SAFETY DATA SHEET

MATERION

Version #: 06
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

Registration number -

Synonyms None.

Materion Code 2AC

1.1. Product identifier

Name of the substance Silicon Carbide (SiC)

Identification number 014-048-00-5 (Index number)

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

Identified uses Not available.

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name Materion Electronic Materials

Address 6070 Parkland Blvd
Mayfield Heights, OH 44124
United States

Division

Telephone 1.216.383.4019

e-mail Materion-PS@materion.com

Contact person Product Stewardship Director

1.4. Emergency telephone number

Document number 2AC

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classificatior applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Substances and mixtures which, in contact with water, emit flammable gases	Category 3	H261 - In contact with water releases flammable gases.

Health hazards

Carcinogenicity (inhalation)	Category 1B	H350i - May cause cancer by inhalation.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1)

Hazard pictograms

Signal word Danger

Hazard statements

H261 In contact with water releases flammable gases.
H350i May cause cancer by inhalation.

Precautionary statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P231 + P232	Handle and store contents under inert gas. Protect from moisture.
P231 + P232	Handle and store contents under inert gas. Protect from moisture.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response

P308 + P313	IF exposed or concerned: Get medical advice/attention.
P370 + P378	In case of fire: Use appropriate media to extinguish.

Storage

P402 + P404	Store in a dry place. Store in a closed container.
P405	Store locked up.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information

Restricted to professional users. EUH014 - Reacts violently with water.
100% of the substance consists of component(s) of unknown acute hazards to the aquatic environment. 100% of the substance consists of component(s) of unknown long-term hazards to the aquatic environment.
For further information, please contact the Product Stewardship Department at +1.800.862.4118.

2.3. Other hazards

This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII. The substance is not included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1)	100	409-21-2 206-991-8	-	014-048-00-5	
Classification: Water-React. 3;H261, Carc. 1B;H350i					

List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
#: This substance has been assigned Union workplace exposure limit(s).
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

General information

IF exposed or concerned: Get medical advice/attention.

4.1. Description of first aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed

Coughing.

4.3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards

In contact with water releases flammable gases.

5.1. Extinguishing media

Suitable extinguishing media

Not available.

Unsuitable extinguishing media	Water.
5.2. Special hazards arising from the substance or mixture	Water reactive material.

5.3. Advice for firefighters

Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special firefighting procedures	Do not get water inside container.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Wear appropriate personal protective equipment.
For emergency responders	Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Do not get water on spilled substance or inside containers. The product is immiscible with water and will spread on the water surface. Stop the flow of material, if this is without risk. Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimise spreading or contact with rain. Put material in suitable, covered, labeled containers. The product is insoluble in water.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not allow water to get into container because of violent reaction and possible flash fire. Handle under inert gas. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store locked up. Never allow product to get in contact with water during storage. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a dry place. Store in a building without sprinklers. Store away from incompatible materials (see Section 10 of the SDS).
7.3. Specific end use(s)	Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	MAK	5 mg/m3	Respirable fraction.
	STEL	10 mg/m3	Respirable fraction.

Belgium. OEL. Exposure Limit Values to Chemical Substances at Work, Code of Well-being at work, Book VI, Title 1 - Chemical agents, as amended

Material	Type	Value
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	10 mg/m3

Bulgaria. OELs. Ordinance No 13 on protection of workers against risks of exposure to chemical agents at work, as amended

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	5 mg/m3	Inhalable fraction.

Croatia. OELs (GVI). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and Biological Limit Values, Annex I (NN 91/2018), as amended

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	MAC	4 mg/m3	Respirable dust.
		10 mg/m3	Total dust.

Denmark. Work Environment Authority. Exposure Limits for Substances & Materials, Annex 2

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TLV	5 mg/m3	Respirable dust.
		10 mg/m3	Dust.
		0,5 mg/m3	Respirable quartz fraction.

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	5 mg/m3	Fine dust, respiratory fraction
		10 mg/m3	Respirable fraction.

Finland. HTP-arvot, App 3., Binding Limit Values, Social Affairs and Ministry of Health

Material	Type	Value
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	0,1 fibers/cm3

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Material	Type	Value
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	VME	10 mg/m3

Regulatory status: Indicative limit (VL)

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG), as updated

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	4 mg/m3	Inhalable dust.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	AGW	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.

