

# E-glass microfibres

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Date of issue: 30/1/2018

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Version: 3.00

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

#### 1.1. Product identifier

Product form : Substance  
Trade name : E-glass microfibres  
Chemical name : Glass, oxide, chemicals  
EC-No. : 266-046-0  
CAS-No. : 65997-17-3  
REACH registration No : 01-2119488048-29-0001

#### 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 : Manufacturing of:  
Insulation  
Filtration material

Title	Life cycle stage	Use descriptors
Manufacture of glass and glass products, E-glass Filter	Industrial, Manufacture	SU3, SU6b, PROC1, PROC5, PROC8b, PROC9, PROC14, PROC21, PROC26, AC4, ERC5

Full text of use descriptors: see section 16

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier

Lauscha Fiber International GmbH  
Dammweg 35  
98724 Lauscha

T: 036702 / 287-0 F: 036702 28728

lauscha.info@unifrax.com

wrodigas@unifrax.com

##### Email competent person

sds@kft.de

wrodigas@unifrax.com

##### Email competent person

sds@kft.de

#### 1.4. Emergency telephone number

Emergency number : National Health Service (NHS)  
24 hour national number consumer  
England and Scotland: 111  
Wales: 0845 46 47  
Northern Ireland: call your local General Practitioner  
  
Call 999 if there is a life-threatening incident.

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

May cause slight irritation to the skin. May cause slight irritation to eyes. May cause respiratory irritation. May cause cancer.

##### Adverse physicochemical, human health and environmental effects

Carcinogenicity (inhalation) Category 1B H350i

Full text of H statements : see section 16

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### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) : Danger

Hazard statements (CLP) : H350i - May cause cancer by inhalation.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.

P280 - Wear face protection.

P308+P313 - IF exposed or concerned: Get medical advice/attention.

P501 - Dispose of contents/container to a hazardous or special waste collection point

Extra phrases : Restricted to professional users

### 2.3. Other hazards

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

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%
Glass, oxide, chemicals	(CAS-No.) 65997-17-3 (EC-No.) 266-046-0 (REACH-no) 01-2119488048-29-0001	-

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Move to fresh air. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Gently wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. Get medical advice if skin irritation persists. Wash skin with plenty of water.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : The product is not flammable. Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon dioxide. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream. Strong water jet.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Non flammable.

### 5.3. Advice for firefighters

Firefighting instructions : Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Complete protective clothing. Self-contained breathing apparatus. Do not attempt to take action without suitable protective equipment.

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Other information : Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes.

##### 6.1.1. For non-emergency personnel

Protective equipment : Concerning personal protective equipment to use, see section 8.

Emergency procedures : Prohibit unauthorized persons. Only qualified personnel equipped with suitable protective equipment may intervene.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Ensure adequate ventilation. Concerning personal protective equipment to use, see section 8. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ensure operatives are trained to minimise exposures.

#### 6.2. Environmental precautions

No special environmental precautions required. Notify authorities if product enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Minimize generation of dust. High efficiency particulate air filter (HEPA filter). Notify authorities if product enters sewers or public waters. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

Other information : Disposal must be done according to official regulations.

#### 6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Ensure good ventilation of the work station. Avoid contact with skin and eyes. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Clean contaminated areas thoroughly. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Product must only be kept in the original packaging. Store tightly closed in a dry and cool place. Store locked up. Store in a well-ventilated place. Keep cool.

Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

#### 7.3. Specific end use(s)

For professional users only. See Heading 8.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<b>Glass, oxide, chemicals (65997-17-3)</b>	
DNEL/DMEL (Workers)	
Long-term - local effects, inhalation	0,75 fibers/cm <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - local effects, inhalation	0,25 fibers/cm <sup>3</sup>

#### 8.2. Exposure controls

##### Appropriate engineering controls:

Ensure good ventilation of the work station.

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### Hand protection:

Leather protective gloves. Chemically resistant protective gloves. EN 374. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear. Fluoroelastomer (FKM). Nitrile rubber. Chloroprene rubber. Butyl rubber

### Eye protection:

Safety glasses with side shields

### Skin and body protection:

Impervious clothing. Do not take working clothes home

### Respiratory protection:

If dust are formed : Wear appropriate mask. (FFP3). [In case of inadequate ventilation] wear respiratory protection. EN 143



### Environmental exposure controls:

Avoid release to the environment.

