Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Quick Change Discs

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

1.1 Product identifier

Product Name: FRQ Quick Change Discs

Additional information: This product is not hazardous as shipped and sold. However, during the grinding process, hazardous substances may be released and made available for exposure. The Hazard Classification in Section 2 and corresponding Label Elements are applicable to this product when used for grinding, sanding, mechanical abrasion or any other fabrication process that compromises the integrity of the abrasive belt/sleeve/band.

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

Relevant identified uses: Coated abrasives for grinding and sanding.
Uses advised against: Any use other than recommended above.
Reasons why uses advised against: Not determined or not applicable.

1.3 Details of the manufacturer/supplier of the safety data sheet

Manufacturer: European Union
Rosver SRL
Via Concordia 5/C6
20099 Sesto San Giovanni (MI) +
+39 0224417219

1.4 Emergency telephone number: European Union

Emergency phone number

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture:

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

Eye Irritation, category 2
Skin sensitization, category 1
Carcinogenicity, category 1B
Specific target organ toxicity - repeated exposure, category 1

Hazard-determining components of labeling:

Silicon carbide
Formaldehyde, oligomeric reaction products with phenol
Trisodium hexafluoroaluminate

Additional Information: None

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
(CLP) Hazard pictograms:

Signal Word: Danger

Hazard statements:

H319 Causes serious eye irritation
H317 May cause an allergic skin reaction H350 May cause cancer via inhalation
H372 Causes damage to organs (lungs and bone) through prolonged or repeated exposure

Precautionary statements:

P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood P260 Do not breathe dust/fume/gas/mist/vapours/spray
P264 Wash any exposed skin thoroughly after handling
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/… P270 Do not eat, drink or smoke when using this product
P272 Contaminated work clothing should not be allowed out of the workplace P302+P352 IF ON SKIN: Wash with plenty of soap and water
P333+P313 If skin irritation or rash occurs: Get medical advice/attention
P321 Specific treatment (see Sections 4-8 of this SDS and any supplemental information on the product label)
P363 Wash contaminated clothing before reuse
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 If eye irritation persists: Get medical advice/attention P308+P313 IF exposed or concerned: Get medical advice/attention P314 Get medical advice/attention if you feel unwell
P405 Store locked up
P501 Dispose of contents and container in accordance with local, regional, national, and international regulations

2.3 Other hazards:

Finely divided particles may form combustible dust concentrations in air.
Airborne dust may cause mechanical irritation to eyes, nose, throat, and lungs. Direct contact may result in corneal injury.

SECTION 3: Composition/information on ingredients

3.1 Substance: Not applicable.

3.2 Mixture:

Identification	EU REACH Registration No.	Name	Classification according to Regulation (EC) No. 1272/2008 (CLP)	Weight %
CAS number: 409-21-2 EC number: 206-991-8	–	Silicon carbide	Carc. 1B; H350	<15

CAS number: 1344-28-1 EC number: 215-691-6	–	Aluminum Oxide	Not classified;	<15
CAS number: 1314-23-4 EC number: 215-227-2	–	Zirconium Dioxide	Not classified;	<15
CAS number: 9003-35-4 EC number: 500-005-2	–	Formaldehyde, oligomeric reaction products with phenol	Skin Sens. 1; H317 Eye Irrit. 2; H319	<15
CAS number: 13775-53-6 EC number: 237-410-6	–	Trisodium hexafluoroaluminate	Acute Tox. 4 (Inh); H332 STOT RE 1; H372 Aquatic Chronic 2; H411	<15
CAS number: 14075-53-7 EC number: 237-928-2	–	Potassium tetrafluoroborate	Not classified;	<15
CAS number: 9003-08-1 EC number: Not Applicable	–	1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde	Not classified;	<10
CAS number: 1332-58-7 EC number: 310-194-1	–	Kaolin	Not classified;	<3
CAS number: 13463-67-7 EC number: 236-675-5	–	Titanium Dioxide	Not classified;	<3

Additional information: None
Full Text of H and EUH statements: See section 16

SECTION 4: First aid measures

4.1 Description of first aid

measures General notes:

Show this Safety Data Sheet to the doctor in attendance.

Following inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

Following skin contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

Following eye contact:

Rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

Following ingestion:

Not a likely route of exposure.

Self-Protection of the first aider:

Take precautions to ensure your own safety before attempting rescue. Wear appropriate safety eyewear, gloves, protective clothing and respiratory protection to prevent exposure. See Section 8 of this SDS for personal protective equipment recommendations. Do not use the mouth to mouth method if victim has ingested or inhaled the product. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper device.

4.2 Most important symptoms and effects, both acute and delayed Acute symptoms and effects:

Eye contact may result in irritation, redness, pain, inflammation, itching, burning and tearing. Dermal exposure may cause an allergic skin reaction. Symptoms may include irritation, redness, pain, rash, inflammation, itching, burning and dermatitis.

Inhalation of large amounts of dust may cause inflammation and irritation of the nose and throat. Symptoms may include cough, sore throat, tightness of the chest, chest pain and lightheadedness.

Delayed symptoms and effects:

Prolonged or repeated exposure to silicon carbide fibres (with diameter 5 µm and aspect ratio ≥ 3:1) may cause pulmonary fibrosis and lung cancer.

Chronic exposure to titanium dioxide (airborne, unbound particles of respirable size) may cause pulmonary fibrosis and cancer.

Chronic exposure to Aluminum Oxide fumes or dust may damage the lungs and peripheral nervous system. Adverse effects on lungs include chronic bronchitis, COPD and pulmonary fibrosis.

Chronic exposure to airborne silica of respirable size can cause Silicosis, an incurable lung disease that can lead to disability and death; Lung cancer; Chronic obstructive pulmonary disease (COPD); and Kidney disease.

Prolonged or repeated exposure to trisodium hexafluoroaluminate may damage the lungs. Long-term exposure to high levels of fluoride may cause skeletal fluorosis. The results of skeletal fluorosis include: denser bones that are more brittle or fragile than normal bone a disease causing denser bones that are more brittle or fragile than normal bone; joint pain; limited range of joint movement.

4.3 Indication of any immediate medical attention and special treatment needed Specific treatment:

Not determined or not available.

Notes for the doctor:

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Use extinguishing media appropriate for surrounding materials and fire. For fire involving combustible dust: Dry chemical, sand and carbon dioxide.

Unsuitable extinguishing media:

Do not use water jet.

