FBR-MP0007 PEEK/CF

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Issue date: 15 June 2020 Version: 1.0

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

1.1. Product identifier

Product form : Article

Trade name : FBR-MP0007 PEEK/CF

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Composites

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Desktop Metal
Schwanthalerstr. 73,
c/o SCUR24 Holding GmbH,
80336 München, Germany
T +49 170 3316066 (c)
www.desktopmetal.com

1.4. Emergency telephone number

Emergency number : 978-224-1244 (Hours: 9:00 am to 5:00 pm Eastern time)
CHEMTREC: +44-870-8200418 (United Kingdom)
CHEMTREC: +33-975181407 (France)
CHEMTREC: +49-69643508409 (Germany)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

Product may be electrically conductive. Risk of electric shock.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

other hazards which do not result in classification : Product may be electrically conductive. Risk of electric shock. Risk of thermal burns on contact with molten product. Dust can be generated during cutting or fabrication of the product. Potential dust explosion hazard. The components of this product are encapsulated homogeneously in a thermoplastic composite and are therefore not biologically available. Any hazardous constituents are fixed in the composite and therefore present a negligible exposure risk under normal conditions of processing and handling.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Glass, oxide, chemicals substance with a Community workplace exposure limit	(CAS-No.) 65997-17-3 (EC-No.) 266-046-0	< 75	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : In all cases of doubt, or when symptoms persist, seek medical attention.

First-aid measures after inhalation : None under normal use. Dust may cause mechanical irritation. Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : None under normal use. Risk of thermal burns on contact with molten product. Seek medical attention if burns develop.

First-aid measures after eye contact : None under normal use. Direct contact with the eyes is likely to be irritating. Rinse eyes with water as a precaution. Obtain medical attention if irritation persists.

First-aid measures after ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

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

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.

Symptoms/effects after skin contact : Risk of thermal burns on contact with heated product.

Symptoms/effects after eye contact : Dust can be generated during cutting or fabrication of the product. May cause mechanical irritation on direct contact with eyes.

Symptoms/effects after ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

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

Treat symptomatically. Burns caused by molten material must be treated clinically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Thermal decomposition can lead to the release of irritating gases and vapours. Carbon oxides (CO, CO2).

Explosion hazard : No direct explosion hazard.

5.3. Advice for firefighters

Firefighting instructions : Evacuate personnel to a safe area. Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

Protective equipment for firefighters : Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : No additional risk management measures required.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Mechanically recover the product. No particular/specific measures required. If melted: allow liquid to solidify before taking it up.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Electrical interference may occur. Dust can be generated during cutting or fabrication of the product. Dust may contain carcinogens: Carbon black, Quartz, Silica. Potential dust explosion hazard.

Precautions for safe handling : Use insulated gloves when handling this material hot. If cutting, grinding or sanding is required, avoid breathing fibers or dust generated. Wear recommended personal protective equipment. Even though no eye contact is expected under reasonable normal conditions of use, appropriate eye protection should be worn when handling this material. If handling results in dust generation or high temperatures, local exhaust ventilation should be provided to insure that exposure to dust or decomposition products does not exceed the exposure recommended levels. Prevent dust accumulation generated from mechanical handling.

Hygiene measures : Always wash hands after handling the product. Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature. Store in a dry place.

Incompatible materials : Sulfuric acid.

7.3. Specific end use(s)

See Heading 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Silica, amorphous (7631-86-9)	
Austria - Occupational Exposure Limits	
Local name	Kieselsäuren, amorphe
MAK (mg/m³)	4 mg/m³ (also Silica manufactured through wet process-inhalable fraction)
Regulatory reference	BGBl. II Nr. 238/2018
Czech Republic - Occupational Exposure Limits	
Expoziční limity (PEL) (mg/m³)	0.1 mg/m³ (respirable fraction) 4 mg/m³
Estonia - Occupational Exposure Limits	
Local name	Räni (räni dioksiid)
OEL TWA (mg/m³)	2 mg/m³ peentolm
Remark (ET)	1 (Peentolm koosneb alla 2,5-mikromeetrise läbimõõduga osakestest, mis võivad jõuda koos sissehingatava õhuga kopsu alveoolidesse (respireeritav fraktsioon))

