

SAFETY DATA SHEET

SiC Papers #80-120-220-320-500-800-1000-1200- 2400-4000

Section 1. Identification

GHS product identifier : SiC Papers #80-120-220-320-500-800-1000-1200- 2400- 4000

Cat. No. : 40400008, 40400009, 40400010, 40400011, 40400012, 40400013, 40400014, 40400019, 40400020, 40400021, 40400022, 40400023, 40400024, 40400025, 40400026, 40400027, 40400032, 40400033, 40400034, 40400035, 40400036, 40400037, 40400038, 40400056, 40400057, 40400058, 40400059, 40400060, 40400061, 40400062, 40400063, 40400064, 40400065, 40400066, 40400067, 40400069, 40400070, 40400071, 40400073, 404000125, 404000126, 404000127, 404000128, JP-4040B008, JP-4040B012, JP-4040B018, JP-4040B022, JP-4040B032, JP-4040B050, JP-4040B080, JP-4040B100, JP-4040B120, JP-4040B200

Container size : 0.5 - 2 kg

Other means of identification : Not available.

Product type : This product, under the normal conditions of use, meets the definition of an "ARTICLE".

Relevant identified uses of the substance or mixture and uses advised against

Product use : For wet grinding of materialographic specimens.

Area of application : Professional applications.

Uses advised against	Reason
Dry grinding	-

Supplier's details : Struers Inc.
24766 Detroit Rd. Westlake
Cleveland, OH 44145
United States
Telephone:+1 (440) 871 0071

e-mail address of person responsible for this SDS : struers@struers.dk

Emergency telephone number (with hours of operation) : National Capital Poison Center: 1-800-222-1222
Infotrac: 1-800-535-5053
Struers US:
1-440-871-0071

Section 2. Hazards identification

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Date of issue/Date of revision : 02/02/2024 **Date of previous issue** : 12/07/2023 **Version** : 2.01 1/12



Section 2. Hazards identification

Signal word	: No signal word.
Hazard statements	: No known significant effects or critical hazards.
<u>Precautionary statements</u>	
Prevention	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood.
Response	: Not applicable.
Storage	: Not applicable.
Disposal	: Not applicable.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Article.
Other means of identification	: Not available.

CAS number/other identifiers

CAS number	: Not applicable.
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Ingredient name	Other names	%	CAS number
silicon carbide	-	≥5 - ≤50	409-21-2
crystalline silica, respirable powder	-	<0.3	14808-60-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Section 4. First aid measures

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

Description of necessary first aid measures

Eye contact	: Not applicable.
Inhalation	: Not applicable.
Skin contact	: No special measures are required.
Ingestion	: Not applicable.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.



Section 4. First aid measures

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

Extinguishing media

- Suitable extinguishing media** : Water, Foam, Powder, carbon dioxide or Sand.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No special measures are required.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : No special measures are required.

Methods and materials for containment and cleaning up

- Small spill** : Dispose of via a licensed waste disposal contractor.
- Large spill** : Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.



Section 7. Handling and storage

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

Precautions for safe handling

- Protective measures** : No special measures are required.
Advice on general occupational hygiene : No special measures are required.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
silicon carbide	<p>ACGIH TLV (United States, 1/2023). [Silicon carbide (nonfibrous)] TWA: 10 mg/m³ 8 hours. Form: Inhalable fraction TWA: 3 mg/m³ 8 hours. Form: Respirable fraction</p> <p>ACGIH TLV (United States, 1/2023). [Silicon carbide, fibrous (including whiskers)] TWA: 0.1 f/cc 8 hours. Form: Respirable fibers: length greater than 5 uM; aspect ratio equal to or greater than 3:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination.</p> <p>NIOSH REL (United States, 10/2020). TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total</p> <p>OSHA PEL (United States, 5/2018). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p> <p>OSHA PEL Z3 (United States, 6/2016). TWA: 250 mppcf / (%SiO₂+5) 8 hours. Form: Respirable TWA: 10 mg/m³ / (%SiO₂+2) 8 hours. Form: Respirable</p> <p>OSHA PEL (United States, 5/2018). [Silica, crystalline] TWA: 50 µg/m³ 8 hours. Form: Respirable dust</p> <p>ACGIH TLV (United States, 1/2023). [Silica, crystalline] TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction</p> <p>NIOSH REL (United States, 10/2020). [SILICA, CRYSTALLINE] TWA: 0.05 mg/m³ 10 hours. Form: respirable dust</p>
crystalline silica, respirable powder	

Biological exposure indices

None known.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.



