

Precipitated Silica for the Rubber Industry



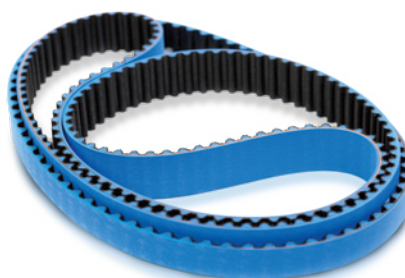
PRECIPITATED SILICA



In recent years silica has become an important raw material for the rubber and tire industry. Evonik is one of the global market leaders in precipitated silica business with 16 production plants and regional sales offices and technical service around the world.

The high purity precipitated silica offered by Evonik used as reinforcing filler for the rubber industry is globally sold under the trade name ULTRASIL®. The ULTRASIL® line offers a broad range of particle sizes and performance benefits to suit the specific needs of our customers. Evonik is the only supplier to offer Silica/Silane systems to the rubber industry. This reinforcing filler system is predominantly used in low-rolling

resistance tires with excellent wet grip, but also in mechanical rubber goods and shoe soles which require enhanced performance. Our application engineers and technicians are always available to answer any questions you may have, so don't hesitate to call. On request, we will gladly send detailed information on individual products, product samples as well as technical essays on application issues relevant to your processes.



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TYPICAL VALUES

PROPERTY	BET SURFACE AREA (N ₂)	CTAB SURFACE AREA	ELECTRICAL CONDUCTIVITY	LOSS ON DRYING 2h, 105°C	pH VALUE	SIEVE RESIDUE (MOCKER) 45µm	SIEVE RESIDUE (MOCKER) 63µm	GRANULAR SIZE (RO-TAP) > 300µm	GRANULAR SIZE (RO-TAP) < 75µm	POUR DENSITY	TAMPED DENSITY
UNIT	m ² /g	m ² /g	µS/cm	%	-	%	%	%	%	g/l	g/l
TEST METHOD (GUIDANCE)	ISO 9277	ISO 5794-1 G	ISO 787-14	ISO 787-2	ISO 787-9	ISO 787-18	ISO 787-18	ISO 5794-1F	ISO 5794-1F	ASTM D 1513	ISO 787-11
Highly dispersible silica	ULTRASIL® 9100 GR	235	200	≤ 1300	5.5	6.5		≥ 80	≤ 10	250	
	ULTRASIL® 7000 GR	175	160	≤ 1300	5.5	6.5		≥ 80	≤ 10	260	
	ULTRASIL® 5000 GR	115	110	≤ 1000	5.5	6.5		≥ 80	≤ 10	270	
	ULTRASIL® 4000 GR	85	80	≤ 1300	6.0	6.5		≥ 80	≤ 10	280	
Standard silica	ULTRASIL® VN 3	180		≤ 1300	5.5	6.2	≤ 0.10				160
	ULTRASIL® VN 3 GR	180	167	≤ 1300	5.5	6.2		≥ 80	≤ 10	280	
	ULTRASIL® VN 2	130		≤ 1000	5.5	6.9	≤ 0.10				190
	ULTRASIL® VN 2 GR	130	125	≤ 1000	5.5	6.9		≥ 80	≤ 10	260	
	ULTRASIL® 360	55		≤ 1200	5.5	9.0	≤ 0.30				180
Calcium silicate	ULTRASIL® 880	35			5.5	10.5	≤ 0.15				260
Sodium aluminium silicate	ULTRASIL® AS 7	65			5.5	11.3	≤ 0.50				220

The advantage of a Global Enterprise – Local Proximity

Precipitated Silica production sites:



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ULTRASIL® is a registered trademark of Evonik Industries or its subsidiaries.

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The Silica and Silanes experts at Evonik – From elements to excellence.