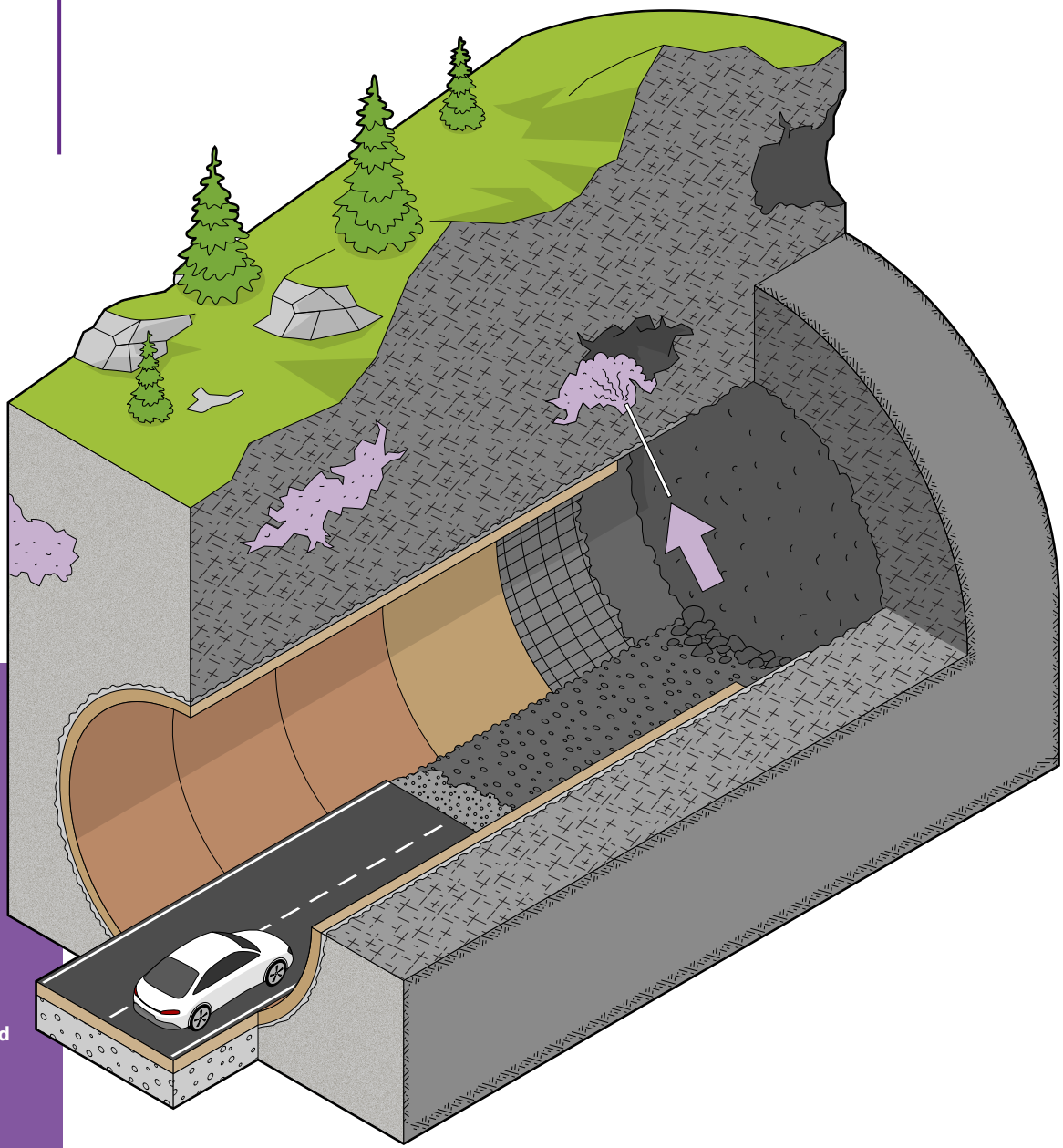
INJECTION-BASED STABILISATION

Area of application
Void Filling



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Area of application
Void Filling

Safe closure of cavities
Voids within or around structures can develop for many reasons – for example due to settlement, demolition works, insufficient compaction or natural processes such as erosion and tectonic movements.

Whether dry or water-bearing, fissures, cavities and karst voids can compromise structural stability and may lead to surface settlement or collapse of the overlying ground.

Targeted filling of such voids prevents settlement damage, stabilises adjacent structures and ensures the long-term integrity of the structure.

Flexible application – even with difficult access
Void filling is carried out via drill holes, filling ports or injection lances – depending on the location, size and accessibility of the cavity.

Thanks to liquid to foaming material properties, even difficult-to-access or complex cavity structures can be reliably and completely filled.

Typical applications range from backfilled foundation zones, abandoned pipelines and annular space filling to caverns, karst areas, old mines or washouts in tunnelling. Hidden voids in existing structures can also be treated in a targeted and non-destructive manner.

Reaction-reliable materials with a system
RASCOR uses volume-stable, solvent-free reaction resins with variable viscosity, reaction time and expansion behaviour.

Depending on the application, elastic, pressure-resistant or water-displacing systems are used – tailored to the ground conditions, cavity size and environmental influences.

Highly expanding polyurethane or silicate foam resins are particularly suitable for securing karst zones, fissures and cavities. Hybrid systems, such as cement-modified injection resins, are also used successfully – combining high strength with controlled reaction and enabling economical filling of complex structures in tunnel and shaft construction.

The injection materials distribute evenly within the cavity, reliably close remaining voids and bond with adjacent structures. The result is a dense, structurally effective mass with high durability – even under fluctuating water levels, dynamic loads or confined conditions.

Stabilisation with long-term performance
RASCOR supports you from damage analysis to final application – with proven materials, technical expertise and practical injection concepts. The systems used enable economical and durable void filling – whether localised or large-scale, temporary or permanent.

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1 **RASCOflex PU309 Series** comprises solvent-free 2-component polyurethane resins for waterproofing and consolidation under active water ingress, even in difficult conditions.
2 **RASCOflex PU516F** is a heavily foaming 1-component polyurethane foam resin for the fast, temporary sealing of pressurised water and the economical filling of voids.
3 **RASCOflex US509F** is a heavily foaming 2-component urea-silicate resin for the rapid stabilisation and filling of voids, fissures and unstable ground, even where water is present.
4 **RASCOhybrid HMS317** is a hybrid PU-cement injection resin with an adjustable gel time for economical, large-volume filling of karst zones and fissures.

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