

Safety Data Sheet

Material: 60004600

HDK® N20
HYDROPHILIC PYROGENIC SILICA

Version 2.5 (US)

Print Date 11/08/2023

Date of last alteration: 11/09/2022

1. Product and company identification

1.1 Identification of the substance or preparation:

Trade name

HDK® N20
HYDROPHILIC PYROGENIC SILICA

Product group:

Additive

Use of the Substance/Mixture

Industrial.

Auxiliary agent for: Plastics , Lacquer , Building materials , elastomer products , cosmetics .

1.2 Company/undertaking identification:

Manufacturer/distributor:

Wacker Chemie AG
Hanns-Seidel-Platz 4
81737 München
Germany

Customer information:

Wacker Chemical Corporation
4950 S State Road
Ann Arbor, MI 48108
InfoLine:
Tel (517) 264-8240
Hours of operation:
Monday - Friday, 8 am to 5 pm (eastern standard time)
Corporate website: www.wacker.com

Emergency telephone no. (24h):

(517) 264-8500

Transportation emergency:

(800) 424-9300 (CHEMTREC, USA)
(703) 527-3887 (CHEMTREC, international)

This SDS was prepared by the Regulatory Affairs and Product Safety Department (RAPS) of Wacker Chemical Corporation.

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (GHS):

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (GHS):

No labeling according to GHS required.

2.3 Other hazards

No data available.

Endocrine disrupting properties - human health: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine disrupting properties - environment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3. Composition/information on ingredients

3.1 Chemical characterization (substance)

CAS-No.

Chemical characterization

Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO₂)

3.2 Information on ingredients:

This material does not contain any ingredients above the permitted limit(s).

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Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in this section are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product. Specific chemical identities and/or exact percentage (concentration) of the composition may have been withheld as a trade secret.

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above $\geq 0.1\%$.

4. First-aid measures**4.1 General information:**

Get medical attention if irritation occurs or if breathing becomes difficult.

4.2 If inhaled

If inhaled, remove to fresh air.

4.3 In case of skin contact

If contact with skin, wash skin with plenty of water or with water and soap.

4.4 In case of eye contact

If contact with eyes, immediately flush eyes with plenty of water.

4.5 If swallowed

Drink plenty of water. Get medical attention if symptoms occur. Show label if possible.

5. Fire-fighting measures**5.1 Flammable properties:**

| Property: | Value: | Method: |
|--|-----------------|---------|
| Flash point..... | exempt | |
| Boiling point/boiling range | not applicable | |
| Lower explosion limit..... | exempt | |
| Upper explosion limit..... | exempt | |
| Ignition temperature | Not applicable. | |
| NFPA Hazard Class (comb./flam.liquid)..... | Not applicable | |

5.2 Fire and explosion hazards:

Material does not burn. Electrostatic charging is possible.

5.3 Recommended extinguishing media:

Use extinguishing measures appropriate to the source of fire.

5.4 Unsuitable extinguishing media:

Not applicable.

5.5 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

not applicable

5.6 Fire fighting procedures:

Fire fighters should wear full protective clothing including a self-contained breathing apparatus.

6. Accidental release measures**6.1 Precautions:**

Secure the area. Wear personal protection equipment (see section 8). Keep unprotected persons away. Avoid dust formation. Do not breathe dust. Avoid contact with eyes and skin.

HAZWOPER PPE Level: D

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6.2 Containment:

Prevent material from entering surface waters, drains or sewers and soil. Close leak if possible without risk. Cover any spilled material in accordance with regulations to prevent dispersal by wind. Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Inform authorities if substance leaks into surface waters, sewerage or ground.

Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.

6.3 Methods for cleaning up

Damp down dust and fill into containers. Avoid dust formation.

7. Handling and storage**7.1 Handling****Precautions for safe handling:**

Avoid dust formation. Observe information in section 8.

Precautions against fire and explosion:

Electrostatic discharge possible during transport and processing. Take precautionary measures against electrostatic charging. Ensure all parts of equipment are well earthed. Use inert gas when working with combustible and explosive liquids. Avoid dust deposit, remove dust regularly.