Silica, amorphous (7631-86-9)	
OEL chemical category (ET)	Carcinogenic substance respirable dusts
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 17.10.2019, 2); Vabariigi Valitsuse 10. märtsi 2019. a määruse nr 84
Finland - Occupational Exposure Limits	
HTP-arvo (8h) (mg/m³)	5 mg/m³ (Silicon dioxide, amorphous)
Germany - Occupational Exposure Limits (TRGS 900)	
TRGS 900 Local name	Kieselsäuren, amorphe
Occupational exposure limit value (mg/m³)	4 mg/m³ (E)
TRGS 900 Remark	DFG;2;Y
TRGS 900 Regulatory reference	TRGS900
Ireland - Occupational Exposure Limits	
OEL (8 hours ref) (mg/m³)	6 mg/m³ (total inhalable dust) 2.4 mg/m³ (respirable dust)
OEL (15 min ref) (mg/m3)	7.2 mg/m³ (cacluated, respirable dust)
Latvia - Occupational Exposure Limits	
Local name	Silīcija dioksīds
OEL TWA (mg/m³)	1 mg/m³
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2020. gada 7. janvārī noteikumiem Nr. 11)
Netherlands - Occupational Exposure Limits	
Grenswaarde TGG 8H (mg/m³)	0.075 mg/m³ (respirable dust of Quartz, Cristobalite and Tridymite-respirable dust)
Slovenia - Occupational Exposure Limits	
Local name	silikagel
OEL TWA (mg/m³)	4 mg/m³
Remark (SI)	Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti)
Regulatory reference	Uradni list RS, št. 78/2019 z dne 20.12.2019
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m³)	6 mg/m³ (inhalable dust) 2.4 mg/m³ (respirable dust)
WEL STEL (mg/m³)	18 mg/m³ (calculated-inhalable dust) 7.2 mg/m³ (calculated-respirable dust)
Norway - Occupational Exposure Limits	
Grenseverdier (AN) (mg/m³)	1.5 mg/m³ (respirable dust)
Grenseverdier (Korttidsverdi) (mg/m3)	3 mg/m³ (value calculated-respirable dust)
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m³)	10 mg/m³ (biologically inert, insoluble or poorly soluble particles - inhalable particles)

para-Aramid fibrils (24938-64-5)	
Finland - Occupational Exposure Limits	
HTP-arvo (8h) (mg/m³)	1 fibers/cm³
France - Occupational Exposure Limits	
VME (mg/m³)	1 fibers/cm³

Carbon (7440-44-0)	
Austria - Occupational Exposure Limits	
Local name	Graphit (Alveolarstaub mit < 1% Quarz)
MAK (mg/m³)	5 mg/m³ (alveolar dust with <1% Quartz, respirable fraction)
MAK Short time value (mg/m³)	10 mg/m³ (alveolar dust with <1% Quartz, respirable fraction)
Regulatory reference	BGBl. II Nr. 238/2018
Poland - Occupational Exposure Limits	
Local name	Grafit syntetyczny
NDS (mg/m³)	6 mg/m³ (synthetic-inhalable fraction)
Remark (PL)	Frakcja wdychalna – frakcja aerozolu wnikająca przez nos i usta, która po zdeponowaniu w drogach oddechowych stwarza zagrożenie dla zdrowia.
Regulatory reference	Dz. U. 2018 poz. 1286
United Kingdom - Occupational Exposure Limits	
Local name	Graphite
WEL TWA (mg/m³)	10 mg/m³ inhalable dust 4 mg/m³ respirable
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Glass, oxide, chemicals (65997-17-3)	
EU - Occupational Exposure Limits	
IOELV TWA (mg/m³)	0.3 fibers/mL REFRACTORY CERAMIC FIBRES
Belgium - Occupational Exposure Limits	
Limit value (mg/m³)	10 mg/m³ (dust and fiber)
Bulgaria - Occupational Exposure Limits	
OEL TWA (mg/m³)	1 mg/m³ Mineral, natural (asbestos-free) and man-made fibers - fibrous particles, respirable fraction
Croatia - Occupational Exposure Limits	
GVI (granična vrijednost izloženosti) (mg/m³)	0.3 fibers/cm³ Ceramic fibers fireproof, classified as carcinogenic substances
Cyprus - Occupational Exposure Limits	
OEL TWA (mg/m³)	10 mg/m³ Glass (fibers and particles)
Czech Republic - Occupational Exposure Limits	
Expoziční limity (PEL) (mg/m³)	4 mg/m³ Synthetic mineral fibers (all sizes)
Denmark - Occupational Exposure Limits	
Grænsevædi (8 timer) (mg/m³)	1 fibers/cm³ KERAMISKE FIBRE
Estonia - Occupational Exposure Limits	
OEL TWA (mg/m³)	1 fibers/cm³ Glass fibers, synthetic and inorganic
Finland - Occupational Exposure Limits	
HTP-arvo (8h) (mg/m³)	5 mg/m³ Continuous filament glass fibers (inhalable dust)
Hungary - Occupational Exposure Limits	
AK-érték	1 fibers/cm³ Other filamentous dust (glass, mineral, ceramics, plastics)
Ireland - Occupational Exposure Limits	
OEL (8 hours ref) (mg/m³)	5 mg/m³ 2 fibres/cm3 of air - MINERAL WOOL

