

HDK[®] H18

Pyrogenic Silica - Fumed Silica

Characteristics

Synthetic, hydrophobic amorphous silica, produced via flame hydrolysis

More detailed information about the application and processing of HDK[®] H18 is available in our HDK-brochures and on the WACKER web site (<http://www.wacker.com/hdk>)

Special characteristics

White colloidal powder of high purity

Storage

HDK[®] H18 has a shelf life of at least 24 months when stored in unbroken original packaging in dry storage areas. The "Best use before end" - date of each batch is shown on the product label.

Application

HDK[®] H18 is applied as a thickening and thixotropic agent in composites, coatings and adhesives, especially in vinyl ester, epoxy and polyurethane systems.

If the material is kept beyond the shelf life recommended on the product label, it is not necessarily unusable, but a quality control should be performed on the properties relevant to the application.

Processing

A good dispersion of HDK[®] H18 is a must to assure optimum performance.

Product data

Typical General Properties	Test procedure	Unit	Value
SiO ₂ -content ¹⁾	DIN EN ISO 3262-19	%	>99.8
density of SiO ₂		g/l	2200
silanol group density		SiOH/nm ²	< 0.5
electric resistivity (density 50 g/l)		[Ω cm]	>10 ¹³
BET-surface area	DIN ISO 9277/ DIN 66132	m ² /g	ca. 120

Physical-chemical properties	Test procedure	Unit	Value
BET-surface area of hydrophilic silica	DIN ISO 9277/ DIN 66132	m ² /g	170 - 230
Carbon content		%	ca. 4.5
pH, in 4 % dispersion ²⁾	DIN EN ISO 787-9		4.0 – 6.8
tamped density	DIN EN ISO 787-11	g/l	ca. 50
loss on drying ³⁾ (2 h at 105°C)	DIN EN ISO 787-2	%	< 0.6
sieve residue, acc. to Mocker > 40 μm	DIN EN ISO 787-18	%	< 0.2
Surface modification		-OSi(CH ₃) ₂ -	

- 1) based on the substance heated at 1000 °C for 2 h
- 2) 1:1 mixture of water-methanol
- 3) ex works

Packaging

HDK[®] H18 is offered in following packaging:

- * paper bags on pallet:
10 kg bags, (180 kg per pallet)
- * Big bags:
160 kg (big bag on pallet)

Details about packaging and handling:
(<http://www.wacker.com/hdk>).

Safety information

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via the WACKER web site (<http://www.wacker.com/hdk>).

During transportation and processing HDK[®] H18 may cause electrostatic charges.

Like other amorphous silicas HDK[®] H18 does not show either carcinogenic (IARC classification, Volume 68, 1997) or mutagenic properties.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

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For technical, quality, or product safety questions, please contact:

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