7.2 Storage**Conditions for storage rooms and vessels:**

Observe local/state/federal regulations.

Advice for storage of incompatible materials:

Observe local/state/federal regulations.

Further information for storage:

Keep container dry and tightly closed.

8. Exposure controls and personal protection**8.1 Engineering controls****Ventilation:**

Use only with adequate ventilation.

Local exhaust:

In case of dust formation: (To maintain concentration below TLV.) Local exhaust ventilation which meets the requirements of ANSI Z9.2 is recommended to control airborne contaminants at the point of use.

8.2 Associate substances with specific control parameters such as limit values**Maximum airborne concentrations at the workplace:**

| Substance | Type | mg/m ³ | ppm | Dust fract. |
|---------------------------------------|-----------|-------------------|-----|----------------------|
| Silica, amorphous | OSHA PEL | 0.8 | | |
| Particulates not otherwise classified | ACGIH TWA | 10.0 | | Inhalable dust/mist |
| Particulates not otherwise classified | ACGIH TWA | 3.0 | | Respirable dust/mist |

Re Silica, amorphous: The exposure limits given for CAS-No. 7631-86-9 cover all types of synthetic amorphous silica; it appears, that there is an error in the OSHA PEL entry for amorphous silica. There should have been a footnote to the Z-3 Table indicating that the percent SiO₂ in formula (80 mg/m³ + % SiO₂) refers to crystalline silica content and not to amorphous silica. For evaluation of U.S. exposure measurements WACKER recommends use of the current NIOSH REL (6 mg/m³) instead of the old Z-3 Table entry.

Re Particulates not otherwise classified: The value is for particulate matter containing no asbestos and < 1% crystalline silica (ACGIH).

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8.3 Personal protection equipment (PPE)**Respiratory protection:**

In case of dust formation: A NIOSH approved particulate respirator with a P95 or higher rating.

Hand protection:

Recommendation: rubber gloves .

Eye protection:

Recommendation: Safety glasses with side shields or chemical safety goggles.

Other protective clothing or equipment:

Barrier cream may be used to prevent dryness of skin.

8.4 General hygiene and protection measures:

Do not breathe dust/vapor/mist/gas/aerosol. Wash thoroughly after handling.

9. Physical and chemical properties**9.1 Appearance**

Physical state : solid
 Form : powder
 Colour : white
 Odour : odourless

9.2 Safety data

| Property: | Value: | Method: |
|--|--|--------------------|
| Melting point..... | 1700 °C (3092 °F) at 1013 hPa | |
| Boiling point/boiling range | not applicable | |
| Flash point..... | exempt | |
| Ignition temperature | Not applicable. | |
| Lower explosion limit..... | exempt | |
| Upper explosion limit..... | exempt | |
| Vapour pressure..... | not applicable | |
| Density | 2.2 g/cm ³ at 20 °C (68 °F) | (DIN 51757) |
| Bulk density..... | 20 - 130 kg/m ³ | |
| Water solubility..... | 0.1 - 0.5 g/lslightly soluble at 20 °C (68 °F) | (OECD 105) |
| pH | 3.8 - 4.3 (4 %) | (DIN EN ISO 787-9) |
| Partition coefficient: n-octanol/water | no data available | |
| Viscosity, dynamic..... | not applicable | |
| Viscosity, kinematic..... | not applicable | |

9.3 Further information

No data available.

Odour Threshold..... : no data available
 VOC..... : This material does not contain any reportable VOCs. 0 (calculated value)
 g/l
 Thermal decomposition

disturbed dust

Dust explosion class

No danger of dust explosion according to German VDI 2263.

10. Stability and reactivity**10.1 General information:**

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

10.2 Conditions to avoid

Moisture.

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10.3 Materials to avoid

None known.

10.4 Hazardous decomposition products

If stored and handled properly: none known.

10.5 Further information:

Hazardous polymerization cannot occur.