### Other information:

Do not eat, drink or smoke during use. Do not take working clothes home. Separate working clothes from town clothes. Launder separately.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Fibres.
Colour	: According to product specification.
Odour	: odourless.
Odour threshold	: Not applicable
pH	: Not applicable.
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 700 - 800 °C
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not self-igniting
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 2,5 - 2,6 g/cm <sup>3</sup> (20 °C)
Solubility	: Water: Insoluble
Log Pow	: Not applicable
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: Product is not explosive.
Oxidising properties	: Not applicable.
Explosive limits	: Not applicable

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions of use.

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### 10.2. Chemical stability

The product is stable at normal handling and storage conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known.

### 10.4. Conditions to avoid

No additional information available.

### 10.5. Incompatible materials

No additional information available.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 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)

Additional information	This fibre also has low potential to cross biological membranes and consequently has a low potential for absorption through the gastrointestinal tract.
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Skin corrosion/irritation : No irritant effect. rabbit. (OECD 404 method) (Based on available data, the classification criteria are not met)

pH: Not applicable.

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)

pH: Not applicable.

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 : May cause cancer by inhalation.

<b>Glass, oxide, chemicals (65997-17-3)</b>	
Additional information	E-glass microfibre has been shown to induce lung tumours (carcinoma and adenoma) at high concentrations in long-term inhalation studies, probably due to the higher biopersistence of fibers longer than 20 µm. The mechanism by which E-glass microfibre induces lung tumours is not fully elucidated but overload of cellular clearance mechanisms has been suggested.

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. Not relevant)

Other information : E-glass microfibre dissolves relatively slowly in vitro at pH 7.4 and in lung fluid. Fibre dissolution by lung fluid at acidic pH by macrophages is making them brittle and the longer fibres are then broken into shorter fibres. The shorter fibres are catabolized either by migration or by ingestion by macrophages that "travel" to the lymphatic system. If swallowed, the fibres will dissolve at acidic gastric pH and be excreted.

## SECTION 12: Ecological information

### 12.1. Toxicity

Acute aquatic toxicity : Not classified (Based on available data, the classification criteria are not met)

Chronic aquatic toxicity : Not classified (Based on available data, the classification criteria are not met)

<b>Glass, oxide, chemicals (65997-17-3)</b>	
LC50 fish 1	> 1000 mg/l (96h; Dario rerio; OECD 203)
EC50 Daphnia 1	> 1000 mg/l (48h; Daphnia Magne; OECD 202)
EC50 72h algae (1)	> 1000 mg/l (Pseudokirchnelle subcapitata; OECD 201)

### 12.2. Persistence and degradability

<b>Glass, oxide, chemicals (65997-17-3)</b>	
Persistence and degradability	Not biodegradable.

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### 12.3. Bioaccumulative potential

Glass, oxide, chemicals (65997-17-3)	
Log Pow	Not applicable
Bioaccumulative potential	Bioaccumulation unlikely.

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

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

Other adverse effects : No additional information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Disposal must be done according to official regulations. European waste catalogue. Do not dispose of with domestic waste. Do not discharge into drains or the environment.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

European List of Waste (LoW) code : 10 11 12 - waste glass other than those mentioned in 10 11 11

HP Code : HP7 - "Carcinogenic:" waste which induces cancer or increases its incidence

## SECTION 14: Transport information

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

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

### 14.6. Special precautions for user

#### - Overland transport

Not applicable

#### - Transport by sea

Not applicable

#### - Air transport

Not applicable

#### - Inland waterway transport

Not applicable

#### - Rail transport

Not applicable

### 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

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

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28. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Carcinogen category 1A or 1B (Table 3.1) or Carcinogen category 1 or 2 (Table 3.2) and listed as follows: Carcinogen category 1A (Table 3.1)/Carcinogen category 1 (Table 3.2) listed in Appendix 1 Carcinogen category 1B (Table 3.1)/Carcinogen category 2 (Table 3.2) listed in Appendix 2

Glass, oxide, chemicals

Glass, oxide, chemicals is not on the REACH Candidate List

Glass, oxide, chemicals is not on the REACH Annex XIV List

Other information, restriction and prohibition regulations : Take note of Directive 94/33/EC on the protection of young people at work. Take note of Directive 92/85/EC on the safety and health of pregnant workers at work.

