HDK® N20
Pyrogenic Silica

Synthetic, hydrophilic, amorphous silica, produced via flame hydrolysis. Standard product for industrial applications.

INCI Silica

Properties
White colloidal powder of high purity.

Technical data

Specification

<table>
<thead>
<tr>
<th>Property</th>
<th>Condition</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss on drying⁽¹⁾</td>
<td>-</td>
<td>&lt; 1.5 %</td>
<td>DIN EN ISO 787-2</td>
</tr>
<tr>
<td>Sieve residue⁽²⁾</td>
<td>-</td>
<td>&lt; 0.03 %</td>
<td>DIN EN ISO 787-18</td>
</tr>
<tr>
<td>pH</td>
<td>-</td>
<td>3.8 - 4.3</td>
<td>DIN EN ISO 787-9</td>
</tr>
<tr>
<td>Tamped density</td>
<td>-</td>
<td>approx. 40 g/l</td>
<td>DIN EN ISO 787-11</td>
</tr>
<tr>
<td>BET surface</td>
<td>-</td>
<td>175 - 225 m²/g</td>
<td>DIN ISO 9277 DIN 66132</td>
</tr>
</tbody>
</table>

⁽¹⁾ex works (2 h at 105 °C)
⁽²⁾acc. to Mocker > 40 µm
## General Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Condition</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density⁽¹⁾</td>
<td>20 °C</td>
<td>approx. 2.2 g/cm³</td>
<td>DIN 51757</td>
</tr>
<tr>
<td>INCI name</td>
<td>-</td>
<td>Silica</td>
<td>-</td>
</tr>
<tr>
<td>Loss of weight⁽²⁾</td>
<td>-</td>
<td>&lt; 2 %</td>
<td>DIN EN ISO 3262-19</td>
</tr>
<tr>
<td>Refraction index</td>
<td>-</td>
<td>1.46 - 1.46</td>
<td>-</td>
</tr>
<tr>
<td>SiO₂ content⁽³⁾</td>
<td>-</td>
<td>&gt; 99.8 %</td>
<td>DIN EN ISO 3262-19</td>
</tr>
<tr>
<td>Silanol group density</td>
<td>-</td>
<td>2 SiOH/nm²</td>
<td>-</td>
</tr>
</tbody>
</table>

⁽¹⁾SiO₂
⁽²⁾at 1000 °C / 2h (based on the substance dried at 105 °C for 2 h)
⁽³⁾based on the substance heated at 1000 °C for 2 h

These figures are only intended as a guide and should not be used in preparing specifications.

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product’s fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties’ rights.

## Applications

- Toners
- Offset Printing
- Industrial Coatings
- Architectural Coatings
- Personal Care
- Composites & Molding
- Insulation Materials
- Batteries

## Application details

HDK® N20 is applied as a thickening and thixotropic agent in many organic systems, e.g. in unsaturated polyesters, coatings, printing inks, adhesives, cosmetics and others.

HDK® N20 is used as a reinforcing filler in elastomers, mainly silicone-elastomers.

HDK® N20 acts as a free flow additive in the production of technical powders.

HDK® N20 is not suitable for pharmaceuticals, food and feed.

A good dispersion of HDK® N20 is a must to assure optimum performance.

More detailed information about the application and processing of HDK® N20 is available in our HDK-brochures and on the WACKER web site.
Packaging and storage

Packaging

HDK® N20 is offered in following packaging:
- pallet with paper bags: 10 kg bags
- Big bags: 150 kg (big bags on pallets)
- Silotruck: depending on size of truck, approx. 3.5 to 5 tons

Storage

The ‘Best use before end’ date of each batch is shown on the shipping label and the certificate of analysis. HDK® N20 should be stored in the original packaging in dry storage areas. Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons. Due to the high surface area HDK® adsorbs volatiles and should be protected from humidity and volatiles. If single bags are taken away from an original pallet, the remaining bags of this pallet must again be protected against humidity and volatiles.

Safety notes

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. During transportation and processing HDK® N20 may cause electrostatic charges. Like other amorphous silicas HDK® N20 does not show either carcinogenic (IARC classification, Volume 68, 1997) or mutagenic properties.

QR Code HDK® N20

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

Wacker Chemie AG, Hanns-Seidel-Platz 4, 81737 Munich, Germany
info@wacker.com, www.wacker.com

The data presented in this medium 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 medium 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 information provided by us does 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 product for a particular purpose.