11. Toxicological information**11.1 Information on toxicological effects****11.1.1 Acute toxicity****Product details:**

| Exposure routes | Result/Effect |
|-------------------------|---|
| Oral | LD50 > 5000 mg/kg Species: Rat, Source: ECHA |
| dermal | LD50 > 2000 mg/kg Species: Rabbit, Source: ECHA |
| by inhalation (dust) | 4 h At the technically highest possible concentration no mortality in animal test. Species: Rat, Source: ECHA |

11.1.2 Skin corrosion/irritation**Product details:**No skin irritation
(Species: Rabbit, Test substance: CAS 7631-86-9, Source: ECHA)**11.1.3 Serious eye damage/eye irritation****Product details:**No eye irritation
(Species: Rabbit, Test substance: CAS 7631-86-9, Source: ECHA)**11.1.4 Respiratory or skin sensitisation****Assessment:**

During several years of handling this material, there were no indications of a skin-sensitizing potential.

Product details:

| Exposure routes | Result |
|-----------------|--------------------|
| Inhalation | No data available. |

11.1.5 Germ cell mutagenicity**Assessment:**

According to our present state of knowledge not mutagenic.

11.1.6 Carcinogenicity**Assessment:**

Animal tests have not revealed any carcinogenic effects.

11.1.7 Reproductive toxicity**Assessment:**

In animal experiments there have not been any indications of reproduction toxicity.

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11.1.8 Specific target organ toxicity - single exposure**Assessment:**

No data known.

11.1.9 Specific target organ toxicity - repeated exposure**Assessment:**

Changes in the lungs (inflammatory processes) observed in animal experiments after chronic inhalative exposure were reversible; no indication of silicosis.

11.1.10 Aspiration hazard**Assessment:**

Based on the physical-chemical properties of the product no aspiration hazard must be expected.

11.1.11 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.1.12 Further toxicological information

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Other information: By handling the product for many years no damage to health was observed.

12. Ecological information**12.1 Toxicity****Assessment:**

No expected damaging effects to aquatic organisms. According to current knowledge adverse effects on water purification plants are not expected.

Product details:

| Result/Effect | Species/Test system | Source |
|---|-----------------------------------|--------|
| LC50: > 10000 mg/l | Danio rerio (zebra fish) (96 h) | ECHA |
| EC50: > 500 mg/l | Daphnia magna (Water flea) (48 h) | ECHA |
| ErC50: > 10000 mg/l The effect level is greater than the maximum achievable concentration. | Scenedesmus subspicatus (72 h) | ECHA |
| NOEC: >= 100 mg/l | Daphnia magna (Water flea) (21 d) | ECHA |

12.2 Persistence and degradability**Assessment:**

The methods for determining biodegradability are not applicable to inorganic substances. The substance is degradable in abiotic processes.

12.3 Bioaccumulative potential**Assessment:**

No adverse effects expected.

12.4 Mobility in soil**Assessment:**

No adverse effects expected.

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12.5 Results of PBT and vPvB assessment

No data available.

12.6 Endocrine disrupting properties

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12.7 Other adverse effects

none known

13. Disposal considerations**13.1 Product disposal**

Recommendation:

Material that cannot be used, reprocessed or recycled should be disposed of in accordance with Federal, State, and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration.

13.2 Packaging disposal

Recommendation:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

14. Transport information**14.1 US DOT & CANADA TDG SURFACE**

Valuation : Not regulated for transport

14.2 Transport by sea IMDG-Code

Valuation : Not regulated for transport

14.3 Air transport ICAO-TI/IATA-DGR

Valuation : Not regulated for transport

15. Regulatory information**15.1 U.S. Federal regulations****TSCA inventory status and TSCA information:**

This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory. This material is in compliance with TSCA under CAS Number 7631-86-9 (silica, amorphous).

TSCA 12(b) Export Notification:

This material does not contain reportable amounts of any TSCA 12(b) listed chemicals.

CERCLA Regulated Chemicals:

This material does not contain any CERCLA regulated chemicals.

SARA 302 EHS Chemicals:

This material does not contain any SARA extremely hazardous substances.

