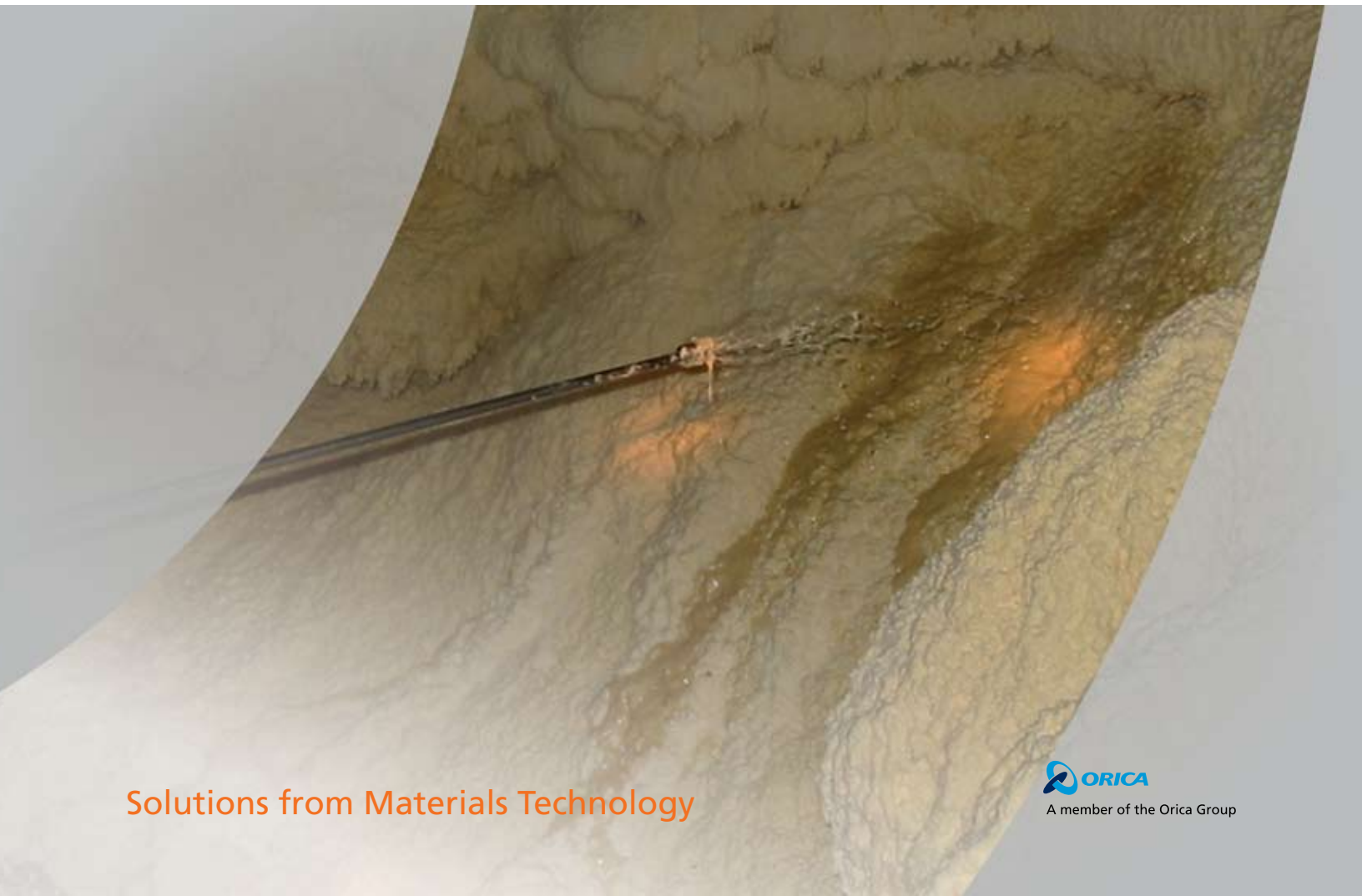


Geofoam

Injection and Cavity Filling System



Solutions from Materials Technology





Geofoam - rapidly reacting - strongly expanding

Geofoam is a high-efficiency, low exothermic dual component "Urethane-Silicate" injection grout, specially designed for the immediate stabilization of unconsolidated geological formations during tunneling and drilling in civil engineering, mining, tunneling, and geotechnical application.

Advantages

- Extremely quick reaction times, effectively reducing stand-still times
- Lower consumption due to very high expansion and penetration
- Use of Minova standard injection pumps
- Injection against the water-flow possible
- Environmentally engineered system
- Once cured, Geofoam can easily be cut through by TBM
- Highest progression speeds in broken strata due to effective front and radial cohesion of the soils and rocks
- Lower disc and wheel maintenance costs due to even spread of penetration forces
- Low exothermic reaction temperature makes it a unique alternative for injections in mines

Technical Data	Material Data of the Components		
	Unit	A	B
Density at 25°C (77°F)	kg/m ³ lbs/ft ³	1 455 ± 30 90.9 ± 2	1 220 ± 15 76.1 ± 1
Flame Point	°C (°F)	--	> 200 (> 390)
Viscosity at 25°C (77°F)	mPa*s (cps)	270 ± 70	140 ± 15
Reaction Data at 25°C (77°F)			
Start of foaming	20" ± 10"		
End of foaming	45" ± 15"		
Foaming factor	15 – 30		





Geofoam consists of two components which react immediately after mixing and transform very quickly into extremely resilient and durable foam. The mixed resin can be injected into the rock through a packer. Within a few seconds, the reaction sets in along with an increase in volume and the resin mixture starts foaming. The low viscosity of the grout combined with the high foaming factor allow the grout to enter into the finest cracks. Geofoam is particularly suited for the filling of large voids and cavities without shrinkage problems, while offering a very strong bond against pressurized water flows.

Standard dual component injection equipment can be used for the application of Geofoam. It ensures that the volumetric mixing ratio is kept even at high pumping pressures during application.

Geofoam is supplied in 20 and 30 liter (5.3 and 7.9 gallon) disposable containers. Further packaging information is available upon request.





Minova USA Inc.

150 Carley Court
Georgetown KY 40324 USA
Phone 502 863 6800
Fax 502 863 1374
Email sales.info@minovaint.com
Website www.minovausa.com



A member of the Orica Group

Important Note: Warranty

Minova USA Inc. warrants that its products, at the time of shipment, conform to the applicable descriptions set forth in the invoice and are free from defects in material and workmanship. NO OTHER WARRANTY, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, SHALL EXIST IN CONNECTION WITH THE SALE OR USE OF ANY MINOVA USA INC. PRODUCT, AND ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED AND EXCLUDED.

All claims under this warranty must be made in writing to Minova USA Inc. within 15 days after discovery of the defect, and within 90 days of the date of shipment by Minova USA Inc. of the product claimed defective. Upon timely receipt of a claim, Minova USA Inc. shall have the option either to inspect the product while in Buyer's possession or to request Buyer to return the product to Minova USA Inc. for inspection. Claims not made as provided above and within the applicable time period will be barred. All warranties shall be null and void if the products have not been stored and used in accordance with procedures recommended by Minova USA Inc.

Minova USA Inc. shall, at its option, either replace the nonconforming or defective product or refund to Buyer its purchase price. The foregoing constitutes Buyer's sole and exclusive remedy for any breach or warranty.