5.2 Special hazards arising from the substance or mixture:

May form combustible dust concentrations in air. This generates a fire and explosion hazard. Thermal decomposition may lead to the release of irritating and toxic substances, including: carbon oxides,

aluminum oxides, sodium oxides, titanium oxides and silicon oxides.

5.3 Advice for firefighters

Personal protection equipment:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

When using extinguishers, avoid dispersing combustible dust into the air. Aim extinguishers directly at the base of the flames and apply the agent as gently as possible. Overall, give preference to using medium to wide spray patterns rather than solid streams. Use only non-sparking tools. Fire fight from a protected location or maximum possible distance. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Evacuate unnecessary personnel. Extinguish any sources of ignition. Do not ventilate area as this may spread dust. Wear recommended personal protective equipment including suitable respiratory protection (see Section 8). Ensure no sources of electric discharge or ignition are on your person before entering area. Do not get on skin, eyes or on clothing. Avoid breathing dust, fumes. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up:

Carefully sweep up or gather dry material, avoiding the creation of airborne dust. Place recovered product in appropriate container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

6.4 Reference to other sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Follow instructions of grinding machine manufacturers. Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Use dust explosion proof electrical equipment and lighting. Avoid dust generation and dispersal of dust in air. Dust deposits should not be allowed to accumulate on surfaces. Clean dust residues at regular intervals. Do not use brooms or compressed air hoses to clean surfaces. Only use vacuums approved for dust collection. Use only non-sparking tools. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions such as electrical grounding and bonding or inner atmospheres. Keep containers tightly closed and grounded when not in use. Workers whose clothing may have been contaminated should change into non-contaminated clothing before leaving the work premises. Contaminated clothing should be segregated in such a manner so that there is no direct personal contact by personnel who handle, dispose or clean the clothing. Contaminated clothing should not be allowed out of the workplace. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10).

7.2 Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well-ventilated area. DO NOT GET WET. Store in original, tightly closed container. Store away from incompatible materials. Store away from open flame and ignition sources.

7.3 Specific end use(s):

Refer to Section 1 (Recommended Use).

SECTION 8: Exposure controls/personal protection



8.1 Control parameters

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
Austria	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (fiber free, respirable fraction)
	Silicon carbide	409-21-2	60-Minute STEL: 10 mg/m³ (fiber free, respirable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 5 mg/m³ (respirable fraction, smoke)
	Aluminum Oxide	1344-28-1	60-Minute STEL: 10 mg/m³ (respirable fraction, smoke)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Trisodium hexafluoroaluminate	13775-53-6	STEL: 12.5 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Potassium tetrafluoroborate	14075-53-7	STEL: 12.5 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Kaolin	1332-58-7	8-Hour TWA: 5 mg/m³ (respirable dust)
	Kaolin	1332-58-7	15-Minute STEL: 10 mg/m³ (respirable dust)
	Kaolin	1332-58-7	8-Hour TWA: 10 mg/m³ (inhalable dust)
	Kaolin	1332-58-7	15-Minute STEL: 20 mg/m³ (inhalable dust)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 5 mg/m³ (dust, respirable fraction)
	Titanium Dioxide	13463-67-7	STEL: 10 mg/m³ (alveolar dust, respirable fraction 2 X 60 min)
Belgium	Silicon carbide	409-21-2	8-Hour TWA: 1 fibers/cm³ (fibers, including whiskers)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Aluminum Oxide	1344-28-1	8-Hour TWA: 1 mg/m³ (as Al)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Kaolin	1332-58-7	8-Hour TWA: 2 mg/m³ (alveolar fraction)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³
Croatia	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (total dust, inhalable particle)
	Silicon carbide	409-21-2	8-Hour TWA: 4 mg/m³ (respirable dust)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 10 mg/m³ (total dust, inhalable particles)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 4 mg/m³ (respirable dust)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Kaolin	1332-58-7	8-Hour TWA: 2 mg/m³ (respirabledust)
	Titanium Dioxide	13463-67-7	15-Minute STEL: 10 mg/m³ (total dust)
	Titanium Dioxide	13463-67-7	15-Minute STEL: 4 mg/m³ (respirable dust)
Estonia	Silicon carbide	409-21-2	8-Hour TWA: 5 mg/m³ (fiberless, respirable dust)
	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (fiberless)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 10 mg/m³ (total dust)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 4 mg/m³ (respirable dust)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (as fluorides)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (as fluorides)
	Kaolin	1332-58-7	8-Hour TWA: 10 mg/m³ (total dust)
	Kaolin	1332-58-7	8-Hour TWA: 5 mg/m³ (fine dust)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Titanium Dioxide	13463-67-7	8-Hour TWA: 5 mg/m³
Greece	Silicon carbide	409-21-2	8-Hour TWA: 5 mg/m³ (respirable fraction)
	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (inhalable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 10 mg/m³ (inhalable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 5 mg/m³ (respirable fraction)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, as F)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³ (Inhalable)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 5 mg/m³ (respirable)
Latvia	Silicon carbide	409-21-2	8-Hour TWA: 6 mg/m³
	Aluminum Oxide	1344-28-1	8-Hour TWA: 6 mg/m³ (disintegration aerosol)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³
Poland	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (inhalable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 2.5 mg/m³ (inhalable fraction, as Al)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 1.2 mg/m³ (respirable fraction, as Al)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2 mg/m³ (Fluorides, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2 mg/m³ (Fluorides, as F)
	Kaolin	1332-58-7	8-Hour TWA: 10 mg/m³ (inhalable fraction, the concentration of respirable silica fraction is obtained simultaneously)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³ (concentration of the respirable Crystalline silica fraction is determined simultaneously inhalable fraction)
	Titanium Dioxide	13463-67-7	15-Minute STEL: 30 mg/m³ (titanium and compounds, as Ti)
Portugal	Silicon carbide	409-21-2	8-Hour TWA: 3 mg/m³ (nonfibrous respirable fraction, particulate matter containing no Asbestos and <1% Crystalline silica)
	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (nonfibrous inhalable fraction, particulate matter containing no Asbestos and <1% Crystalline silica)
	Silicon carbide	409-21-2	8-Hour TWA: 0.1 fibers/cm³ (respirable fibers, including whiskers, length >5 µm, aspect ratio >=3:1)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 1 mg/m³ (as Aluminum insoluble compounds)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, as F)
	Kaolin	1332-58-7	8-Hour TWA: 2 mg/m³ (particulate matter, containing no asbestos and <1% crystalline silica)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³
Slovakia	Silicon carbide	409-21-2	8-Hour TWA: 4 mg/m³ (inhalable fraction)
	Silicon carbide	409-21-2	8-Hour TWA: 1.5 mg/m³ (respirable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 4 mg/m³ (inhalable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 1.5 mg/m³ (respirable fraction)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 1 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (as fluoride)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (as fluoride)

