

1 Q-TE-C® Material
(dry and swollen state)

Q-TE-C®

SWELLABLE THERMOPLAST- ELASTOMER-COMPOSITES

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Fraunhofer UMSICHT develops concepts and materials for self-repairing sealings on the basis of swellable polymers.

They are used e. g. in civil engineering (sealing of joints in buildings) and sewerage technology (sealing of pipe connections).

A current activity of UMSICHT is the development of "Swellable Thermoplast-Elastomer-Composites (Q-TE-C®)". The properties of new material are similar to rubber, at the same time it can easily be processed (similar to thermoplastic materials), disposes of an excellent recycling capability, and its ability to swell provides the basis for a new generation of sealing systems.

Keywords

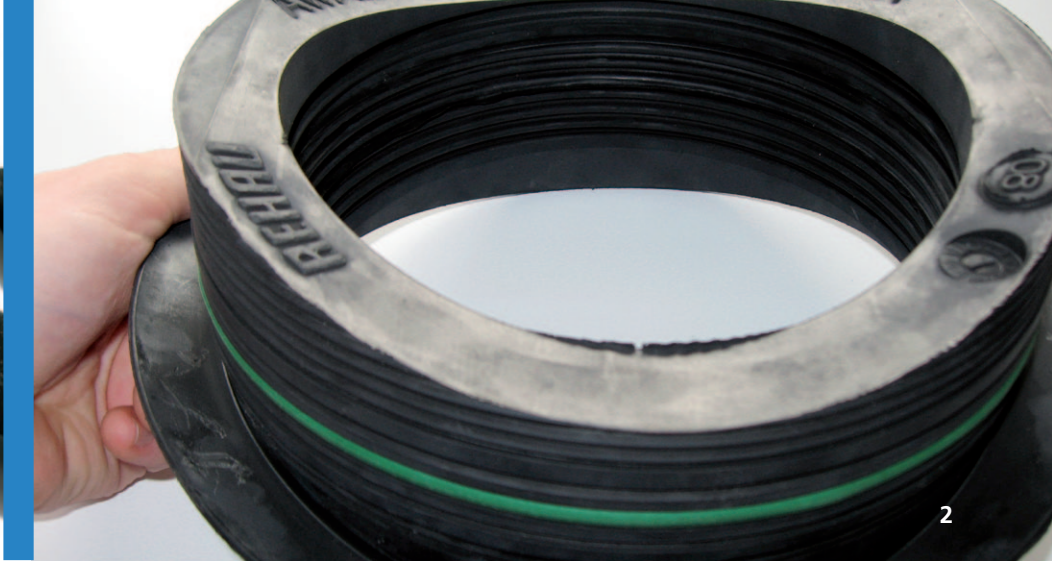
- Self-repairing materials
- Development of compounds
- Innovative sealing technology
- Material testing
- Application technology

Industrial sectors

- Civil engineering
- Pipeline construction and apparatus engineering
- Utilities
- Automotive industry
- Plumbing trade



1



2

1 Q-TE-C® shoulder rod

2 Sewer pipe connecting
with Q-TE-C® sealing ring

Technological specifications

- Various compounding units for the development of materials
- Measuring method for the determination of swelling pressure of swellable materials
- Application and processing technology (injection molding, calendaring, extrusion)
- Material testing according to DIN methods
- Provision of sample quantities in laboratory scale (some 100 g)
- Provision of sample quantities in technical and industrial scale (some 100 kg)

Our services

- Development of formulations and compounding
- Development of tailor-made products and solutions
- Realization – from the first idea up to prototype construction
- Material testing and system check
- Provision of test batches

Your benefit

- advance in technology by innovative solutions
- cost-efficient products
- high reliability for applications

