1. Product and Company Identification

Product Identifier

Trade Name: COATED ABRASIVES
This safety data sheet pertains to the following products:
Abrasive Caps
Belts
Bore Polisher
Cartridge Rolls - Straight or Tapered
Cones - Chamfering or Center Lap
Cross Pad and Square Pads
Discs - Quick Change, PSA, Flap, Resin Fiber
Flap Wheels - Mounted, Unmounted, Mini, Angle Grinder
Sheets
Shop Rolls
Spiral Bands

Relevant identified uses of the substance or mixture and uses adivsed against:

General Use: Grinding and sanding of different kinds of materials.
For industrial purposes only.

Details of the supplier of the Safety Data Sheet

Company Name:

Superior Abrasives, LLC
1620 Fieldstone Way
Vandalia, Ohio 45377
USA
www.superiorabrasives.com
email: SDS@superiorabrasives.com
Telephone: 1-800-235-9123
Local Tel: 937-278-9123
Fax: 937-278-7581

2. Hazards Identification

Emergency overview

Appearance: Form: solid
Color: varying colors
Odor: No data availabe
Classification: Eye Irritation 2A; Carcinogenicity 1A; Toxic to Reproduction (Lactation):
Specific Target Organ Toxicity (repeated exposure) 1; Aquatic Toxicity - chronic 3

Hazard symbols:

Signal word: **Danger**

Hazard statements: Causes serious eye irritation.
May cause cancer.
May cause harm to breast-fed children.
Causes damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

Precautionary statements:
Obtain special instructions before use.
Do not breathe dust/fume/gas/mist/vapors/spray.
Avoid contact during pregnancy/while nursing.
Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical adivice/attention.
If eye irritation persists: Get medical advise/attention.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point.

additional information:
The hazard identification is based on a formalistic procedure as the hazard statements of the ingredients are summarized under section 3. This does not correspond to the hazardousness of the product itself. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being ground. Most of the dust generated during grinding is from the base material being ground and the potential hazard from this exposure must be evaluated. This dust may present a fire or dust explosion hazard and may present a serious health hazard.

Regulatory status

This matrial is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Hazards not otherwise cassified

Processing, e.g. by cutting, sawing or grinding, can produce particles and dust.
Inhalation of dust may cause irritation of the respiratory system.
Dust may irritate eyes.
See section 11: Toxicological information

3. Composition / Information on Ingredients

Chemical Characterisation: Components in synthetic resin, completely embedded.

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 1344-28-1	Aluminium oxide	< 70%	Not applicable
CAS -	Vulcanized fiber	< 70%	Not applicable
CAS 409-21-2	Silicon carbide	< 60%	Not applicable
CAS -	Cotton cloth	< 60%	Not applicable
CAS -	Polyester cloth	< 55%	Not applicable
CAS -	Paper	< 50%	Not applicable
CAS 65997-17-3	Fibre glass weaves	< 45%	Not applicable
CAS -	Polyamide compound	< 45%	Not applicable
CAS -	Synthetic resin, polymerized	< 40%	Not applicable
CAS -	Cotton-Polyester cloth	< 40%	Not applicable
CAS 1314-23-4	Zirconium dioxide	< 30%	Not applicable
CAS -	Adhesive, cured	< 30%	Not applicable
CAS 471-34-1	Calcium carbonate	< 25%	Not applicable
CAS 60304-36-1	Aluminum potassium fluoride	< 25%	Acute Toxicity 4 (inhalative). Eye Irritation 2A. Toxic to Reproduction (Lactation). Specific Target Organ Toxicity (Repeated Exposure) 1. Aquatic Toxicity - Chronic 3.
CAS 14075-53-7	Potassium tetrafluoroborate	< 20%	Not applicable