Country (Legal Basis)	**Substance**	**Identifier**	**Permissible concentration**
	Kaolin	1332-58-7	8-Hour TWA: 10 mg/m³ (total concentration)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 5 mg/m³ (NPEL)
Spain	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (no fibers, inhalable fraction)
	Silicon carbide	409-21-2	8-Hour TWA: 3 mg/m³ (no fibers, respirable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 10 mg/m³
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Kaolin	1332-58-7	8-Hour TWA: 2 mg/m³ (particulate matter, containing no asbestos and <1% crystalline silica)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³ (VLA_ED)
United Kingdom	Silicon carbide	409-21-2	8-Hour TWA: 4 mg/m³ (not whiskers, respirable)
	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (not whiskers, total inhalable)
	Silicon carbide	409-21-2	15-Minute STEL: 12 mg/m³ (not whiskers, respirable)
	Silicon carbide	409-21-2	15-Minute STEL: 30 mg/m³ (not whiskers, total inhalable)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 10 mg/m³ (inhalable dust)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 4 mg/m³ (respirable dust)
	Aluminum Oxide	1344-28-1	15-Minute STEL: 12 mg/m³ (calculated respirable dust)
	Aluminum Oxide	1344-28-1	15-Minute STEL: 30 mg/m³ (calculated inhalable dust)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Trisodium hexafluoroaluminate	13775-53-6	15-Minute STEL: 7.5 mg/m³ (Fluorides, inorganic, as F)

	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	15-Minute STEL: 7.5 mg/m³ (Fluorides, inorganic, as F)
	Kaolin	1332-58-7	8-Hour TWA: 2 mg/m³ (respirable dust)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Kaolin	1332-58-7	15-Minute STEL: 6 mg/m³ (calculated respirable dust)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³ (total inhalable)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 4 mg/m³ (respirable)
	Titanium Dioxide	13463-67-7	STEL: 12 mg/m³ (respirable)
	Titanium Dioxide	13463-67-7	STEL: 30 mg/m³ (total inhalable)
Bulgaria	Silicon carbide	409-21-2	8-Hour TWA: 5 mg/m³ (Artificial abrasives, dust, inhalable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 10 mg/m³ (inhalable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 1.5 mg/m³ (respirable fraction)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Kaolin	1332-58-7	8-Hour TWA: 6 mg/m³ (respirable fraction, <2% free Crystalline silicon dioxide)
	Kaolin	1332-58-7	8-Hour TWA: 3 mg/m³ (respirable fraction)
	Titanium Dioxide	13463-67-7	TWA: 10 mg/m³ (respirable dust)
Sweden	Silicon carbide	409-21-2	8-Hour TWA: 0.2 fibers/cm³ (fibres which have a length-width relationship greater than 3:1, a diameter less than 3 µm and a length greater than 5 µm)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 5 mg/m³ (total dust, as Al)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 2 mg/m³ (respirable fraction, as Al)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Titanium Dioxide	13463-67-7	Level Limit Value: 5 mg/m³ (total dust)
France	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³
	Aluminum Oxide	1344-28-1	8-Hour TWA: 10 mg/m³
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Kaolin	1332-58-7	8-Hour TWA: 10 mg/m³ (reapirable fraction)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³ (as Ti)
Ireland	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (total inhalable dust)
	Silicon carbide	409-21-2	8-Hour TWA: 3 mg/m³ (respirable dust)
	Silicon carbide	409-21-2	8-Hour TWA: 0.1 fibers/cm³ (fibrous)
	Silicon carbide	409-21-2	15-Minute STEL: 9 mg/m³ (respirable dust)
	Silicon carbide	409-21-2	15-Minute STEL: 30 mg/m³ (total inhalable dust)
	Silicon carbide	409-21-2	15-Minute STEL: 0.3 fibers/cc (fibrous)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 10 mg/m³ (total inhalable dust)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 4 mg/m³ (respirable dust)
	Aluminum Oxide	1344-28-1	15-Minute STEL: 12 mg/m³ (calculated respirable dust)
	Aluminum Oxide	1344-28-1	15-Minute STEL: 30 mg/m³ (calculated total inhalable dust)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, as F)
	Trisodium hexafluoroaluminate	13775-53-6	15-Minute STEL: 7.5 mg/m³ (Fluorides, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, as F)
	Potassium tetrafluoroborate	14075-53-7	15-Minute STEL: 7.5 mg/m³ (Fluorides, as F)
	Kaolin	1332-58-7	8-Hour TWA: 2 mg/m³ (respirable dust)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³ (total inhalable dust)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 4 mg/m³ (respirable dust)
	Titanium Dioxide	13463-67-7	STEL: 12 mg/m³
	Titanium Dioxide	13463-67-7	STEL: 30 mg/m³
Finland	Silicon carbide	409-21-2	60-Minute STEL: 0.1 fibers/cm³
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 1 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, as F)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Kaolin	1332-58-7	8-Hour TWA: 2 mg/m³ (respirable dust)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³ (dust)
Germany (TRGS 900)	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (fiber-free, inhalable fraction)
	Silicon carbide	409-21-2	8-Hour TWA: 1.25 mg/m³ (fiber-free respirable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 10 mg/m³ (fiber-free, except Aluminum oxide smoke inhalable fraction exposure factor)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 1.25 mg/m³ (fiber-free, except Aluminum oxide smoke respirable fraction exposure factor)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 1 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Trisodium hexafluoroaluminate	13775-53-6	15-Minute STEL: 4 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 1 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Potassium tetrafluoroborate	14075-53-7	15-Minute STEL: 4 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Kaolin	1332-58-7	8-Hour TWA: 1.25 mg/m³ (Dust, respirable)
	Kaolin	1332-58-7	8-Hour TWA: 4 mg/m³ (Dust, general threshold limit value, inhalable fraction)
	Titanium Dioxide	13463-67-7	Limit Value: 1.25 mg/m³ (general dust limit, respirable fraction)
	Titanium Dioxide	13463-67-7	Limit Value: 10 mg/m³ (general dust limit, inhalable fraction)
Romania	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (dust, inhalable fraction)
	Aluminum Oxide	1344-28-1	15-Minute STEL: 3 mg/m³ (fume)
	Aluminum Oxide	1344-28-1	15-Minute STEL: 10 mg/m³ (dust)
	Aluminum Oxide	1344-28-1	15-Minute STEL: 5 mg/m³ (aerosols)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 1 mg/m³ (fume)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 3 mg/m³ (dust)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 2 mg/m³ (aerosols)

