

## Aqua reactive polyurethane for sealing against water ingress

IsoStop A is a single component polyurethane product which reacts on contact with water intended for:

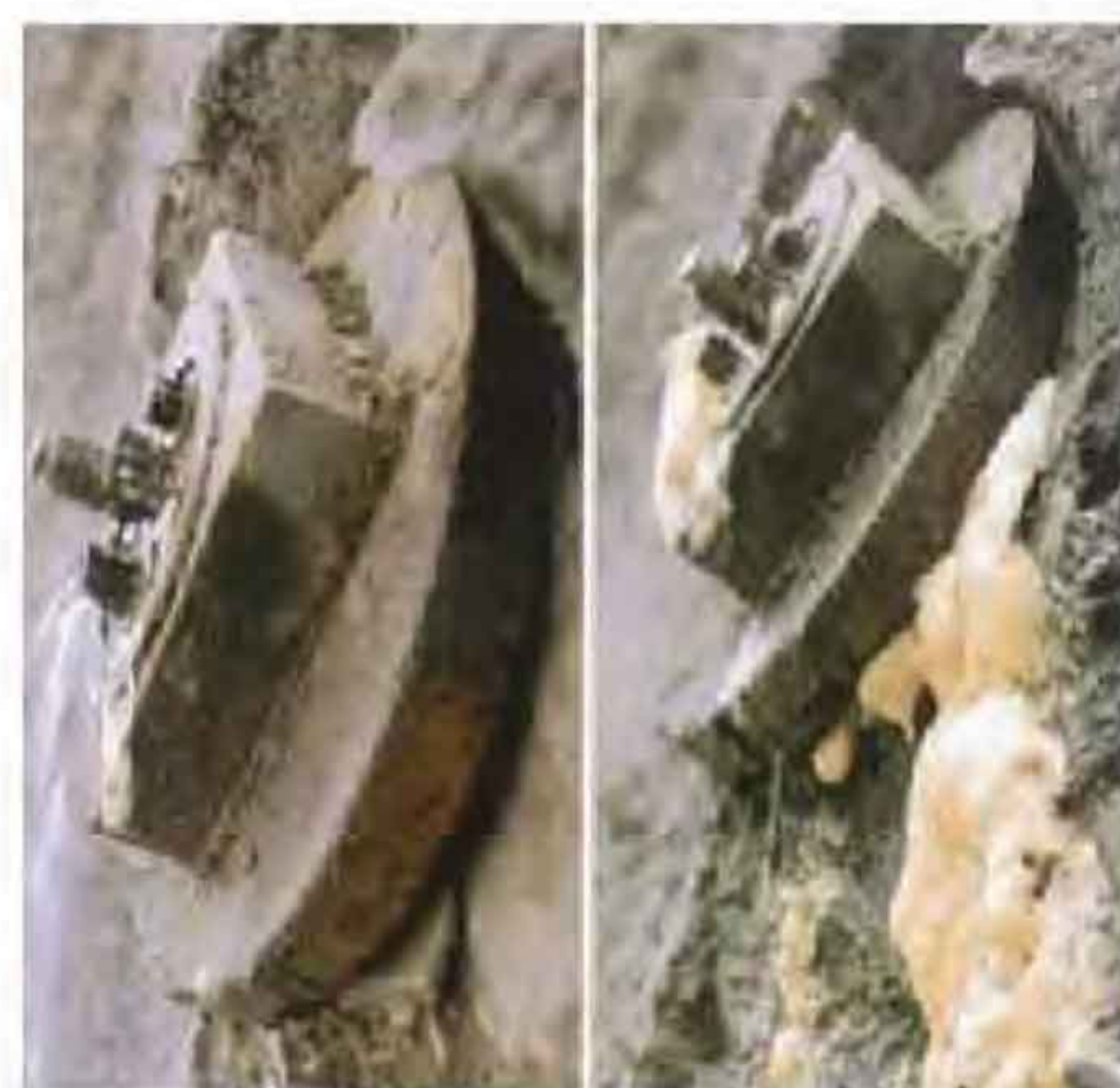
- Sealing against water ingress.
- General sealing work.

IsoStop A is intended for sealing large water inflows. The addition of an accelerator during product application increases the reaction speed

IsoStop A is injected into the ground by means of a manual or mechanical pump. Once the product has been injected, any contact with water produces rigid foam, which effectively seals the treated area.

### ADVANTAGES:

- Simple process, no metering pump required.
- Rapid reaction and high swelling capacity, particularly effective against large ingress of water.
- Water reactive.
- Effective for large water inflows.



### Technical Data

COMPONENT DATA	POLYURETHANE	ACCELERATOR
Density at 25°C (g/cm <sup>3</sup> )	1.2	0.8
Viscosity at 25° C (mPa.s)	800	10
Quantity of accelerator added to the prepolymer (%)	1 to 10	1 to 10
Shelf life at 20° C (months)	12	12

REACTION DATA	15°C	25°C
Start of reaction (min.)	0:15	0:35
End of foaming (min.)	0:45	1:40

The above data are values obtained in laboratory tests. They may vary according to site application conditions.

### Packaging

IsoStop A	POLYURETHANE	ACCELERATOR
Packaging	20 kg in a can	2 kg in a can

## Composition and Properties

### Components:

IsoStop A consists of modified isocyanates with softeners and additives.

### System:

IsoStop A cures by reaction with ambient water yielding a polyurethane/ polyurea foam. The expansion rate of the foam depends in the first place on the backpressure effected by the propaga- tion of the resin into the structure to be sealed, i.e. wide cracks/gravel result in a high foaming factor, narrow cracks/ sand in a low expansion rate and high strength.

### Final Product:

IsoStop A stops water inflows and provides a temporary seal, which often is satisfactory for the sealing of excavation sites during the construction work. IsoStop A also is used as a pre-seal for sealing work according to German ZTV-ING (Sealing and extendable joining of cracks in reinforced concrete). Cured IsoStop A does not shrink nor swell with water. IsoStop A has been tested for groundwater compatibility according to the official guidelines of the German Institute for Construction Technology (DIBt). Only an insignificant disturbance of the groundwater quality has been found.<sup>1</sup>

### Application

IsoStop A 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. IsoStop A is injected as a single component via packers into the water-bearing zones using manual or motordriven pumps. When in contact with water, the reaction mix foams up strongly and hardens. If the zone to be sealed is dry, a full hardening of the CarboStop mass can be achieved by preliminary or subsequent water injection. In contrast to the two component systems, IsoStop A will not harden in the injection pipe for hours since contact with the water contained in the ground is necessary for hardening.

### Recommendation:

We recommend to store the products prior to processing for at least 12 h at a minimum temperature of °15C in order to achieve the recommended processing temperature of between °15C – °30C. When the material is warmed up, local overheating, e. g. at the container wall, must be avoided by any means.

### Risk and safety phrases for IsoStop A

Observe the general safety regulations when handling chemicals

### IsoStop A:

Symbol: Xn (harmful)  
 R26 Harmful by inhalation. R38/37/36 Irritating to eyes, respiratory system and skin. R40 Limited evidence of a carcinogenic effect. R43/42 May cause sensitization by inhalation or skin contact. R20/48 Harmful: Danger of serious damage to health by prolonged exposure through inhalation. S9 Keep container in a well-ventilated place. S23 Do not breathe fumes/aerosol. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37/36 Wear suitable protective clothing and gloves. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S60 This material and its container must be disposed of as hazardous waste. Z1 Contains isocyanates: See information supplied by the manufacturer