Synthetic vitreous fibres: DX100 and DX 200 Glass

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 12/21/2022 Revision date: 12/21/2022 Version: 1.00

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	Synthetic vitreous fibres: DX100 and DX 200 Glass
Chemical name	:	Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight]
EC Index-No.	:	650-016-00-2
REACH registration No	:	01-2119495511-37-0000

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

1.2.1. Relevant identified uses

Main use category	:	Industrial use
Use of the substance/mixture	:	Manufacture of glass fibres, Paper, Manufacturing of separator and filtration media Exposure scenarios See: attachment

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier
Alkegen
Mill Lane, Rainford
WA11 8LP St Helens, Merseyside
United Kingdom
T + 44 (0) 1744 88 7600 - F + 44 (0) 1744 88 9916
www.alkegen.com

Email competent person
reachsds@alkegen.com

Importer
Lauscha Fiber International GmbH
Dammweg 35
98724 Lauscha
Germany
T +49 36702 2870 - F +49 36702 28728
lauscha.info@unifrax.com

Manufacturer
Unifrax Dongxiang (Songyuan) Co., Ltd
Wulantuga Industrial Park
131121 Songyuan City
China
T +86 0438 2611 628

1.4. Emergency telephone number

Emergency number	:	Occupational Hygiene and CARE: Tel: + 44 (0) 1744 887603; Email: reachsds@alkegen.com; (8.15-17.10 h); Language : English

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Carcinogenicity, Category 2	H351

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Suspected of causing cancer (if inhaled).

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS08

Signal word (CLP) : Warning

Hazard statements (CLP) : H351 - Suspected of causing cancer (if inhaled).

Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P280 - Wear eye protection, protective gloves, Breathing equipment.
P308+P313 - IF exposed or concerned: Get medical advice/attention. medical advice.

Listed on CLP Annex VI : EC Index-No.: 650-016-00-2

2.3. Other hazards

Other hazards which do not result in classification : May cause mechanical irritation to the skin, eyes and respiratory system.

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	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight] (Note A)(Note Q)(Note R)	EC Index-No.: 650-016-00-2 REACH-no: 01-2119495511-37-0000	-	Carc. 2, H351

Full text of H- and EUH-statements: see section 16

Note A : Without prejudice to Article 17(2), the name of the substance must appear on the label in the form of one of the designations given in Part 3. In Part 3, use is sometimes made of a general description such as '... compounds' or '... salts'. In this case, the supplier is required to state on the label the correct name, due account being taken of section 1.1.1.4.

Note Q : The harmonised classification as a carcinogen applies unless one of the following conditions is fulfilled: — a short term biopersistence test by inhalation has shown that fibres longer than 20 µm have a weighted half-life less than 10 days; or — a short term biopersistence test by intratracheal instillation has shown that the fibres longer than 20 µm have a weighted halflife less than 40 days; or — an appropriate intra-peritoneal test has provided no evidence of excess carcinogenicity; or — no relevant pathogenicity or neoplastic changes are noted in a suitable long term inhalation test

Note R : The harmonised classification as a carcinogen applies except in the case of fibres with a Length Weighted Geometric Mean Diameter (LWGMD) minus two geometric standard errors greater than 6 µm, as measured in accordance with Test method A.22 in the Annex to Commission Regulation (EC) No 440/2008 (1).

3.2. Mixtures

Not applicable

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 : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water. Take off immediately all contaminated clothing and wash it before reuse.

First-aid measures after eye contact : Rinse eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : Rinse mouth out with water.

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

Symptoms/effects after inhalation : mechanical irritation.
Symptoms/effects after skin contact : mechanical irritation.
Symptoms/effects after eye contact : mechanical irritation.

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. Water spray. Dry powder. Foam.
Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : None known.

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid dust formation. Do not breathe dust. 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 : 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. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Manipulations are to be done only by qualified and authorised persons.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Minimise generation of dust. Dust can be vacuumed with a vacuum cleaner containing a HEPA (High Efficiency Particulate Air) filter.
Other information : Shovel into suitable and closed container for disposal. 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. Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Wear personal protective equipment. Do not breathe dust. Avoid contact with skin and eyes.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in original container. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Protect from moisture.

