

ULTRASIL® 9100 GR

Characteristic physico-chemical data*

Properties and test methods	Unit	Value
Specific surface area (N ₂) Multipoint following ISO 9277	m ² /g	235
Specific surface area (CTAB) following ISO 5794-1G	m ² /g	200
Loss on drying 2 h at 105°C following ISO 787-2	%	5.5
pH value 5 % in water following ISO 787-9	-	6.5
Pour density following ASTM D1513	g/l	250
Electrical conductivity 4 % in water following ISO 787-14	μS/cm	≤ 1300
SA Ro-Tap (> 300 μm) following ISO 5794-1F	%	≥ 80
SA Ro-Tap (< 75 μm) following ISO 5794-1F	%	≤ 10
SiO ₂ content ¹⁾ following ISO 3262-19	%	≥ 97
Fe content ^{1) 2)}	ppm	≤ 400
Cu content ^{1) 2)}	ppm	≤ 6
Mn content ^{1) 2)}	ppm	≤ 6
Package size FIBC (net)	kg	625
1) based on ignited substance (2 h/1000°C) 2) internal method		
*) The given data are typical values. Specifications on request.		

Chemical description

SiO₂, synthetically produced amorphous silicon dioxide

Registration

ULTRASIL® 9100 GR

CAS-No.	112926-00-8 7631-86-9
DSL (Canada)	registered
IECSC (China)	registered
REACH (Europe)	registered
ENCS (Japan)	registered
KECI (Korea)	registered
NZIoC (New Zealand)	registered
PICCS (Philippines)	registered
TSCA (USA)	registered
AICS (Australia)	registered

Precipitated silica for use as a white reinforcing filler in the rubber industry.

Properties and applications

ULTRASIL® 9100 GR is a highly dispersible (HD) silica. It is strongly reinforcing with a specific surface area (SSA) of approximately 235 m²/g. Due to its outstanding dispersion behavior compared to other high SSA range silica and the very high reinforcing potential, ULTRASIL® 9100 GR is best suited for high performance and ultra high performance passenger car tire treads. In this application it combines a high dynamic stiffness with excellent abrasion and hysteresis characteristics at moderate green compound viscosities. Additionally this silica is also used in truck tire tread compounds with superior cut & chip resistance.

Bifunctional organosilanes like Si 69°, Si 75°, Si 266° or VP Si 363° are required for the use of precipitated silica in tire tread compounds. The use of diethylene glycol, triethanolamine or other alkaline accelerators might be necessary in order to achieve optimum in-rubber data.

Application fields are: Tires, mechanical rubber goods.

Safety and Handling

Information concerning the safety of this product is listed in the corresponding Safety Data Sheet, which will be sent with the first delivery or upon updating. Such information is also available from Evonik Industries AG, Product Safety Department, E-MAIL: sds-im@evonik.com. We recommend to read carefully the safety data sheet prior to the use of our product.

Packaging and storage

Our silica products are inert and extremely stable chemically. However, due to their high specific surface area, they can absorb moisture and volatile organic compounds from the surrounding atmosphere. Therefore, we recommend storing the products in sealed containers in a dry, cool place, and removed from volatile organic substances. Even if a product is stored under these conditions, after a longer period it can still pick up ambient moisture over time, which could lead to its exceeding the specified moisture content. For this reason, our recommended use-by date is 24 months after date of manufacture. Product more than 24 months old should be tested for moisture content before use in order to make certain that it is still suitable for the intended application.

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