

# ULTRASIL® 5000 GR

## Characteristic physico-chemical data

Properties and test methods	Unit	Value
Specific surface area (N <sub>2</sub> ) Multipoint following ISO 9277	m <sup>2</sup> /g	115
Specific surface area (CTAB) following ISO 5794-1G	m <sup>2</sup> /g	110
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	280
SA Ro-Tap (> 300 µm) following ISO 5794-1F	%	≥ 80
SA Ro-Tap (< 75 µm) following ISO 5794-1F	%	≤ 10
Electrical conductivity 4 % in water following ISO 787-14	µS/cm	≤ 1000
SiO <sub>2</sub> content <sup>1)</sup> following ISO 3262-19	%	≥ 97
Package size paper bag (net)	kg	25
Package size FIBC (net)	kg	650

1) based on ignited substance (2 h/1000°C)  
\*) The given data are typical values. Specifications on request.

## Chemical description

SiO<sub>2</sub>, synthetically produced amorphous silicon dioxide

## Registration

### ULTRASIL® 5000 GR

CAS-No.	112926-00-8
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® 5000 GR is a mechanically compacted granulate. On account of the granulation process it leads to less dust development during mixing.

ULTRASIL® 5000 GR is a highly dispersible and reinforcing silica with a specific surface area of approximately 120 m<sup>2</sup>/g. Compared to standard silicas with a specific surface area of approximately 160 m<sup>2</sup>/g ULTRASIL® 5000 GR provides lower compound viscosities, i.e. an improved processing behavior at equal loading. Furthermore, lower dynamic stiffness at low ambient temperatures and improved rolling resistance are achieved for tire tread compounds. Higher silica loadings will improve wet traction properties and allow to optimize winter properties. Bifunctional organosilanes like Si 69°, Si 75°, Si 266° or VP Si 363° are required for the use of ULTRASIL® 5000 GR 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 Material 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](mailto:sds-im@evonik.com). We recommend to read carefully the material 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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