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 Section 8.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight]	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Man made mineral fibers (MMMF)
IOEL TWA	1 fibers/ml
Remark	(Year of adoption 2012)
Regulatory reference	SCOEL Recommendations
United Kingdom - Occupational Exposure Limits	
Local name	MMMF (Machine-made mineral fibre)
WEL TWA (OEL TWA) [1]	5 mg/m³ (except for refractory ceramic fibres and special purpose fibres)
WEL TWA (OEL TWA) [2]	2 fibers/ml (except for refractory ceramic fibres and special purpose fibres)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight]	
DNEL/DMEL (Workers)	
Long-term - local effects, inhalation	0.9 mg/m³
DNEL/DMEL (General population)	
Long-term - local effects, inhalation	0.3 mg/m³

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:
In case of dust production: protective goggles. EN 166

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Leather protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:
If dust are formed : Wear appropriate mask, (FFP3)

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

Other information:
Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Always wash hands after handling the product. Do not take working clothes home. Wash contaminated clothing before reuse. 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
Colour	:	white.
Appearance	:	Fibres.
Odour	:	odourless.
Odour threshold	:	Not available
Melting point	:	920 – 1220 °C
Freezing point	:	Not applicable
Softening point	:	≈ 700 °C (Glass)
Boiling point	:	Not available
Flammability	:	Non flammable.
Explosive properties	:	Product is not explosive.
Oxidising properties	:	Non oxidizing.
Explosive limits	:	Not applicable
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not available
pH	:	Not available
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	Not applicable
Solubility	:	Water: Insoluble
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not applicable
Vapour pressure at 50°C	:	Not available
Density	:	2.4 – 2.9 g/cm³ (20 °C)
Relative density	:	Not available
Relative vapour density at 20°C	:	Not applicable
Particle size	:	Not available
Particle size distribution	:	Not available

Particle shape	:	Not available
Particle aspect ratio	:	Not available
Particle aggregation state	:	Not available
Particle agglomeration state	:	Not available
Particle specific surface area	:	Not available
Particle dustiness	:	Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1)	:	Not applicable
Bulk density	:	Not applicable

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

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Water, humidity.

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 hazard classes as defined in Regulation (EC) No 1272/2008

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)
Additional information	:	(OECD 404 method)
Serious eye damage/irritation	:	Not classified (Based on available data, the classification criteria are not met)
Additional information	:	Dust from this product may cause eye irritation Experience with humans
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	:	Suspected of causing cancer (if inhaled).

Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight]	
NOAEL, Inhalation, rat	> 30 mg/m³ (6h/d, 5d/week, 24 months, No significant effect was observed at 30 mg/m3. Corresponding to 243 WHO fibres/cm3)

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)

Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight]	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

11.2.2. Other information

Other information : The most likely routes of exposure for FMMVF fibres are evaluated to be by inhalation. Fibres have been shown to disintegrate slowly in acidic environment. Inhaled fibres are subjected to breakage, leading to shorter fibre length. Due to the inert nature of the substance, and the fact that the substance does not cross biological barriers, systemic exposure leading to toxic reactions is evaluated to be very unlikely.

SECTION 12: Ecological information

12.1. Toxicity

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)

Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight]	
LC50 - Fish [1]	> 1000 mg/l (96 h; Danio rerio; (OECD 203 method))
EC50 - Crustacea [1]	> 1000 mg/l (3 d; Daphnia magna; (OECD 202 method))
EC50 72h algae	> 1000 mg/l (72 h; Pseudokirchneriella subcapitata; (OECD 201 method))
NOEC chronic algae	≥ 1000 mg/l (72 h; Pseudokirchneriella subcapitata; (OECD 201 method))

12.2. Persistence and degradability

Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight]	
Persistence and degradability	Not applicable for inorganic substances.

12.3. Bioaccumulative potential

Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight]	
Bioaccumulative potential	Not applicable for inorganic substances.

12.4. Mobility in soil

Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight]	
Ecology - soil	Product adsorbs little onto the soil.

12.5. Results of PBT and vPvB assessment

Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content greater than 18% by weight]
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. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

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 discharge into drains or the environment. Do not dispose of with domestic waste.

Product/Packaging disposal recommendations : Recycle or dispose of in compliance with current legislation.

European List of Waste (LoW) code : 10 11 03 - waste glass-based fibrous materials
17 06 03* - other insulation materials consisting of or containing dangerous substances

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

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
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. Maritime transport in bulk according to IMO instruments

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

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.