Glass, oxide, chemicals (65997-17-3)	
Latvia - Occupational Exposure Limits	
OEL TWA (mg/m³)	2 mg/m³ Silicates and alumosilicates: ceramics
Lithuania - Occupational Exposure Limits	
IPRV (mg/m³)	0.2 fibers/cm³ Synthetic inorganic, crystal fibers 1 fibers/cm³ Glass fiber (synthetic inorganic, amorphous fibers)
Netherlands - Occupational Exposure Limits	
Grenswaarde TGG 8H (mg/m³)	0.5 fibers/cm³ CERAMIC FIBERS, RESPIRABLE
Poland - Occupational Exposure Limits	
NDS (mg/m³)	1 fibers/cm³ Artificial mineral fibers, except refractory ceramic fibers, respirable fibers 0.3 fibers/cm³ Refractory ceramic fibers in a mixture with other artificial mineral fibers
Portugal - Occupational Exposure Limits	
OEL TWA (mg/m³)	1 fibers/cm³ FIBRAS INORGâNICAS ARTIFICIAIS - FIBRAS DE VIDRO DE FILAMENTO CONTíNUO
Slovakia - Occupational Exposure Limits	
NPHV (priemerná) (mg/m³)	2 fibers/cm³ 4 mg/m3 - Artificial mineral fibers (e.g., from basalt, glass, slag, or cinder)
Spain - Occupational Exposure Limits	
VLA-ED (mg/m³)	1 fibers/cm³ Manufactured fibers, artificial vitreous fibers (fiberglass, mineral wool, etc.); Manufactured fibers, other artificial or synthetic fibers (p-Aramid, etc.) 0.5 fibers/cm³ Manufactured fibers, artificial vitreous fibers (refractory ceramic fibers, fibers for special uses, etc.)
Sweden - Occupational Exposure Limits	
nivågränsvärde (NVG) (mg/m³)	1 fibers/cm³ fibers/ml_ FIBRES, SYNTHETIC INORGANIC GLASSY FIBRES (AMORPHOUS): OTHER FIBRES: MINERAL WOOL
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m³)	1 fibers/mL REFRACTORY CERAMIC FIBRES AND SPECIAL PURPOSE FIBRES
Iceland - Occupational Exposure Limits	
OEL (8 hours ref) (mg/m³)	1 mg/m³ fibers/cm3 - FIBERGLASS (INSULATION FIBERS, MMMF, MAN MADE MINERAL FIBERS, ROCK WOOL)
Norway - Occupational Exposure Limits	
Grenseverdier (AN) (mg/m³)	0.5 fibers/cm³ AES (ALKALINE EARTH SILICATE) WOOL
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m³)	5 mg/m³ CONTINUOUS FILAMENT GLASS FIBERS, INHALABLE FRACTION 1 fibers/cm³ GLASS WOOL FIBERS; CONTINUOUS FILAMENT GLASS FIBERS; ROCK WOOL FIBERS; SLAG WOOL FIBERS; SPECIAL PURPOSE GLASS FIBERS 0.2 fibers/cm³ REFRACTORY CERAMIC FIBERS

8.2. Exposure controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Hand protection:

Wear protective gloves to help prevent mechanical injury. For thermal protection from molten material, wear gloves with insulation. Check the resistance to chemicals and heat when choosing protective gloves. EN 374. EN 407

Eye protection:

Safety glasses with side guards should be worn to prevent injury from airborne particles and/or other eye contact with this product. EN 166

Skin and body protection:

Not required for normal conditions of use

Respiratory protection:

Appropriate dust or mist respirator should be used if airborne particles are generated when handling this material

Thermal hazard protection:
When handling molten material, thermally-protective long sleeved clothing, boots and gloves should be worn.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Plastic. Tape strip.
Colour	:	Black.
Odour	:	None to slight.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Insoluble.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Sulfuric acid.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition can lead to the release of irritating gases and vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	:	Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	:	Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	:	Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitisation	:	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	:	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	:	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	:	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	:	Not classified (Based on available data, the classification criteria are not met)
Other information	:	Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	:	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	:	Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	:	Not classified (Based on available data, the classification criteria are not met)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
Glass, oxide, chemicals (65997-17-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Additional information	:	No special environmental precautions required

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector’s sorting instructions.
Product/Packaging disposal recommendations	:	Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	:	This product does not present any particular risk for the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not regulated
Transport by sea
Not regulated
Air transport
Not regulated
Inland waterway transport
Not regulated
Rail transport
Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substance on the REACH candidate list
Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.
Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Employment restrictions	:	Observe restrictions according Act on the Protection of Working Mothers (MuSchG) Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)
Water hazard class (WGK)	:	WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)
WGK remark	:	Most stringent classification due to insufficient data
Hazardous Incident Ordinance (12. BImSchV)	:	Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	Glass, oxide, chemicals is listed
SZW-lijst van mutagene stoffen	:	Glass, oxide, chemicals is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	:	None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	:	None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Other information : None.

Full text of H- and EUH-statements:	
EUH210	Safety data sheet available on request.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.