 min	~ 6 min

Note : The given data are laboratory parameters and may deviate depending on the object and conditions on site.

*To prevent condensation on the liquids at the start of work, the temperature of the components should be at least as high as the ambient temperature.

** All opened drums of **Guardian PU-ELASTIC** should be capped when not in use.

MIX RATIO

Guardian PU-ELASTIC : Guardian 201 = 1 : 1 by weight or
 Guardian PU-ELASTIC : Guardian 201 = 1.08 : 1 by volume

MECHANICAL & PHYSICAL PROPERTIES OF THE END PRODUCT

	According to Unit Value	
Elongation at break :	60-80 %	ASTM D638
Shore hardness :	20-30 D	ASTM D2240

PACKAGING

20 kg (44 lb) set; **Guardian PU-ELASTIC** 10 kg (22 lb) & **Guardian PU-ELASTIC** 10 kg (22 lb) in steel packaging.

Other packing units available upon request.

STORAGE & SHELF LIFE

Guardian PU-ELASTIC are very stable when properly handled.

To avoid problems, it is very important to understand that these materials are both temperature and moisture sensitive. Therefore, materials should be stored in an area with temperatures not exceeding 35°C (95°F) or not lower than 5°C (41°F), the shelf life is approximately 12 months in unopened drums.

All part used drums should be re-sealed to prevent the ingress of moisture.

HEALTH & SAFETY

Ordinary hygienic principles, such as washing the compounds from the hands before eating or smoking should be observed. Hands should be washed with a waterless cleaner followed by soap and water. Avoid breathing of vapours, prolonged contact with the skin, contact with open breaks in the skin, and ingestion. Use **Guardian PU-ELASTIC** with adequate ventilation.

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TECHNICAL SERVICE

The Guardian Coating Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

QUALITY ASSURANCE

ISO 9001: 2015 verified by TUV Nord.

DISCLAIMER

Performance data is achieved testing in accordance with International Standards. Testing by others may result in different results from those published as a result of external factors such as poor sampling, incorrect mixing, varying temperatures, curing, crushing procedures etc.

Guardian does not take responsibility nor need to defend others testing that does not achieve the published data.

The user must test the products suitability for the intended application and purpose. Guardian reserves the right to change the properties of the product.

Site conditions and differences in materials are such that no warranty or fitness for a particular purpose, nor liability can be inferred from the published data sheet, written recommendations or from other advice offered.