### 15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on the Canadian DSL (Domestic Substances List)

### United Kingdom

National regulations : Take note of Directive 92/85/EC on the safety and health of pregnant workers at work.

### 15.2. Chemical safety assessment

A chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes:

General revision.

Section	Changed item	Change	Comments
2.2	Precautionary statements (CLP)	Modified	
8.1	DNEL	Removed	

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DNEL	Derived-No Effect Level
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
DMEL	Derived Minimal Effect level
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PNEC	Predicted No-Effect Concentration
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit

Data sources : ECHA (European Chemicals Agency). Information provided by the manufacturer.

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Department issuing data specification sheet: : KFT Chemieservice GmbH  
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Postfach 1451 64345 Griesheim  
Germany

Phone: +49 6155-8981-400 Fax: +49 6155 8981-500  
Safety Data Sheet Service: +49 6155 8981-522

Contact person : Dr. Johann Klassen

Full text of H- and EUH-statements:

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

KFT SDS EU 10

*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*



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### Annex to the safety data sheet

#### Table of contents of the Annex

Identified Uses	Es N°	Short title	Page
Manufacture of glass and glass products, E-glass Filter	1		10

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### 1. Manufacture of glass and glass products, E-glass Filter

#### 1.1. Title section

##### Manufacture of glass and glass products, E-glass Filter

ES Type: Worker

Association ref code: 1

Environment		
1	Contributing scenario controlling environmental exposure	ERC5
Worker		
2	E-glass Delivery & Storage	PROC1
3	Mixing or blending in batch processes (Water & Sulfuric acid), Formulation	PROC5
4	Contributing scenario controlling worker exposure	PROC8b
5	Bulk weighing	PROC9
6	Paper articles	PROC14
7	Manufacture Filter, Product packaging, Control measures, Cleaning Working area	PROC21
8	Contributing scenario controlling worker exposure	PROC26

Processes, tasks, activities covered

Industrial use  
Manufacture

#### 1.2. Conditions of use affecting exposure

##### 1.2.1. Control of environmental exposure: Contributing scenario controlling environmental exposure (ERC5)

ERC5	Industrial use resulting in inclusion into or onto a matrix
------	---

##### Product characteristics

Physical form of product	Solid
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently)

##### Technical and organisational conditions and measures

Onsite wastewater treatment required	Filtration. Neutralize
Exhaust gas must be neutralised	Filtration

##### Conditions and measures related to sewage treatment plant

Ensure all waste water is collected and treated via a WWTP	
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##### 1.2.2. Control of worker exposure: E-glass Delivery & Storage (PROC1)

PROC1	Use in closed process, no likelihood of exposure
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##### Product characteristics

Physical form of product	Solid
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently)

##### Amount used (or contained in articles), frequency and duration of use/exposure

Frequency and duration of use	<= 8 h/day
Covers frequency up to: 5 days per week	

##### Technical and organisational conditions and measures

Use in closed process, no likelihood of exposure	
Clean equipment and the work area every day	Avoid dust to spread
Local exhaust is needed at source of dust	Dust and/or fine particles, minimize inhalation exposure
Minimisation of manual phases	
Avoid dust formation	
Sweeping or shovelling without dust for disposal	

##### Conditions and measures related to personal protection, hygiene and health evaluation

Assumes a good basic standard of occupational hygiene is implemented	
Wear suitable gloves resistant to chemical penetration	Ensure that direct skin contact is avoided
If skin contact or contamination of clothing is possible, protective clothing should be worn	

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### 1.2.3. Control of worker exposure: Mixing or blending in batch processes (Water & Sulfuric acid), Formulation (PROC5)