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

United Kingdom

National 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.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

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
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

DNEL	Derived-No Effect Level
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
NOAEL	No-Observed Adverse Effect Level
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
DMEL	Derived Minimal Effect level
IARC	International Agency for Research on Cancer
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOEC	No-Observed Effect Concentration
STP	Sewage treatment plant
TLM	Median Tolerance Limit

Data sources : Information provided by the manufacturer. European Chemicals Agency, http://echa.europa.eu/.

Other information : Occupational Hygiene: dawn.webster@alkegen.com.

Full text of H- and EUH-statements:	
Carc. 2	Carcinogenicity, Category 2
H351	Suspected of causing cancer.

KFT SDS EU 06

The information presented on this SDS (1) provides details on material identity, manufacturer/supplier information, hazard characterization and prevention, emergency response and other specialized information, (2) is considered to be accurate to the best of our knowledge, information and good faith belief as of the date of publication, (3) is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release of the material named, (4) should be read and used in conjunction with the company's relevant literature, (5) relates only to the specific material designated and may not be valid for such material used in combination with any other material or process and (6) is provided without warranty, expressed or implied, in law or in fact, of merchantability or fitness for a particular purpose. This document does not constitute a product specification and should not be relied on as such. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product.

Annex to the safety data sheet

Product exposure scenario(s)	
ES Type	**ES title**
Worker	Mineral wool fibres production, Manufacturing of individual fibres
Worker	Mineral wool fibres production, Manufacturing of bulk, commercial and industrial
Worker	Manufacturing of products, Manufacturing of filtration products
Worker	Manufacturing of products, Manufacturing of non-woven filter media
Worker	Manufacturing of products, Final product manufacturing of commercial filters
Worker	Manufacturing of products, Production of final product of GFB filters on Edinburgh paper machine
Worker	Manufacturing of products, Final product routine fiber monitoring on Voith 1 and 2
Worker	Manufacturing of products, Final product reel change on Edinburgh paper machine
Worker	Manufacturing of products, Final product cutting by Edinburgh paper machine
Worker	Manufacturing of products, Final product re-pulping of Cornwall paper machine
Worker	Manufacturing of products, Final product production run Edinburgh paper machine
Worker	Industrial, Battery separator
Worker	Manufacturing of products, Manufacturing of separator and filtration media
Worker	Industrial, Aircraft insulation cutting/sawing with power tools
Worker	IndustrialAircraft insulation cutting/sawing with power tools
Worker	Professional, Commercial filters
Worker	Professional, Aircraft insulation handling
Worker	Application Private/Commercial, Exhaust from vacuum cleaner
Worker	Application Private/Commercial, Indoor air in public buildings
Consumer	Consumer, Exhaust from vacuum cleaner
Consumer	Consumer

