# Synthetic vitreous fibres: A, B and C Glass

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 15/12/2022 Revision date: 15/12/2022 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: A, B and C 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 | : | Substance used in secondary processing to produce articles used in industrial and commercial applications.<br>Manufacture of glass fibres, Paper, Manufacturing of separator and filtration media<br>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

**Manufacturer/Supplier**
Alkegen
Mill Lane, Rainford
UK– WA11 8LP St Helens, Merseyside
United Kingdom
T + 44 (0) 1744 88 7600 - F + 44 (0) 1744 88 9916

**Email competent person**
reachsds@alkegen.com

**Manufacturer**
Lauscha Fiber International GmbH
Dammweg 35
98724 Lauscha

T: 036702 / 287-0 F: 036702 28728
lauscha.info@unifrax.com

### 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]<br>(Note A)(Note Q)(Note R) | EC Index-No.: 650-016-00-2<br>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.

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. For specific technical details refer to technical data sheets.

## 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 | : | > 400 °C |
| Freezing point | : | Not applicable |
| 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 – 2.6 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

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 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<br>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 |

## 1. Mineral wool fibres production, Manufacturing of individual fibres

### 1.1. Title section

**Mineral wool fibres production, Manufacturing of individual fibres**

| | |
|---|---|
| ES Type: Worker<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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<br>Revision date: 15/12/2022 | Issue date: 15/12/2022 |

| | | |
|---|---|---|
| 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 |