PROC5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
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Product characteristics	
Physical form of product	Solid
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently)

Amount used (or contained in articles), frequency and duration of use/exposure	
Frequency and duration of use	<= 8 h/day
Covers frequency up to: 5 days per week	

Technical and organisational conditions and measures	
Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)	
Clean equipment and the work area every day	Avoid dust to spread
Local exhaust is needed at source of dust	Dust and/or fine particles, minimize inhalation exposure
Minimisation of manual phases	
Avoid dust formation	
Sweeping or shovelling without dust for disposal	

Conditions and measures related to personal protection, hygiene and health evaluation	
Assumes a good basic standard of occupational hygiene is implemented	
If skin contact or contamination of clothing is possible, protective clothing should be worn	
Wear suitable gloves resistant to chemical penetration	Ensure that direct skin contact is avoided
Dust formation: dust mask. Filter type: P3	

### 1.2.4. Control of worker exposure: Contributing scenario controlling worker exposure (PROC8b)

PROC8b	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
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Product characteristics	
Physical form of product	Solid
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently)

Amount used (or contained in articles), frequency and duration of use/exposure	
Frequency and duration of use	<= 8 h/day
Covers frequency up to: 5 days per week	

Technical and organisational conditions and measures	
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Clean equipment and the work area every day	Avoid dust to spread
Local exhaust is needed at source of dust	Dust and/or fine particles, minimize inhalation exposure
Minimisation of manual phases	
Avoid dust formation	
Sweeping or shovelling without dust for disposal	

Conditions and measures related to personal protection, hygiene and health evaluation	
Assumes a good basic standard of occupational hygiene is implemented	
If skin contact or contamination of clothing is possible, protective clothing should be worn	
Wear suitable gloves resistant to chemical penetration	Ensure that direct skin contact is avoided
Breathing apparatus with filter. Filter type: P3	

### 1.2.5. Control of worker exposure: Bulk weighing (PROC9)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
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Product characteristics	
Physical form of product	Solid
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently)

Amount used (or contained in articles), frequency and duration of use/exposure	
Frequency and duration of use	<= 8 h/day
Covers frequency up to: 5 days per week	

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<b>Technical and organisational conditions and measures</b>	
Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Clean equipment and the work area every day	Avoid dust to spread
Local exhaust is needed at source of dust	Dust and/or fine particles, minimize inhalation exposure
Minimisation of manual phases	
Avoid dust formation	
Sweeping or shovelling without dust for disposal	

<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
Assumes a good basic standard of occupational hygiene is implemented	
If skin contact or contamination of clothing is possible, protective clothing should be worn	
Wear suitable gloves resistant to chemical penetration	Ensure that direct skin contact is avoided
Dust formation: dust mask. Filter type: P3	

### 1.2.6. Control of worker exposure: Paper articles (PROC14)

PROC14	Production of preparations or articles by tableting, compression, extrusion, pelletisation
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<b>Product characteristics</b>	
Physical form of product	Solid
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently)

<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
Frequency and duration of use	<= 8 h/day
Covers frequency up to: 5 days per week	

<b>Technical and organisational conditions and measures</b>	
Production of preparations or articles by tableting, compression, extrusion, pelletisation	
Clean equipment and the work area every day	Avoid dust to spread
Local exhaust is needed at source of dust	Dust and/or fine particles, minimize inhalation exposure
Minimisation of manual phases	
Avoid dust formation	
Sweeping or shovelling without dust for disposal	

<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
Assumes a good basic standard of occupational hygiene is implemented	
If skin contact or contamination of clothing is possible, protective clothing should be worn	
Wear suitable gloves resistant to chemical penetration	Ensure that direct skin contact is avoided
Breathing apparatus with filter. Filter type: P3	

### 1.2.7. Control of worker exposure: Manufacture Filter, Product packaging, Control measures, Cleaning Working area (PROC21)

PROC21	Low energy manipulation of substances bound in materials and/or articles
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<b>Product characteristics</b>	
Physical form of product	Solid
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently)

<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
Frequency and duration of use	<= 8 h/day
Covers frequency up to: 5 days per week	