	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³
	Titanium Dioxide	13463-67-7	15-Minute STEL: 15 mg/m³
Italy	Silicon carbide	409-21-2	8-Hour TWA: 3 mg/m³ (particulate matter containing no Asbestos and <1% Crystalline silica nonfibrous, respirable fraction)
	Silicon carbide	409-21-2	8-Hour TWA: 10 mg/m³ (particulate matter containing no Asbestos and <1% Crystalline silica nonfibrous, inhalable fraction)
	Silicon carbide	409-21-2	8-Hour TWA: 0.1 fibers/cm³ (>5 µm in length, aspect ratio >=3:1)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 1 mg/m³ (as Aluminum insoluble compounds)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Kaolin	1332-58-7	8-Hour TWA: 2 mg/m³ (particulate matter, containing no asbestos and <1% crystalline silica)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 2.5 mg/m³ (finescale particles, respirable fractio)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 0.2 mg/m³ (nanoscale particles, respirable fraction)
	Titanium Dioxide	13463-67-7	TWA: 10 mg/m³ (ACGIH)
Hungary	Aluminum Oxide	1344-28-1	8-Hour TWA: 2 mg/m³ (respirable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 5 mg/m³
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)

	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Kaolin	1332-58-7	8-Hour TWA: 6 mg/m³ (Dust, respirable)
	Kaolin	1332-58-7	8-Hour TWA: 10 mg/m³ (Dust, inhalable)
Denmark	Aluminum Oxide	1344-28-1	8-Hour TWA: 5 mg/m³ (total, as Al)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 2 mg/m³ (respirable, as Al)
	Aluminum Oxide	1344-28-1	15-Minute STEL: 10 mg/m³ (total, as Al)
	Aluminum Oxide	1344-28-1	15-Minute STEL: 4 mg/m³ (respirable, as Al)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 10 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Trisodium hexafluoroaluminate	13775-53-6	15-Minute STEL: 5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	15-Minute STEL: 5 mg/m³ (Fluorides, inorganic, as F)
	Kaolin	1332-58-7	8-Hour TWA: 2 mg/m³ (respirable)
	Kaolin	1332-58-7	15-Minute STEL: 4 mg/m³ (respirable)
	Titanium Dioxide	13463-67-7	TWA: 6 mg/m³ (as Ti)
	Titanium Dioxide	13463-67-7	STEL: 12 mg/m³ (total dust)
Germany (MAK)	Aluminum Oxide	1344-28-1	8-Hour TWA: 1.5 mg/m³ (respirable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 4 mg/m³ (inhalable fraction)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 0.3 mg/m³ (respirable fraction multiplied by material density)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 2.4 mg/m³ (respirable fraction multiplied by material density)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 1 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Trisodium hexafluoroaluminate	13775-53-6	15-Minute STEL: 4 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 1 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Potassium tetrafluoroborate	14075-53-7	15-Minute STEL: 4 mg/m³ (Fluorides, inorganic, as F - inhalable fraction)
	Kaolin	1332-58-7	8-Hour TWA: 0.3 mg/m³ (Dust, respirable)
	Kaolin	1332-58-7	15-Minute STEL: 2.4 mg/m³ (Dust, respirable)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 0.3 mg/m³ (respirable fraction, except ultrafine particles)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 4 mg/m³ (dust, general threshold limit value [inhalable fraction])
Lithuania	Aluminum Oxide	1344-28-1	8-Hour TWA: 5 mg/m³ (as Al, inhalable fraction)
	Aluminum Oxide	1344-28-1	8-Hour TWA: 2 mg/m³ (as Al, respirable fraction)
	Zirconium Dioxide	1314-23-4	8-Hour TWA: 6 mg/m³
	Formaldehyde, oligomeric reaction products with phenol	9003-35-4	8-Hour TWA: 3 mg/m³
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (as fluorides)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (as fluorides)
	1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde	9003-08-1	TWA: 0.5 mg/m³ (Melamine)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 5 mg/m³
Czech Republic	Aluminum Oxide	1344-28-1	8-Hour TWA: 10 mg/m³ (except for gamma Al2O3 dust)
	Formaldehyde, oligomeric reaction products with phenol	9003-35-4	8-Hour TWA: 5 mg/m³
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Trisodium hexafluoroaluminate	13775-53-6	Ceiling Limit: 5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	Ceiling Limit: 5 mg/m³ (Fluorides, inorganic, as F)
Slovenia	Zirconium Dioxide	1314-23-4	8-Hour TWA: 1 mg/m³ (Zr, as Zirconium compounds, insoluble in water, inhalable fraction)
	Zirconium Dioxide	1314-23-4	15-Minute STEL: 1 mg/m³ (Zr, as Zirconium compounds, insoluble in water, inhalable fraction)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Trisodium hexafluoroaluminate	13775-53-6	15-Minute STEL: 10 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Potassium tetrafluoroborate	14075-53-7	15-Minute STEL: 10 mg/m³ (Fluorides, inorganic, as F)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³ (dust, inhalable fraction)
	Titanium Dioxide	13463-67-7	15-Minute STEL: 20 mg/m³ (dust, inhalable fraction)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 1.25 mg/m³ (dust, respirable fraction)
	Titanium Dioxide	13463-67-7	15-Minute STEL: 2.5 mg/m³ (dust, respirable fraction)
Cyprus	Zirconium Dioxide	1314-23-4	8-Hour TWA: 5 mg/m³ (Zr, as Zirconium compounds)
	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Titanium Dioxide	13463-67-7	8-Hour TWA: 10 mg/m³
European Union	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ ([IOELV] Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ ([IOELV] Fluorides, inorganic, as F)
	Formaldehyde	50-00-0	TWA: 0.37 mg/m³ (0.3 ppm)
	Formaldehyde	50-00-0	TWA: 0.369 mg/m³ (0.3 ppm (SCOEL))
	Formaldehyde	50-00-0	STEL: 0.738 mg/m³ (0.6 ppm (SCOEL))
	Formaldehyde	50-00-0	STEL: 0.74 mg/m³ (0.6 ppm)
Luxembourg	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
Malta	Trisodium hexafluoroaluminate	13775-53-6	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)
	Potassium tetrafluoroborate	14075-53-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, inorganic, as F)

Biological limit values:

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
Austria	Aluminum Oxide	1344-28-1	Aluminum	Creatinine in Urine	EOD/EOW	60 ug/g
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in urine	EOS	7 mg/g
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in urine	BFS	4 mg/g
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in	EOS	7 mg/g

				urine		
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in urine	BFS	4 mg/g

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
Hungary	Aluminum Oxide	1344-28-1	Aluminum	Creatinine in Urine	Not critical	0.25 µmol/mmol [0.06 mg/g]
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in urine	PTNS	24 µmol/mmol [4 mg/g]
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in urine	EOS	42 µmol/mmol [7 mg/g]
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in urine	PTNS	24 µmol/mmol [4 mg/g]
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in urine	EOS	42 µmol/mmol [7 mg/g]
Croatia	Aluminum Oxide	1344-28-1	Aluminum	Urine	EOS	200 µg/L
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in urine	BOS/MOW	4 mg/g
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in urine	EOS	8 mg/g
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in urine	BOS/MOW	4 mg/g
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in urine	EOS	8 mg/g
Slovenia	Aluminum Oxide	1344-28-1	Aluminum	Urine	EOS	50 µg/L
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in Urine	EOS	7 mg/g
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in Urine	PTS	4 mg/g
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in Urine	EOS	7 mg/g
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in Urine	PTS	4 mg/g
Czech Republic	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Urine	EOS	60 µmol/mmol [10 mg/g]
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Urine	EOS	60 µmol/mmol [10 mg/g]
Germany (TRGS 903)	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in urine	EOS	4 mg/g
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in urine	EOS	4 mg/g
Ireland	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Non-specific	EOS	3 mg/L
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Non-specifi	PTS	2 mg/L

				c		
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Non-specific	EOS	3 mg/L
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Non-specific	PTS	2 mg/L
Italy	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Non-specific	EOS	3 mg/L
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Non-specific	PTS	2 mg/L
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Non-specific	EOS	3 mg/L
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Non-specific	PTS	2 mg/L

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
Romania	Trisodium hexafluoroaluminate	13775-53-6	Fluorine	Creatinine in Urine	EOS	5 mg/g
	Potassium tetrafluoroborate	14075-53-7	Fluorine	Creatinine in Urine	EOS	5 mg/g
Slovakia	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in Urine	EOS	7 mg/g
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Creatinine in Urine	PTS	4 mg/g
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in Urine	EOS	7 mg/g
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Creatinine in Urine	PTS	4 mg/g
Spain	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Urine	EOS	3mg/L
	Trisodium hexafluoroaluminate	13775-53-6	Fluoride	Urine	PTS	2 mg/L
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Urine	EOS	3 mg/L
	Potassium tetrafluoroborate	14075-53-7	Fluoride	Urine	PTS	2 mg/L

Derived No Effect Level (DNEL): Ingredient Name:
Silicon carbide **CAS #:** 409-21-2

Workers - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	94 mg/m³
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified
Workers - Local Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified
General Population - Systemic Effects	Acute - Oral	13 mg/kg bw/day
	Acute - Inhalation	No hazard identified
	Acute - Dermal	200 mg/kg bw/day
	Chronic - Oral	No hazard identified
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified
General Population - Local Effect	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.

	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified

Ingredient Name: Aluminum Oxide
CAS #: 1344-28-1

Workers - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	3 mg/m³
	Chronic - Dermal	No hazard identified
Workers - Local Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	3 mg/m³
	Chronic - Dermal	No hazard identified
General Population - Systemic Effects	Acute - Oral	No hazard identified
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	1.32 mg/kg bw/day
	Chronic - Inhalation	0.75 mg/m³
	Chronic - Dermal	No hazard identified
General Population - Local Effect	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	0.75 mg/m³
	Chronic - Dermal	No hazard identified

Ingredient Name: Formaldehyde, oligomeric reaction products with phenol
CAS #: 9003-35-4

Workers - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	Hazard identified but no DNEL available
	Acute - Dermal	Hazard identified but no DNEL available
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	98.7 mg/m³
	Chronic - Dermal	28 mg/kg bw/day
Workers - Local Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	Hazard identified but no DNEL available
	Acute - Dermal	Hazard identified but no DNEL available
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	Hazard identified but no DNEL available
	Chronic - Dermal	Hazard identified but no DNEL available

General Population - Systemic Effects	Acute - Oral	Hazard identified but no DNEL available
	Acute - Inhalation	Hazard identified but no DNEL available
	Acute - Dermal	Hazard identified but no DNEL available
	Chronic - Oral	10 mg/kg bw/day
	Chronic - Inhalation	17.4 mg/m³
	Chronic - Dermal	10 mg/kg bw/day
General Population - Local Effect	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	Hazard identified but no DNEL available
	Acute - Dermal	Hazard identified but no DNEL available
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	Hazard identified but no DNEL available
	Chronic - Dermal	Hazard identified but no DNEL available

Ingredient Name: Trisodium hexafluoroaluminate
CAS #: 13775-53-6

Workers - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	99.8 mg/m³
	Acute - Dermal	Not determined or not applicable.
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	Not determined or not applicable.
	Chronic - Dermal	1020 mg/kg bw/day
Workers - Local Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	99.8 mg/m³
	Acute - Dermal	Not determined or not applicable.
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	0.1 mg/m³
	Chronic - Dermal	1020 mg/kg bw/day
General Population - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	74.5 mg/m³
	Acute - Dermal	Not determined or not applicable.
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	Not determined or not applicable.
	Chronic - Dermal	510 mg/kg bw/day
General Population - Local Effect	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	74.5 mg/m³
	Acute - Dermal	Not determined or not applicable.
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	0.025 mg/m³
	Chronic - Dermal	Not determined or not applicable.

Ingredient Name: Potassium tetrafluoroborate
CAS #: 14075-53-7

Workers - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	4.54 mg/m³
	Chronic - Dermal	20.5 mg/kg bw/day
Workers - Local Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified
General Population - Systemic Effects	Acute - Oral	No hazard identified
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	0.067 mg/kg bw/day
	Chronic - Inhalation	1.13 mg/m³
	Chronic - Dermal	3.7 mg/kg bw/day
General Population - Local Effect	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified

Ingredient Name: Titanium Dioxide
CAS #: 13463-67-7

Workers - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified
Workers - Local Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	Not determined or not applicable.
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	1.25 mg/m³; No hazard identified
	Chronic - Dermal	No hazard identified

General Population - Systemic Effects	Acute - Oral	No hazard identified
	Acute - Inhalation	No hazard identified
	Acute - Dermal	Not determined or not applicable.
	Chronic - Oral	No hazard identified
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified; No hazard identified
General Population - Local Effect	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	Not determined or not applicable.
	Chronic - Dermal	No hazard identified