Synthetic vitreous fibres: DX100 and DX 200 Glass

Annex to the safety data sheet: Exposure scenario

Product form: Substance Physical state: Solid

1. Mineral wool fibres production, Manufacturing of individual fibres

1.1. Title section

Mineral wool fibres production, Manufacturing of individual fibres

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

1.2. Conditions of use affecting exposure

1.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

Product (article) characteristics	
Physical form of product	Solid

1.3. Exposure estimation and reference to its source

1.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.6 mg/m³	0.667	

1.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

1.4.1. Environment

Guidance - Environment	No additional information available

1.4.2. Health

Guidance - Health	No additional information available

2. Mineral wool fibres production, Manufacturing of bulk, commercial and industrial

2.1. Title section

Mineral wool fibres production, Manufacturing of bulk, commercial and industrial

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

2.2. Conditions of use affecting exposure

2.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

Product (article) characteristics	
Physical form of product	Solid

2.3. Exposure estimation and reference to its source

2.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.0062 mg/m³	0.007	

2.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

2.4.1. Environment

Guidance - Environment	No additional information available

2.4.2. Health

Guidance - Health	No additional information available

3. Manufacturing of products, Manufacturing of filtration products

3.1. Title section

Manufacturing of products, Manufacturing of filtration products

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

3.2. Conditions of use affecting exposure

3.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

Product (article) characteristics	
Physical form of product	Solid

3.3. Exposure estimation and reference to its source

3.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.0089 mg/m³	0.01	

3.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

3.4.1. Environment

Guidance - Environment	No additional information available

3.4.2. Health

Guidance - Health	No additional information available

4. Manufacturing of products, Manufacturing of non-woven filter media

4.1. Title section

Manufacturing of products, Manufacturing of non-woven filter media

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

4.2. Conditions of use affecting exposure

4.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

Product (article) characteristics	
Physical form of product	Solid

4.3. Exposure estimation and reference to its source

4.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.053 mg/m³	0.059	

4.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

4.4.1. Environment

Guidance - Environment	No additional information available

4.4.2. Health

Guidance - Health	No additional information available

5. Manufacturing of products, Final product manufacturing of commercial filters

5.1. Title section

Manufacturing of products, Final product manufacturing of commercial filters

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

5.2. Conditions of use affecting exposure

5.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

Product (article) characteristics	
Physical form of product	Solid

5.3. Exposure estimation and reference to its source

5.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.053 mg/m³	0.059	

5.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

5.4.1. Environment

Guidance - Environment	No additional information available

5.4.2. Health

Guidance - Health	No additional information available

6. Manufacturing of products, Production of final product of GFB filters on Edinburgh paper machine

6.1. Title section

Manufacturing of products, Production of final product of GFB filters on Edinburgh paper machine

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

6.2. Conditions of use affecting exposure

6.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

Product (article) characteristics	
Physical form of product	Solid

6.3. Exposure estimation and reference to its source

6.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.069 mg/m³	0.077	

6.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

6.4.1. Environment

Guidance - Environment	No additional information available

6.4.2. Health

Guidance - Health	No additional information available

7. Manufacturing of products, Final product routine fiber monitoring on Voith 1 and 2

7.1. Title section

Manufacturing of products, Final product routine fiber monitoring on Voith 1 and 2

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

7.2. Conditions of use affecting exposure

7.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

Product (article) characteristics	
Physical form of product	Solid

7.3. Exposure estimation and reference to its source

7.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.0045 mg/m³	0.005	

7.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

7.4.1. Environment

Guidance - Environment	No additional information available

7.4.2. Health

Guidance - Health	No additional information available

8. Manufacturing of products, Final product reel change on Edinburgh paper machine

8.1. Title section

Manufacturing of products, Final product reel change on Edinburgh paper machine

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

8.2. Conditions of use affecting exposure

8.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

Product (article) characteristics	
Physical form of product	Solid

8.3. Exposure estimation and reference to its source

8.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.0045 mg/m³	0.005	

8.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

8.4.1. Environment

Guidance - Environment	No additional information available

8.4.2. Health

Guidance - Health	No additional information available

9. Manufacturing of products, Final product cutting by Edinburgh paper machine

9.1. Title section

Manufacturing of products, Final product cutting by Edinburgh paper machine

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

9.2. Conditions of use affecting exposure

9.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

9.3. Exposure estimation and reference to its source

9.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.0164 mg/m³	0.018	

9.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

9.4.1. Environment

Guidance - Environment	No additional information available

9.4.2. Health

Guidance - Health	No additional information available

10. Manufacturing of products, Final product re-pulping of Cornwall paper machine

10.1. Title section

Manufacturing of products, Final product re-pulping of Cornwall paper machine

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

10.2. Conditions of use affecting exposure

10.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

10.3. Exposure estimation and reference to its source

10.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.0183 mg/m³	0.02	

10.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

10.4.1. Environment

Guidance - Environment	No additional information available

10.4.2. Health

Guidance - Health	No additional information available

11. Manufacturing of products, Final product production run Edinburgh paper machine

11.1. Title section

Manufacturing of products, Final product production run Edinburgh paper machine

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

11.2. Conditions of use affecting exposure

11.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

11.3. Exposure estimation and reference to its source

11.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.04 mg/m³	0.044	

11.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

11.4.1. Environment

Guidance - Environment	No additional information available

11.4.2. Health

Guidance - Health	No additional information available

12. Industrial, Battery separator

12.1. Title section

Industrial, Battery separator

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Use at industrial sites (IS)

12.2. Conditions of use affecting exposure

12.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

12.3. Exposure estimation and reference to its source

12.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.34 mg/m³	0.378	

12.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

12.4.1. Environment

Guidance - Environment	No additional information available

12.4.2. Health

Guidance - Health	No additional information available

13. Manufacturing of products, Manufacturing of separator and filtration media

13.1. Title section

Manufacturing of products, Manufacturing of separator and filtration media

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Manufacture (M)

13.2. Conditions of use affecting exposure

13.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

13.3. Exposure estimation and reference to its source

13.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.41 mg/m³	0.456	

13.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

13.4.1. Environment

Guidance - Environment	No additional information available

13.4.2. Health

Guidance - Health	No additional information available

14. Industrial, Aircraft insulation cutting/sawing with power tools

14.1. Title section

Industrial, Aircraft insulation cutting/sawing with power tools

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Use at industrial sites (IS)