Greece. OELs, Presidential Decree No. 307/1986, as amended

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Inhalable

Ireland. OELVs, Schedules 1 & 2, Code of Practice for Chemical Agents and Carcinogens Regulations

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	0,1 fibers/cm3	Fiber.
		3 mg/m3	Respirable dust.
		10 mg/m3	Total inhalable dust.

Italy. OELs (Legislative Decree n.81, 9 April 2008), as amended

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	0,1 fibers/cm3	Fiber.
		3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Latvia. OELs. Occupational Exposure Limits of Chemical Substances at Workplace (Reg. No. 325/ 2007, L.V. 80, Annex 1), as amended

Material	Type	Value
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	6 mg/m3

Lithuania. OELs. Occupational Exposure Limit Values for Chemical Substances (Hygiene Norm HN 23:2011; Order No. V-824/A1-389), as amended

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	5 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Norway. Regulation No. 1358 on Measures and Limit Values for Physical and Chemical Factors in Work Environment and Infection Groups for Biological Factors, as amended

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TLV	0,1 fibers/cm3	Fiber.
		0,5 mg/m3	Respirable dust.

Poland. Maximum permissible concentrations and intensities of harmful factors in the work environment (Dz.U.Poz. 1286/2018, Annex 1)

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	10 mg/m3	Inhalable fraction.

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796-2014)

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	0,1 fibers/cm3	Respirable fibers.
		3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Romania. OELs. Limit Values of Chemical Agents at Workplace (Regulation 1.218/2006, M.O 845, Annex 1, 3&4, as amended)

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	10 mg/m3	Inhalable fraction.

Slovakia. OELs. Maximum permissible exposure limits for chemical factors in workplace air (Regulation No 355/2006, Annex 1, Table 1, as amended)

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	4 mg/m3	Inhalable fraction.
		1,5 mg/m3	Respirable fraction.

Slovenia. OELs. Occupational Exposure Limits of Chemicals at Workplace (Reg. on Protection of Workers from Risks due to Exp. to Chemicals at Work, Ann. I 100/2001), as amended

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	KTV	20 mg/m3	Inhalable fraction.
		2,5 mg/m3	Respirable fraction.

Slovenia. OELs. Occupational Exposure Limits of Chemicals at Workplace (Reg. on Protection of Workers from Risks due to Exp. to Chemicals at Work, Annex I), as amended

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.

Spain. OELs. INSST, Límites de Exposición Profesional Para Agentes Químicos, Table 1-Valores Límites Ambientales (VLAs)

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Sweden. OELs (Annex 1). Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1), as amended

Material	Type	Value
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	0,2 fibers/ml

Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle MAK-Werte

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	3 mg/m3	Respirable dust.
		10 mg/m3	Inhalable dust.

UK. OELs. Workplace Exposure Limits (WELs) (EH40/2005 (Fourth Edition 2020)), Table 1

Material	Type	Value	Form
silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	TWA	4 mg/m3	Respirable.
		10 mg/m3	Inhalable

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear eye/face protection.

Skin protection

- Hand protection Wear appropriate chemical resistant gloves.

- Other Wear suitable protective clothing. Use of an impervious apron is recommended.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Solid.

Form Solid.

Colour Not available.

Odour Not available.

Melting point/freezing point 2600 °C (4712 °F)

Boiling point or initial boiling point and boiling range Not available.

Flammability Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit – upper (%)	Not available.
Flash point	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
pH	Not available.
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water) (log value)	Not available.
Vapour pressure	1323,89 kPa (25 °C (77 °F))
Density and/or relative density	
Density	3,23 g/cm3 estimated
Vapour density	Not available.
Particle characteristics	Not available.

9.2. Other information

9.2.1. Information with regard to physical hazard classes	No relevant additional information available.

9.2.2. Other safety characteristics

Molecular formula	C-Si
Molecular weight	40,07 g/mol
Specific gravity	3,23

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material reacts with water.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Exposure to moisture. Exposure to water vapour. Contact with incompatible materials.
10.5. Incompatible materials	Water. Water, moisture.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	May cause cancer by inhalation. Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms	Coughing.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	Due to partial or complete lack of data the classification is not possible.
Skin corrosion/irritation	Due to partial or complete lack of data the classification is not possible.
Serious eye damage/eye irritation	Due to partial or complete lack of data the classification is not possible.
Respiratory sensitisation	Due to partial or complete lack of data the classification is not possible.
Skin sensitisation	Due to partial or complete lack of data the classification is not possible.
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	May cause cancer.

