

NordicPUR Crack Seal

One Component (1C) Foaming Elastic Polyurethane Resin for Cavities

Purpose:

This is a water-reactive single-component polyurethane resin, free of CFC and phthalate plasticizers. Developed as a grouting/sealing and elastic connection of fissures and cavities in buildings and other civil engineering structures constructed from concrete, brickwork or natural stone. Used for injection hoses embedded in concrete structures. The final (reacted) product is characterised by excellent flexibility and elasticity.

- Stopping of water, including seawater, in cracks and fissures under high pressure
- Injection in areas requiring elasticity to address joint or crack movements
- Sealing in tunnels, sewers and pipelines
- Deep injection works
- Sealing of drill holes, crack and joints and loose rocks
- Stabilisation work
- Can be injected simultaneously with cement grouting, creating a compound grout

The product is applied at ambient temperatures $>0^{\circ}\text{C}$. Foaming factor is approximately 10 times depending on the site conditions.

Technical properties:

The data below are laboratory data only. They may vary in practice due to thermal exchange between resin and strata, surface properties of the stone, humidity, pressure and other factors.

Material data:

	NordicPUR Crack Seal	1 C Catalyst
Density at 25°C kg/m^3	1030 ± 20	1015 ± 20
Viscosity at 25°C $\text{mPa}\cdot\text{s}$	750 ± 50	25 ± 5
Colour	Brown	Yellow, transparent

Reaction Time data:

		Catalyst	
Temperature		2%	5%
5°C	Start	$100 \text{ s} \pm 20 \text{ s}$	$50 \text{ s} \pm 20 \text{ s}$
	Stop	$470 \text{ s} \pm 20 \text{ s}$	$250 \text{ s} \pm 20 \text{ s}$
15°C	Start	$90 \text{ s} \pm 20 \text{ s}$	$40 \text{ s} \pm 12 \text{ s}$
	Stop	$400 \text{ s} \pm 20 \text{ s}$	$200 \text{ s} \pm 20 \text{ s}$
25°C	Start	$60 \text{ s} \pm 20 \text{ s}$	$38 \text{ s} \pm 10 \text{ s}$
	Stop	$340 \text{ s} \pm 20 \text{ s}$	$160 \text{ s} \pm 20 \text{ s}$

* Reaction data (start & end of foaming) with 10% water and 10% catalyst. Reaction of product will change based on the different catalyst percentages (2 to 10%) used.

** Foaming factor approximately 10 times

Composition and properties:

This is a modified polyisocyanate, based on 4,4'-diphenylmethane diisocyanate (MDI). The catalyst is a blend. After the addition of the catalyst, the mixture has a shelf life of at least 40 hours, when completely protected from moisture. When used, it acts as an expanding foam.

Application:

Catalyst can be added to the resin (1-5% depending on the determined reaction time) quickly. The mixture can be stored for at least 40 hours without significant increase in viscosity under the condition that the grout mix is efficiently protected from moisture. The resin reacts with water. Therefore, in open cans a skin may be formed on the surface of the liquid by reaction with the humidity contained in the air but this does not affect the pumping operation.

The resin is injected as a single component via packers into the water-bearing zones using application pumps. When in contact with water, it reacts strongly and hardens. If the zone to be sealed is dry, a full hardening of the product mass can be achieved by preliminary or subsequent water injection. After use, clean the system and pump with recommended solvents from Nordic Geo Support.

Recommendation:

We recommend that before processing, the product should be stored for at least 12 hours at a minimum temperature of 15 °C to achieve the recommended processing temperature of between 15 °C to 25 °C.

Packaging:

Standard Can Size: 18 kg in Metal can

Catalyser: 1 kg in Metal can

Other packaging units are available on request.

Storage, shelf life:

The shelf life of the product is six months from date of delivery. The product should be stored in a dry place at temperatures between 15 °C and 25 °C. Improper storage will shorten shelf life. Once opened, the components should be used as soon as possible.

Disposal:

Small quantities of cured product residues can be disposed of as normal domestic waste. Dispose of not cured product components must be carried out in accordance with the local regulations. Empty cans should be cleared of liquid by punching a hole through the edge of the cover and turning them upside down, until liquid does not flow out any longer.

Disclaimer:

The data in this sheet conform to our best knowledge and experience at the date of printing, which is indicated below. The state of knowledge and experience are evolving constantly. Please pay attention therefore, that you always refer to the current version of this data sheet. The description of the product application in this sheet cannot take the special conditions and circumstances into account emerging from the individual case. Application use and processing of our product occur outside of our control capabilities. In particular, the processing results are exclusively subject to your own responsibility. No data in this sheet constitute a guarantee in a legal sense. Every time the user is obliged to check the product and auxiliary agents in terms of usefulness for his intended use.

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