14.2. Conditions of use affecting exposure

14.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

14.3. Exposure estimation and reference to its source

14.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.0053 mg/m³	0.006	

14.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

14.4.1. Environment

Guidance - Environment	No additional information available

14.4.2. Health

Guidance - Health	No additional information available

15. IndustrialAircraft insulation cutting/sawing with power tools

15.1. Title section

IndustrialAircraft insulation cutting/sawing with power tools

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Use at industrial sites (IS)

15.2. Conditions of use affecting exposure

15.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

15.3. Exposure estimation and reference to its source

15.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.2 mg/m³	0.222	

15.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

15.4.1. Environment

Guidance - Environment	No additional information available

15.4.2. Health

Guidance - Health	No additional information available

16. Professional, Commercial filters

16.1. Title section

Professional, Commercial filters

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Widespread use by professional workers (PW)

16.2. Conditions of use affecting exposure

16.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

16.3. Exposure estimation and reference to its source

16.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.000026 mg/m³	0	

16.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

16.4.1. Environment

Guidance - Environment	No additional information available

16.4.2. Health

Guidance - Health	No additional information available

17. Professional, Aircraft insulation handling

17.1. Title section

Professional, Aircraft insulation handling

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Widespread use by professional workers (PW)

17.2. Conditions of use affecting exposure

17.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

17.3. Exposure estimation and reference to its source

17.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.0187 mg/m³	0.021	

17.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

17.4.1. Environment

Guidance - Environment	No additional information available

17.4.2. Health

Guidance - Health	No additional information available

18. Application Private/Commercial, Exhaust from vacuum cleaner

18.1. Title section

Application Private/Commercial, Exhaust from vacuum cleaner

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Widespread use by professional workers (PW)

18.2. Conditions of use affecting exposure

18.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

18.3. Exposure estimation and reference to its source

18.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.0000089 mg/m³	0	

18.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

18.4.1. Environment

Guidance - Environment	No additional information available

18.4.2. Health

Guidance - Health	No additional information available

19. Application Private/Commercial, Indoor air in public buildings

19.1. Title section

Application Private/Commercial, Indoor air in public buildings

ES Type: Worker Revision date: 12/21/2022	Issue date: 12/21/2022

Worker		
	Contributing scenario controlling worker exposure	

Processes, tasks, activities covered	Widespread use by professional workers (PW)

19.2. Conditions of use affecting exposure

19.2.1. Control of worker exposure: Contributing scenario controlling worker exposure

19.3. Exposure estimation and reference to its source

19.3.1. Worker exposure Contributing scenario controlling worker exposure

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.000148 mg/m³	0	

19.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

19.4.1. Environment

Guidance - Environment	No additional information available

19.4.2. Health

Guidance - Health	No additional information available

20. Consumer, Exhaust from vacuum cleaner

20.1. Title section

Consumer, Exhaust from vacuum cleaner

ES Type: Consumer Revision date: 12/21/2022	Issue date: 12/21/2022

Consumer		
	Contributing scenario consumer end-use	

Processes, tasks, activities covered	Consumer use (C)

20.2. Conditions of use affecting exposure

20.2.1. Control of consumer exposure: Contributing scenario consumer end-use

20.3. Exposure estimation and reference to its source

20.3.1. Consumer exposure Contributing scenario consumer end-use

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.0000089 mg/m³	0	

20.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

20.4.1. Environment

Guidance - Environment	No additional information available

20.4.2. Health

Guidance - Health	No additional information available

21. Consumer

21.1. Title section

Consumer

ES Type: Consumer Revision date: 12/21/2022	Issue date: 12/21/2022

Consumer		
	Contributing scenario consumer end-use	

Processes, tasks, activities covered	Consumer use (C)

21.2. Conditions of use affecting exposure

21.2.1. Control of consumer exposure: Contributing scenario consumer end-use

21.3. Exposure estimation and reference to its source

21.3.1. Consumer exposure Contributing scenario consumer end-use

Route of exposure and type of effects	Exposure estimate	RCR	Method
Long term - Local - Inhalation	0.000148 mg/m³	0	

21.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

21.4.1. Environment

Guidance - Environment	No additional information available

21.4.2. Health

Guidance - Health	No additional information available