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)

IARC Monographs. Overall Evaluation of Carcinogenicity

silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2) 2A Probably carcinogenic to humans.

Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to partial or complete lack of data the classification is not possible.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Mixture versus substance information	No information available.

11.2. Information on other hazards

Endocrine disrupting properties	This substance does not have endocrine disrupting properties with respect to human health, as it does not meet the assessment criteria laid out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible.
12.2. Persistence and degradability	No data is available on the degradability of this product.
12.3. Bioaccumulative potential	No data available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.
12.6. Endocrine disrupting properties	This substance does not have endocrine disrupting properties with respect to the environment, as it does not meet the assessment criteria laid out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605.
12.7. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Consult authorities before disposal. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN2813
14.2. UN proper shipping name	WATER-REACTIVE SOLID, N.O.S. (silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1))
14.3. Transport hazard class(es)	
Class	4.3
Subsidiary risk	-

Label(s)	4.3
Hazard No. (ADR)	423
Tunnel restriction code	E
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN2813
14.2. UN proper shipping name	WATER-REACTIVE SOLID, N.O.S. (silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1))
14.3. Transport hazard class(es)	
Class	4.3
Subsidiary risk	-
Label(s)	4.3
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number	UN2813
14.2. UN proper shipping name	WATER-REACTIVE SOLID, N.O.S. (silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1))
14.3. Transport hazard class(es)	
Class	4.3
Subsidiary risk	-
Label(s)	4.3
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary risk	-
14.4. Packing group	-
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

IMDG

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary risk	-
14.4. Packing group	-
14.5. Environmental hazards	
Marine pollutant	No.
EmS	Not assigned.
14.6. Special precautions for user	Not assigned.

ADN; ADR; RID

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered

silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex I, as amended

Not listed.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex II, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended Use of this product by young persons under the age of 18 is not allowed in accordance with the Management of Health and Safety at Work Regulations 1999 [SI 1999/3242], as amended. Follow national regulation on the protection of workers from the risks of exposure to carcinogens and mutagens at work, in accordance with Directive 2004/37/EC, as amended.

Contains a substance which is included on the TRGS 905 list of carcinogenic, germ cell mutagenic and reproductive toxic substances

silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	Faserstäube, anorganische (außer Asbest), Künstlich hergestellte anorganische einkristalline Fasern (Whisker) aus Siliziumkarbid

France regulations

France INRS Table of Occupational Diseases

silicon carbide fibres (with diameter < 3 .mu.m, length > 5 .mu.m and aspect ratio ≥ 3:1) (CAS 409-21-2)	Affections respiratoires dues aux poussières de carbures métalliques frittés ou fondus contenant du cobalt 70 bis

15.2. Chemical safety assessment No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
IATA: International Air Transport Association.
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.
IMDG: International Maritime Dangerous Goods.
MAC: Maximum Allowed Concentration.
MARPOL: International Convention for the Prevention of Pollution from Ships.
PBT: Persistent, bioaccumulative and toxic.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
STEL: Short term exposure limit.
TLV: Threshold Limit Value.
TWA: Time Weighted Average.
VLE: Exposure Limit Value.
VME: Exposure Average Value.
vPvB: Very persistent and very bioaccumulative.

References Not available.

Information on evaluation method leading to the classification of mixture Not applicable.

Full text of any statements, which are not written out in full under sections 2 to 15

H261 In contact with water releases flammable gases.
H350i May cause cancer by inhalation.

Revision information This document has undergone significant changes and should be reviewed in its entirety.

Training information Follow training instructions when handling this material.

Further information

Transportation Emergency
Call Chemtrec at:
US: 800.424.9300
International: 703.741.5970
Spain: 900.868.538
Switzerland: 0800.564.402
Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059
South Korea Toll-free Number – 080-880-0468

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