Predicted No Effect Concentration (PNEC):

Ingredient Name: Silicon carbide

CAS #: 409-21-2

Environmental Protection Target	**PNEC**
Fresh water	No hazard identified
Freshwater sediments	No hazard identified
Marine water	No hazard identified
Marine sediments	No hazard identified
Microorganisms in sewage treatment	No hazard identified
Soil (agricultural)	No hazard identified
Air	No hazard identified
Oral (Secondary Poisoning)	No exposure expected

Ingredient Name: Aluminum Oxide

CAS #: 1344-28-1

Environmental Protection Target	**PNEC**
Fresh water	No hazard identified
Freshwater sediments	No hazard identified
Marine water	No hazard identified
Marine sediments	No hazard identified
Microorganisms in sewage treatment	No hazard identified
Soil (agricultural)	No hazard identified
Air	No hazard identified
Oral (Secondary Poisoning)	No exposure expected

Ingredient Name: Formaldehyde, oligomeric reaction products with phenol

CAS #: 9003-35-4

Environmental Protection Target	**PNEC**
Fresh water	0.1 mg/L
Freshwater sediments	6.73 mg/kg sediment dw
Marine water	0.01 mg/L
Marine sediments	0.673 mg/kg sediment dw

Microorganisms in sewage treatment	No hazard identified
Soil (agricultural)	1.29 mg/kg soil dw

Air	No hazard identified
Oral (Secondary Poisoning)	No exposure expected

Ingredient Name: Trisodium hexafluoroaluminate
CAS #: 13775-53-6

Environmental Protection Target	**PNEC**
Fresh water	0.05 mg/L
Freshwater sediments	30.5 mg/kg sediment dw
Marine water	0 mg/L
Marine sediments	3.05 mg/kg sediment dw
Microorganisms in sewage treatment	8.7 mg/L
Soil (agricultural)	6.02 mg/kg soil dw
Air	Not determined or not available.
Oral (Secondary Poisoning)	No exposure expected

Ingredient Name: Potassium tetrafluoroborate
CAS #: 14075-53-7

Environmental Protection Target	**PNEC**
Fresh water	2 mg/L
Freshwater sediments	No hazard identified
Marine water	0.2 mg/L
Marine sediments	No hazard identified
Microorganisms in sewage treatment	55 mg/L
Soil (agricultural)	No hazard identified
Air	No hazard identified
Oral (Secondary Poisoning)	No exposure expected

Ingredient Name: Titanium Dioxide
CAS #: 13463-67-7

Environmental Protection Target	**PNEC**
Fresh water	No hazard identified
Freshwater sediments	No hazard identified
Marine water	No hazard identified
Marine sediments	No hazard identified
Microorganisms in sewage treatment	No hazard identified
Soil (agricultural)	No hazard identified
Air	No hazard identified
Oral (Secondary Poisoning)	No exposure expected

Information on monitoring procedures:

Not determined or not applicable.

8.2 Exposure controls

Appropriate engineering controls:

This product is a combustible material which may be ignited by friction, heat, sparks or flames. It is recommended that all dust control equipment (such as local exhaust ventilation and material transport systems) involved in handling this product contain explosion relief vents or

an explosion suppression system. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area. Keep static electricity under control, which includes the bonding and grounding of equipment. Emergency eye

wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal protection equipment

Eye and face protection:

Use safety glasses with side shields or goggles. Do not wear contact lenses when handling or processing this product. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and body protection:

Cut resistant gloves and sleeves should be worn when working with metal parts. Protective gloves should be worn as required for grinding, welding and burning operations. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Personal protective equipment for the body should be selected based on the task being performed and the risks involved. For grinding, welding and burning operations, wear appropriate personal protective clothing to prevent skin contact. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).
Contaminated work clothing must not be allowed out of the workplace.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Contaminated clothing should be removed and separated for decontamination. Do not allow contaminated work clothing out of the workplace. Perform routine housekeeping.

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Product (substance / mixture) related measures to prevent exposure:	Not determined or not applicable.
Instruction measures to prevent exposure:	Not determined or not applicable.
Organisational measures to prevent exposure:	Not determined or not applicable.
Technical measures to prevent exposure:	Not determined or not applicable.

Risk management measures to control exposure:

Not determined or not applicable.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid; Abrasive coated Belt/Sleeve/Band [Variable in color]
Color	None
Odor/Odor threshold	Not determined or not available.

pH	Not determined or not available.

Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Not determined or not available.
Flammability	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Relative vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Particle characteristics	Not determined or not available.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosives	No data available/Not applicable
Flammable gases	No data available/Not applicable
Aerosols	No data available/Not applicable
Oxidizing gases	No data available/Not applicable
Gases under pressure	No data available/Not applicable
Flammable liquids	No data available/Not applicable
Flammable solids	No data available/Not applicable
Self-reactive substances and mixtures	No data available/Not applicable
Pyrophoric liquids	No data available/Not applicable
Pyrophoric solids	No data available/Not applicable
Self-heating substances and mixtures	No data available/Not applicable
Substances and mixtures, which emit flammable gases in contact with water	No data available/Not applicable
Oxidizing liquids	No data available/Not applicable
Oxidizing solids	No data available/Not applicable
Organic peroxides	No data available/Not applicable
Corrosive to metals	No data available/Not applicable
Desensitized explosives	No data available/Not applicable

9.2.2 Other safety characteristics

None.

SECTION 10: Stability and reactivity

10.1 Reactivity:

Not reactive under recommended handling and storage conditions.

10.2 Chemical stability:

Stable under recommended handling and storage conditions.

10.3 Possibility of hazardous reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

10.4 Conditions to avoid:

Extreme heat, open flames, hot surfaces, sparks, static discharge, ignition sources, dust generation and accumulation and incompatible materials.

10.5 Incompatible materials:

None known.