Section 8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Solid.
Color : Dark grey./Gray. [Light]
Odor : Odorless.
Odor threshold : Not available.
pH : Not applicable.
Melting point/freezing point : Not applicable.
Boiling point, initial boiling point, and boiling range : Not applicable.
Flash point : Not applicable.
Evaporation rate : Not available.
Flammability : Not available.
Lower and upper explosion limit/flammability limit : Not applicable.
Vapor pressure : Not available.
Relative vapor density : Not applicable.



Section 9. Physical and chemical properties and safety characteristics

Relative density : Not available.
 Density : Not applicable.
 Solubility(ies) : Not available.
 Partition coefficient: n-octanol/water : Not applicable.
 Auto-ignition temperature : Not applicable.
 Decomposition temperature : >250°C (>482°F)
 SADT : Not available.
 Viscosity : Not applicable.
 Flow time (ISO 2431) : Not available.

Particle characteristics

Median particle size : Not available.

Additional information

Physical/chemical properties comments : No additional information.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
 Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 For intended use, there is not expected to be hazardous decomposition products or dust.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
silicon carbide	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Female	>2000 mg/kg	-

Irritation/Corrosion

Not available.

Sensitization

Not available.



Section 11. Toxicological information

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Prolonged and/or massive exposure to respirable crystalline silica (quartz)-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica. During application, the product does not form dust.

Classification

Product/ingredient name	OSHA	IARC	NTP
silicon carbide crystalline silica, respirable powder	- +	2A 1	- Known to be a human carcinogen.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
crystalline silica, respirable powder	Category 1	inhalation	lungs

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Eyes.
Routes of entry not anticipated: Inhalation.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure



Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
SiC Papers #80-120-220-320-500-800-1000-1200-2400- 4000	8318	8154.9	N/A	N/A	N/A
silicon carbide	2500	2500	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
silicon carbide	Chronic NOEC \geq 100 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	22 days

Conclusion/Summary : Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.



Section 13. Disposal considerations

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

Additional information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): Not determined.
Clean Water Act (CWA) 311: Formaldehyde, solution

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients



Section 15. Regulatory information

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Formaldehyde, solution	≤0.1	Yes.	500	73.6	100	14.7

SARA 304 RQ : 111111.1 lbs / 50444.4 kg

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Classification
silicon carbide	≥5 - ≤50	CARCINOGENICITY - Category 1B
crystalline silica, respirable powder	<0.3	CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

SARA 313

Not applicable.

State regulations

Massachusetts : The following components are listed: SILICON CARBIDE

New York : None of the components are listed.

New Jersey : The following components are listed: SILICON CARBIDE; SILICA, QUARTZ

Pennsylvania : The following components are listed: SILICON CARBIDE

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Silica, crystalline and Formaldehyde, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Silica, crystalline	-	-
Formaldehyde	Yes.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.



Section 16. Other information

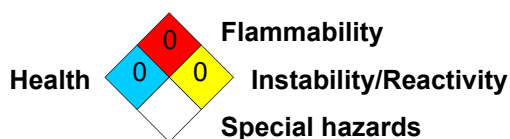
Hazardous Material Information System (U.S.A.)

Health	/	0
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

Classification	Justification
Not classified.	

History

Date of issue/Date of revision	: 02/02/2024
Date of previous issue	: 12/07/2023
Version	: 2.01
Prepared by	: Sphera Solutions
Key to abbreviations	: ATE = Acute Toxicity Estimate AMP = Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available UN = United Nations
References	: HCS (U.S.A.)- Hazard Communication Standard International transport regulations

Indicates information that has changed from previously issued version.

Notice to reader



Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