<b>Technical and organisational conditions and measures</b>	
Low energy manipulation of substances bound in materials and/or articles	
Clean equipment and the work area every day	Avoid dust to spread
Local exhaust is needed at source of dust	Dust and/or fine particles, minimize inhalation exposure
Minimisation of manual phases	
Avoid dust formation	
Sweeping or shovelling without dust for disposal	

<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
Assumes a good basic standard of occupational hygiene is implemented	
If skin contact or contamination of clothing is possible, protective clothing should be worn	
Wear suitable gloves resistant to chemical penetration	Ensure that direct skin contact is avoided

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Breathing apparatus with filter. Filter type: P3	
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### 1.2.8. Control of worker exposure: Contributing scenario controlling worker exposure (PROC26)

PROC26	Handling of solid inorganic substances at ambient temperature
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Product characteristics	
Physical form of product	Solid
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently)

Amount used (or contained in articles), frequency and duration of use/exposure	
Frequency and duration of use	<= 8 h/day
Covers frequency up to: 5 days per week	

Technical and organisational conditions and measures	
Handling of solid inorganic substances at ambient temperature	
Clean equipment and the work area every day	Avoid dust to spread
Local exhaust is needed at source of dust	Dust and/or fine particles, minimize inhalation exposure
Minimisation of manual phases	
Avoid dust formation	
Sweeping or shovelling without dust for disposal	

Conditions and measures related to personal protection, hygiene and health evaluation	
Assumes a good basic standard of occupational hygiene is implemented	
If skin contact or contamination of clothing is possible, protective clothing should be worn	
Wear suitable gloves resistant to chemical penetration	Ensure that direct skin contact is avoided
Breathing apparatus with filter. Filter type: P3	

### 1.3. Exposure estimation and reference to its source

#### 1.3.1. Environmental release and exposure Contributing scenario controlling environmental exposure (ERC5)

Information for contributing exposure scenario
As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed

#### 1.3.2. Worker exposure E-glass Delivery & Storage (PROC1)

Information for contributing exposure scenario
Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted

#### 1.3.3. Worker exposure Mixing or blending in batch processes (Water & Sulfuric acid), Formulation (PROC5)

Information for contributing exposure scenario
Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted

#### 1.3.4. Worker exposure Contributing scenario controlling worker exposure (PROC8b)

Route of exposure and type of effects	Exposure estimate	RCR	Method
Acute - Local - Inhalation	0,12 mg/m <sup>3</sup>	< 1	
Long term - Local - Inhalation	0,013 mg/m <sup>3</sup>	0,017	

#### 1.3.5. Worker exposure Bulk weighing (PROC9)

Route of exposure and type of effects	Exposure estimate	RCR	Method
Acute - Local - Inhalation	0,2 mg/m <sup>3</sup>	< 1	
Long term - Local - Inhalation	0,2 mg/m <sup>3</sup>	0,267	

#### 1.3.6. Worker exposure Paper articles (PROC14)

Route of exposure and type of effects	Exposure estimate	RCR	Method
Acute - Local - Inhalation	0,03 mg/m <sup>3</sup>	< 1	
Long term - Local - Inhalation	0,005 mg/m <sup>3</sup>	0,007	

#### 1.3.7. Worker exposure Manufacture Filter, Product packaging, Control measures, Cleaning Working area (PROC21)

Route of exposure and type of effects	Exposure estimate	RCR	Method
Acute - Local - Inhalation	0,12 mg/m <sup>3</sup>	< 1	
Long term - Local - Inhalation	0,105 mg/m <sup>3</sup>	0,14	

#### 1.3.8. Worker exposure Contributing scenario controlling worker exposure (PROC26)

Route of exposure and type of effects	Exposure estimate	RCR	Method
Acute - Local - Inhalation	0,11 mg/m <sup>3</sup>	< 1	

# E-glass microfibres

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Long term - Local - Inhalation	0,11 mg/m <sup>3</sup>	0,147	
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### 1.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

#### 1.4.1. Environment

#### 1.4.2. Health

Guidance - Health	Supervision in place to check that the RMMs in place are being used correctly and OCs followed
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