SARA 311/312 Hazard Class:

No SARA Hazards

SARA 313 Chemicals:

This material does not contain any SARA 313 chemicals above de minimus levels.

HAPS (Hazardous Air Pollutants):

This material does not contain any hazardous air pollutants.

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15.2 U.S. State regulations**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):**

This material does not contain any chemicals known to the State of California to cause cancer.

This material does not contain any chemicals known to the State of California to cause reproductive effects.

Massachusetts Substance List:

112945-52-5 Silica, amorphous, fumed

Pennsylvania Right-to-Know Hazardous Substance List:

112945-52-5 Silica, amorphous, fumed

15.3 Details of international registration status

Relevant information about individual substance inventories, where available, is given below.

| | |
|--------------------------------------|---|
| Japan..... | : ENCS (Handbook of Existing and New Chemical Substances): This product is listed in, or complies with, the substance inventory. |
| New Zealand | : NZIoC (New Zealand Inventory of Chemicals): This product is listed in, or complies with, the substance inventory. (For a correct interpretation of the New Zealand status, additional information like GHS classification or Group Standard is required.) |
| Australia | : AiIC (Australian Inventory of Industrial Chemicals): This product is listed in, or complies with, the substance inventory. |
| China | : IECSC (Inventory of Existing Chemical Substances in China): This product is listed in, or complies with, the substance inventory. |
| Canada..... | : DSL (Domestic Substance List): This product is listed in, or complies with, the substance inventory. |
| Philippines | : PICCS (Philippine Inventory of Chemicals and Chemical Substances): This product is listed in, or complies with, the substance inventory. |
| United States of America (USA) | : TSCA (Toxic Substance Control Act Chemical Substance Inventory): All components of this product are listed as active or are in compliance with the substance inventory. |
| Taiwan..... | : TCSI (Taiwan Chemical Substance Inventory): This product is listed in, or complies with, the substance inventory. General note: The Taiwanese chemicals regulation requires a phase 1 registration for TCSI-listed or TCSI-compliant substances if imports to Taiwan or manufacturing in Taiwan exceed the trigger quantity of 100 kg/a (for mixtures to be calculated per each ingredient). It is the duty of the importing/manufacturing legal entity to take care of this obligation. |
| European Economic Area (EEA) | : REACH (Regulation (EC) No 1907/2006): REACH registration number: 01-2119379499-16-0001 General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported into the EEA by customers or other downstream users must be fulfilled by the latter. |
| South Korea (Republic of Korea)..... | : AREC (Act on Registration and Evaluation of Chemicals; "K-REACH"): Please approach your regular contact for more detailed information. |

16. Other information**16.1 Additional information:**

This Safety Data Sheet (SDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This SDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating

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to the product being used.

Vertical lines in the left-hand margin indicate changes compared with the previous version.

WACKER restricts the use of its products inside the human body or in contact with bodily fluids and mucosa. For further details please review our Health Care Policy on www.wacker.com. WACKER may cancel any delivery obligation(s) if the Health Care Policy is not observed.

16.2 Glossary of Terms:

ACGIH - American Conference of Governmental Industrial Hygienists

DOT - Department of Transportation

hPa - Hectopascals

mPa*s - Milli Pascal-Seconds

OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit

ppm - Parts per Million

SARA - Superfund Amendments and Reauthorization Act

STEL - Short Term Exposure Limit

TSCA - Toxic Substances Control Act

TWA - Time Weighted Average

| Flash point determination methods | Common name |
|--|-------------------------------|
| ASTM D56..... | Tagliabue (Tag) closed cup |
| ASTM D92, DIN 51376, ISO 2592 | Cleveland open cup |
| ASTM D93, DIN 51758, ISO 2719 | Pensky-Martens closed cup |
| ASTM D3278, DIN 55680, ISO 3679 | Setaflash or Rapid closed cup |
| DIN 51755..... | Abel-Pensky closed cup |

16.3 Conversion table:

Pressure:.....: 1 hPa * 0.75 = 1 mm Hg = 1 torr; 1 bar = 1000 hPa

Viscosity:.....: 1 mPa*s = 1 centipoise (cP)