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

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
Silicon carbide	oral	LD50 Rat: 2000 mg/kg
	dermal	LD50 Rat: 2000 mg/kg
Aluminum Oxide	oral	LD50 Rat: >10,000 mg/kg
	inhalation	LC50 Rat: >2.3 mg/L (4 hr [aerosol])
Zirconium Dioxide	oral	LD50 Rat: >5000 mg/kg
	inhalation	LC50 Rat: > 4.3 mg/L (4 hr [Aerosol])
Formaldehyde, oligomeric reaction products with phenol	oral	LD50 Rat: >5000 mg/kg
	dermal	LD50 Rat: >2000 mg/kg
	inhalation	LC50 Mouse: 7.57 mg/L (2 hr [Vapor])
Trisodium hexafluoroaluminate	oral	LD50 Rat: >5000 mg/kg
	dermal	LD50 Rabbit: >2100 mg/kg
	inhalation	LC50 Rat: 4.47 mg/L (4 hr [Aerosol])
Potassium tetrafluoroborate	oral	LD50 Rat: >2000 mg/kg
	inhalation	LC50 Rat: >5300 mg/m³ (4 hr [Aerosol])
1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde	oral	LD50 Rat: >10,000 mg/kg
Kaolin	oral	LD50 Rat: > 5000 mg/kg
	dermal	LD50 Rat: > 5000 mg/kg
Titanium Dioxide	oral	LD50 Rat: > 5000 mg/kg
	inhalation	LC50 Rat: 5.09 mg/L (4 hr [aerosol])

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Serious eye damage/irritation

Assessment:

Causes serious eye irritation.

Product data:

No data available.

Substance data:

Name	Result
Formaldehyde, oligomeric reaction products with phenol	Causes serious eye irritation.

Respiratory or skin sensitization

Assessment:

May cause an allergic skin reaction.

Product data:

No data available.

Substance data:

Name	Result
Formaldehyde, oligomeric reaction products with phenol	May cause an allergic skin reaction.

Carcinogenicity

Assessment:

May cause cancer.

Product data: No data available.

Substance data:

Name	Species	Result
Silicon carbide		Chronic inhalation exposure to silicon carbide fibres (with diameter < 3 µm, length > 5 µm and aspect ratio ≥ 3:1) may cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Silicon carbide	Group 2A
Trisodium hexafluoroaluminate	Group 3
Potassium tetrafluoroborate	Group 3
Titanium Dioxide	Group 2B

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:
No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment:
Causes damage to organs through prolonged or repeated exposure.

Product data:
No data available.

Substance data:

Name	Result
Silicon carbide	Prolonged or repeated exposure to silicon carbide fibres (with diameter < 3 µm, length > 5 µm and aspect ratio ≥ 3:1) may cause pulmonary fibrosis.
Trisodium hexafluoroaluminate	Causes damage to lungs through prolonged or repeated exposure. Long-term exposure to high levels of fluoride may cause skeletal fluorosis. The results of skeletal fluorosis include: denser bones that are more brittle or fragile than normal bone a disease causing denser bones that are more brittle or fragile than normal bone; joint pain; limited range of joint movement.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:
No data available.

Substance data: No data available.

Information on likely routes of exposure:
Inhalation; Skin contact; Eye contact

Symptoms related to the physical, chemical and toxicological characteristics:
Refer to Section 4 of this SDS.

11.2 Information on other hazards

Endocrine disrupting properties:

Substance data: No data available.

Other information:
No data available.

SECTION 12: Ecological information

12.1 Toxicity

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Silicon carbide	Aquatic Invertebrates LC50 Daphnia magna: >100 mg/L (48 hr)
	Aquatic Plants ErC50 Desmodesmus subspicatus: >100 mg/L (72 hr [growth rate])

Name	Result
Aluminum Oxide	Fish LC50 Oncorhynchus mykiss: 0.57 mg/L (96 hr)
	Aquatic Plants EC50 Green algae: 0.346 mg/L (72 hr - growth rate)
	Aquatic Invertebrates EC50 Ceriodaphnia dubia: 0.111 mg/L (48 hr - mortality)
Zirconium Dioxide	Aquatic Plants EC50 Scenedesmus subspicatus: >100 mg/L (72 hr [growth rate])
	Fish LC50 Danio rerio: >100 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: > 100 mg/L (48 hr [mobility])
Trisodium hexafluoroaluminate	Fish LC50 Brachydanio rerio: 99 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 156 mg/L (48 hr)
	Aquatic Plants ErC50 Pseudokirchneriella subcapitata: 8.8 mg/L (72 hr)
Potassium tetrafluoroborate	Fish LC50 Leuciscus idus: 760 mg/L (96 hr)
	Aquatic Invertebrates ErC50 Daphnia magna: >100 mg/L (48 hr)
	Aquatic Plants ErC50 Pseudokirchnerella subcapitata: >100 mg/L (72 hr)
Titanium Dioxide	Aquatic Invertebrates EC50 Daphnia magna: > 100 mg/L (48 hr [moblity])
	Aquatic Plants EC50 Raphidocelis subcapitata: > 100 mg/L (72 hr [growth rate])
	Fish LC50 Danio rerio: >100 mg/L (96 hr)

Chronic (long-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Aluminum Oxide	Fish LC50 Pimephales promelas: 3.999 mg/L (7 d)
	Aquatic Invertebrates EC50 Ceriodaphnia dubia: 0.222 mg/L (7 d - reproduction)
Titanium Dioxide	Fish NOEC freshwater fish: >=80 mg/L (6 d [time to hatch])
	Aquatic Invertebrates NOEC Daphnia magna: >= 5 mg/L (21 d [reproduction])

12.2 Persistence and degradability

Product data: No data available. **Substance data:**

Name	Result
Silicon carbide	The substance is inorganic and practically insoluble in water. It is therefore not biodegradable.
Aluminum Oxide	Biodegradability studies are not applicable to inorganic substances.
Formaldehyde, oligomeric reaction products with phenol	The substance is readily biodegradable. >60% degradation in water, measured by O2 consumption, after 18 days.
Trisodium hexafluoroaluminate	Persistence and Biodegradability studies are not applicable to inorganic substances.

Name	Result
Titanium Dioxide	Persistence assessment based on biodegradability is not relevant for inorganic compounds such as this substance.

12.3 Bioaccumulative potential

Product data: No data available. **Substance data:**

Name	Result
Silicon carbide	The substance is practically insoluble in water. It has no potential to cross biological membranes, and is therefore highly unlikely to show bioaccumulative behaviour.
Aluminum Oxide	In general, metals do not biomagnify.
Zirconium Dioxide	The substance is not expected to bioaccumulate. BCF (aquatic species): 0.064 L/kg
Formaldehyde, oligomeric reaction products with phenol	The substance has the potential to bioaccumulate significantly (log Pow= 3.564 at 25 °C).
Trisodium hexafluoroaluminate	Bioaccumulation studies are not applicable to inorganic substances.
Potassium tetrafluoroborate	Biaccumulation studies are not applicable to inorganic substances.

12.4 Mobility in soil

Product data: No data available.

