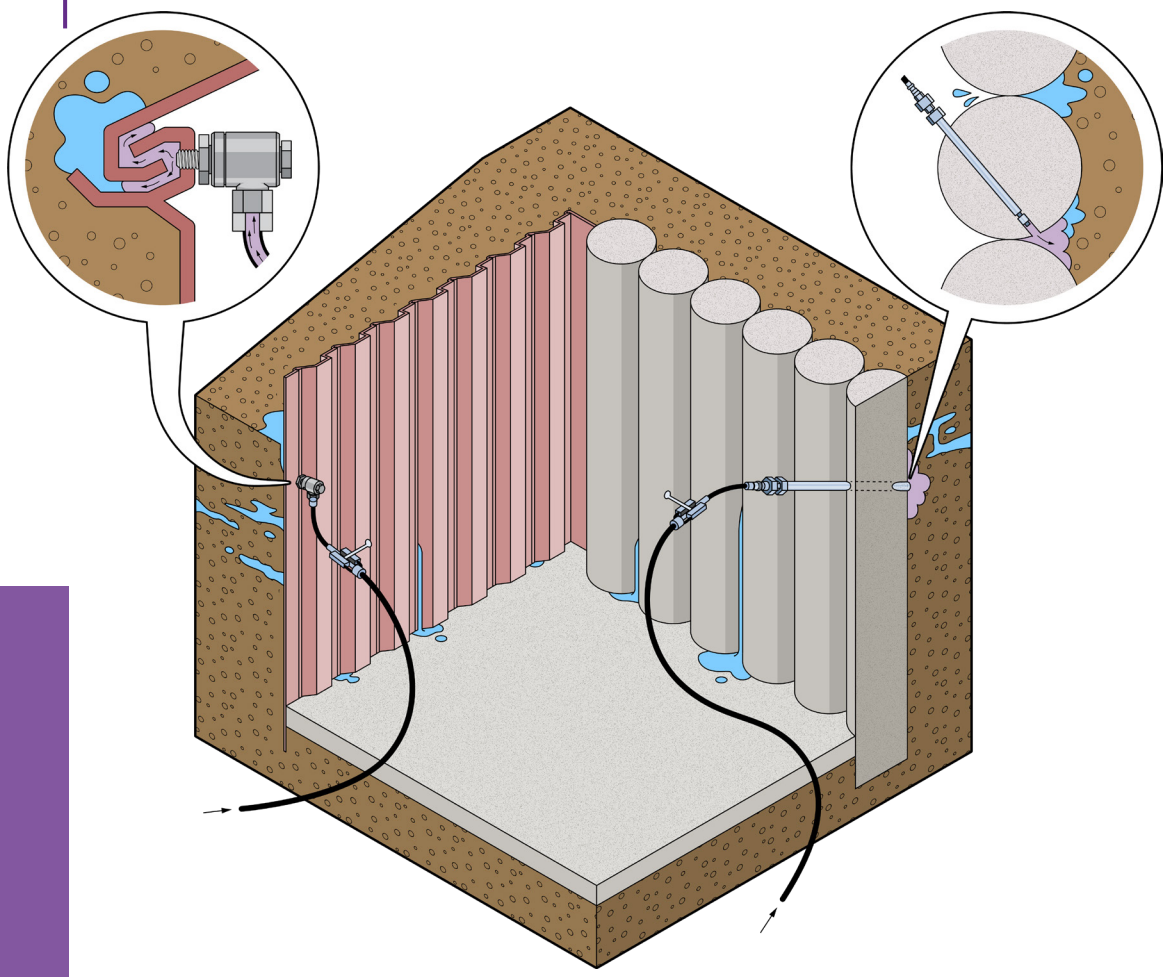
INJECTION-BASED WATERPROOFING

Area of application
Excavation Pit Waterproofing



RASCOR International Ltd
Gewerbestrasse 4
CH-8162 Steinmaur
Switzerland

Phone: +41 (0)44 857 11 11

info@rascor.com
www.rascor.com

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Temporary Protection in Underground Construction
Excavation pits place particular demands on waterproofing. High water pressure, fluctuating groundwater levels, uncontrollable inflows, or permeable soils require temporary measures that must simultaneously be safe, cost-effective, and reversible.

Using RASCOR injection systems, excavation pits can be reliably sealed – without elaborate sheet piling, without permanent structural elements, and regardless of the construction method. Sealing is applied precisely through the soil or through existing excavation enclosures. The result is a dry, safe working space – even under difficult conditions.

A Flexible System for Varying Site Conditions
Depending on the ground conditions, water load, and sealing requirements, different injection materials are available. For permeable soils such as gravel or sand, low-viscosity acrylate gels are suitable – they spread over large areas and form a watertight gel body. For stronger inflows, reactive polyurethane resins are used, which cure even underwater and provide localised sealing.

RASCOR systems can be applied preventively or reactively – at specific points, over large areas, or along the excavation enclosure. Injection is carried out via drill channels or through existing elements such as sheet piling, cut-off walls, or sprayed concrete.

Temporary, Cost-Effective, and Removable
A key advantage of RASCOR excavation pit waterproofing is its temporary design: once construction work is complete, the system can be removed or – if required – reactivated. Through targeted material selection, only as much material as necessary is used – saving time, costs, and resources.

Furthermore, injection technology is ideally suited for dense urban environments, confined construction sites, or complex refurbishment projects – wherever conventional waterproofing systems reach their limits.

Support Through Experience and Expertise
RASCOR supports planners, clients, and contractors from feasibility assessment through material selection right through to on-site execution. With practical advice, reliable products, and dependable application, cost-effective solutions are achieved – even under demanding conditions.

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1. **RASCOflex AY408** is a flexibly modified, environmentally compatible 2-component injection material based on polyacrylates.
2. **RASCOflex PU110X** is a solvent-free, low-viscosity, and elastic 2-component polyurethane injection resin.
3. **RASCOflex PU309 Series** encompasses fast and slow-reacting, foaming and non-foaming variants. All RASCOflex PU309 products are solvent-free 2C polyurethane resins for sealing water-bearing areas – even under flowing water or high pressure. The resins are suitable for injections in concrete, masonry, loose ground, or soil, and adapt flexibly to varying construction and environmental conditions.
4. **RASCOflex PU516F** is a foaming PUR resin for rapid water stoppage at active leakages.

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