Substance data:

Name	Result
Silicon carbide	Based on the physicochemical properties silicon carbide is expected to have a low potential for adsorption; in contrast it can be expected that silicon carbide would behave similarly to a particulate inert matter.
Aluminum Oxide	The potential of aluminium for adsorption to sediment and soil particles is mainly driven by its speciation and the concentration of dissolved organic carbon (DOC).
Zirconium Dioxide	The substance is strongly adsorbed to soil and sediment.
Formaldehyde, oligomeric reaction products with phenol	The substance is moderately mobile, therefore, slight adsorption to soil is expected (log Koc=2.804 dimensionless at 25 °C).
Titanium Dioxide	Mobility in soil assessment based on KOC/Kd values are not relevant for inorganic compounds such as this substance.

12.5 Results of PBT and vPvB

assessment Product data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance data:

PBT assessment:

Silicon carbide	PBT assessment does not apply to inorganic substances.
Aluminum Oxide	PBT assessment does not apply to inorganic substances.
Zirconium Dioxide	The PBT assessment does not apply to inorganic substances.

Formaldehyde, oligomeric reaction products with phenol	The substance is not PBT.

Trisodium hexafluoroaluminate	PBT assessment does not apply to inorganic substances.
Potassium tetrafluoroborate	PBT assessment does not apply to inorganic substances.
Titanium Dioxide	PBT assessment does not apply to inorganic compounds such as this substance.

vPvB assessment:

Silicon carbide	vPvB assessment does not apply to inorganic substances.
Aluminum Oxide	vPvB assessment does not apply to inorganic substances.
Zirconium Dioxide	The vPvB assessment does not apply to inorganic substances.
Formaldehyde, oligomeric reaction products with phenol	The substance is not vPvB.
Trisodium hexafluoroaluminate	vPvB assessment does not apply to inorganic substances.
Potassium tetrafluoroborate	vPvB assessment does not apply to inorganic substances.
Titanium Dioxide	vPvB assessment does not apply to inorganic compounds such as this substance.

12.6 Endocrine disrupting properties

Substance data: No data available.

12.7 Other adverse effects: No data available.

12.8 Hazard to the ozone layer

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Product / Packaging disposal:
Dispose of in accordance with all applicable local, regional and national regulations.

Waste codes / waste designations according to LoW: Not determined or not available.

13.1.2 Waste treatment-relevant information: Not determined or not available.

13.1.3 Sewage disposal-relevant information: Not determined or not available.

13.1.4 Other disposal recommendations: It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

International Carriage of Dangerous Goods by Road/Rail (ADR/RID)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Carriage of Dangerous Goods by Inland Waterways (ADN)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Maritime Transport in Bulk according to IMO Instruments

Bulk Name	None
Ship type	None
Pollution category	None
IMO hazard class	None
Environmental hazards	None
Material hazardous only in bulk	None
Cargo Group	None

SECTION 15: Regulatory information

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

Inventory listing (EINECS):

409-21-2	Silicon carbide	Listed
1344-28-1	Aluminum Oxide	Listed
1314-23-4	Zirconium Dioxide	Listed
9003-35-4	Formaldehyde, oligomeric reaction products with phenol	Listed
13775-53-6	Trisodium hexafluoroaluminate	Listed
14075-53-7	Potassium tetrafluoroborate	Listed

9003-08-1	1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde	Not Listed
1332-58-7	Kaolin	Listed
13463-67-7	Titanium Dioxide	Listed

REACH SVHC candidate list:

409-21-2	Silicon carbide	Not Listed
1344-28-1	Aluminum Oxide	Not Listed
1314-23-4	Zirconium Dioxide	Not Listed
9003-35-4	Formaldehyde, oligomeric reaction products with phenol	Not Listed
13775-53-6	Trisodium hexafluoroaluminate	Not Listed
14075-53-7	Potassium tetrafluoroborate	Not Listed
9003-08-1	1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde	Listed
1332-58-7	Kaolin	Not Listed
13463-67-7	Titanium Dioxide	Not Listed

REACH SVHC Authorizations: None of the ingredients are listed.

REACH Restriction:

409-21-2	Silicon carbide	Listed
1344-28-1	Aluminum Oxide	Not Listed
1314-23-4	Zirconium Dioxide	Not Listed
9003-35-4	Formaldehyde, oligomeric reaction products with phenol	Not Listed
13775-53-6	Trisodium hexafluoroaluminate	Not Listed
14075-53-7	Potassium tetrafluoroborate	Not Listed
9003-08-1	1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde	Not Listed
1332-58-7	Kaolin	Not Listed
13463-67-7	Titanium Dioxide	Listed

Water hazard class (WGK) (Product): Not determined.

Water hazard class (WGK) (Substance):

Ingredient Name	**CAS**	**Class**
Silicon carbide	409-21-2	Non-hazardous to water
Aluminum Oxide	1344-28-1	Non-hazardous to water
Zirconium Dioxide	1314-23-4	Non-hazardous to water

Ingredient Name	CAS	Class
Formaldehyde, oligomeric reaction products with phenol	9003-35-4	Water hazard class 1: slightly hazardous to water
Trisodium hexafluoroaluminate	13775-53-6	Water hazard class 3: highly hazardous to water
Potassium tetrafluoroborate	14075-53-7	Water hazard class 1: slightly hazardous to water
1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde	9003-08-1	Water hazard class 1: slightly hazardous to water
Kaolin	1332-58-7	Non-hazardous to water
Titanium Dioxide	13463-67-7	Non-hazardous to water

Other regulations

Germany TA Luft: None of the ingredients are listed.

Additional information: Not determined.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: Other information

Abbreviations and Acronyms: None

Classification procedure:

Classification according to Regulation (EC) No. 1272/2008 (CLP)	Method Used
Eye Irritation, category 2	Calculation method
Skin sensitization, category 1	Calculation method
Carcinogenicity, category 1B	Calculation method
Specific target organ toxicity - repeated exposure, category 1	Calculation method

Summary of classification(s) in section 3:

Carc. 1B	Carcinogenicity, category 1B
Skin Sens. 1	Skin sensitization, category 1
Eye Irrit. 2	Eye Irritation, category 2
Acute Tox. 4 (Inh)	Acute toxicity (inhalation), category 4
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Aquatic Chronic 2	Chronic aquatic hazard, category 2

Summary of hazard statements in section 3:

H350	May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H372	Causes damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H411	Toxic to aquatic life with long lasting effects

Disclaimer:

This product has been classified in accordance with EC No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and EC No. 1907/2006

(REACH), as amended by Commission Regulation (EU) 2020/878. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation, and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

Initial preparation date: 2024-04-18

End of Safety Data Sheet