CAS 13775-53-6	Trisodium hexafluoroaluminate (cryolite)	< 20%	Acute Toxicity 4 (inhalative). Toxic to Reproduction (Lactation). Specific Target Organ Toxicity (Repeated Exposure) 1. Aquatic Toxicity - Chronic 2.
CAS -	Velcro fabric	< 20%	Not applicable
CAS 25038-36-2	EPDM	< 15%	Not applicable
CAS 1332-58-7	Kaolin	< 15%	Not applicable
CAS -	Rubber, vulcanized	< 10%	Not applicable
CAS 13463-67-7	Titanium dioxide	< 5%	Carcinogenicity 2
CAS 1309-37-1	Diiron trioxide	< 5%	Not applicable
CAS -	Adhesive tape	< 5%	Not applicable
CAS 1345-25-1	Iron (II) oxide	< 1%	Not applicable
CAS 7631-86-9	Silicon dioxide	< 1%	Not applicable
CAS 1309-48-4	Magnesium oxide	<0.5%	Not applicable
CAS 1305-78-8	Calcium oxide	<0.5%	Skin Irritation 2. Eye Damage 1. Specific Target Organ Toxicity (Single Exposure) 3.
CAS 14808-60-7	Quartz (SiO2)	<0.5%	Carcinogenicity 1A
CAS 1333-86-4	Carbon black	<0.5%	Not applicable
CAS 12055-23-1	Hafnium dioxide	<0.4%	Not applicable
CAS 50-00-0	Formaldehyde	<0.1%	Acute Toxicity 3 (oral) Acute Toxicity 3 (dermal) Acute Toxicity 3 (inhalative) Skin Corrosion 1B. Sensitization-skin 1. Germ cell mutagenicity 2 Carcinogenicity 1B

Additional information: The ingredients are embedded in the product.
The components listed above do not represent/include the chemical composition of the Hub.

4. First Aid Measures

In case of inhalation: Provide fresh air. If you feel unwell , seek medical adivce.

Following skin contact: Remove residue with soap and water. In case of skin reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

After swallowing: Rinse mouth with water. Give water to drink in small sips. If you feel unwell, seek medical advice.

Most important symptoms and effects, both acute and delayed

Causes serious eye irritation. Causes damage to organs through prolonged or repeated exposure.

Information to physician Treat Symptomatically.

5. Fire Fighting Measures

Flash point/Flash point range: No data availabe

Auto-ignition Temperature: No data availabe

Suitable extinguishing media: Product is non-combustible. Extinguishing material should therefore be selected according to surroundings.

Specific hazards arising from the chemical:

Can be released in case of fire: Hydrogen fluoride, boron compounds, carbon monoxide, and carbon dioxide (CO_2).

Protective equipment and precautions for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Do not allow fire water to penetrate into surface or ground water.

6. Accidental Release Measures

Personal precautions:

Avoid exposure. Avoid generation of dust. Do not inhale substance.
In case of heating: Development of gas/vapor possible.
Provide adequate ventilation. Wear appropriate protective equipment
Avoid contact with the substance. Keep unprotected people away.

Environmental precautions:

Do not allow to penetrate into soil, waterbodies or drains.
In case of release, notify competent authorities.

Methods for clean up:

Take up mechanically, placing in appropriate containers for disposal

7. Handling and Storage

Handling

Advice on safe handlling:

Provide adequate ventilation, and local exhaust as needed. Avoid generation of dust. In case of heating: Development of gas/vapor possible. Do not inhale substance. Wear appropriate protective equipment. Avoid contact with the substance. Obtain special instructions before use. Work place should be equipped with a shower and an eye rinsing apparatus.

Storage

Requirements for storerooms and containers:

Keep container tightly closed and dry.
Keep in cool, well-ventilated place.

Hints on joint storage:

Do not store together with oxidizing agents or acids.
Do not store together wih food.

8. Exposure Control / Personal Protection

Exposure guidelines

Occupational exposure limit values:

CAS NO.	Designation	Type	Limit Value
1334-28-1	Aluminium oxide	Canada, Alberta: OEL 8 hour	10 mg/m^3
		Canada. Quebec: VEMP	10 mg/m^3 (inhalable fraction)
		USA: OSHA: TWA	15 mg/m^3 (inhalable fraction)
		USA: OSHA: TWA	5mg/m^3 (respirable fraction)
409-21-2	Silicon carbide	Canada, Alberta: OEL 8 hour	0.1 fibers/cm^3 (fibers, inhalable fraction)
		Canada, Alberta: OEL 8 hour	10mg/m^3 (contains no fibers, inhalable fraction)
		Canada, Alberta: OEL 8 hour	3 mg/m^3 (contains no fibers, respirable fraction)
		Canada BC: OEL TWA	0.1 fibers/cm^3 (fibers,inhalable fraction)
		Canada BC: OEL TWA	10 mg/m^3 (Contains no fibers, inhalable fraction)
		Canada BC; OEL TWA	3mg/m^3 (Contains no fibers, respirable fraction)
		Canada Ontario; OEL TWA	0.1 fibers/cm^3 (fibers, inhalable fraction)
		Canada Ontario; OEL TWA	10 mg/m^3 (Contains no fibers, inhalable fraction)
		Canada, Ontario: OEL TWA	3mg/m^3 (Contains no fibers, respirable fraction)
		Canada, Quebec: VEMP	10 mg/m^3 (Contains no fibers, inhalable fraction)
		USA: ACGIH: TWA	0.1 fibers/cm^3 (fibers, inhalable fraction)
		USA: ACGIH: TWA	10mg/m^3 (inhalable fraction)
		USA: ACGIH: TWA	3 mg/m^3 (respirable frtation)
		USA: NIOSH: TWA	10 mg/m^3 (inhalable fraction)
		USA: NIOSH: TWA	5 mg/m^3 (respirable fraction)
		USA: OSHA: TWA	15 mg/m^3 (inhalable fraction)
		USA: OSHA: TWA	5 mg/m^3 (respirable fraction)
65997.17-3	Fiber glass weaves	Canada, Alberta: OEL 8 hour	1 fibers/cm^3 Glass Fibers, continuous filament
		Canada, Alberta: OEL 8 hour	5 mg/m^3 Glass Fibers, continuous filament, Glass wool, inhalable fraction
		Canada, BC: OEL TWA	1 fibers/cm^3 Synthetic Vitreous Fibers-Continous filament glass fibers
		Canada, BC: OEL TWA	5 mg/m^3 Synthetic Vitreous Fibers-Continous filament glass fibers; inhalable fraction
		Canada, Ontario: OEL TWA	1 fibers/cm^3 Synthetic Vitreous Fibers-Continous filament glass fibers
		Canada, Ontario: OEL TWA	5 mg/m^3 Synthetic Vitreous Fibers (Man Made Mineral Fibers), Continuous filament glass fibers
		Canada, Quebec: VEMP	10 mg/m^3 Continuous filament glass fibers Pt note 1

		USA: ACGIH: TWA	1 fibers/cm^3 Synthetic vitreous fibers, Continuous filament glass fibers
		USA: ACGIH: TWA	5 mg/m^3 Synthetic vitreous fibers, Continuous filament glass fibers; inhalable fracton
		USA: NIOSH: TWA	3 fibers/cm^3 Fibers less than or equal to 3,5 um in diameter and greater than or equal to 10 um in length
		USA: NIOSH: TWA	5 mg/m^3 Fiber glas, Fiberglass, Glass fibers, Glass wool, total dust
1314-23-4	Zirconium dioxide	Canada, Alberta: OEL 15 min	10 mg/m^3
		Canada, Alberta: OEL 8 hour	5 mg/m^3
		Canada, BC OEL STEL	10 mg/m^3
		Canada, BC OEL TWA	5 mg/m^3
		Canada Quebec: VECD	10 mg/m^3 (Zirconium and compounds, calculated as Zr)
		Canada Quebec: VEMP	5 mg/m^3 (Zirconium and compounds, calculated as Zr)
		USA: ACGIH: STEL	10 mg/m^3 (calculated as Zr)
		USA: ACGIH: TWA	5 mg/m^3 (calculated as Zr)
		USA: NIOSH: STEL	10 mg/m^3 (calculated as Zr)
		USA: NIOSH: TWA	5 mg/m^3 (calculated as Zr)
		USA: OSHA: TWA	5 mg/m^3 (calculated as Zr)
471-34-1	Calcium carbonate	Canada, Alberta: OEL 8 hour	10 mg/m^3
		Canada, BC OEL STEL	20 mg/m^3 (Calcium carbonate incl. Limestone, Marble)
		Canada, BC: OEL TWA	10 mg/m^3 (Calcium carbonate incl. Limestone, Marble)
		Canada Quebec: VEMP	10 mg/m^3 (inhalable fraction)
		USA: NIOSH: TWA	10 mg/m^3 (inhalable fraction)
		USA: NIOSH: TWA	5 mg/m^3 (respirable fraction)
		USA: OSHA: TWA	15 mg/m^3 (inhalable fraction)
		USA: OSHA: TWA	5 mg/m^3 (respirable fraction)
60304-36-1	Aluminum potassium fluoride	Canada, Alberta: OEL 8 hour	2.5 mg/m^3 (calculated as F)
		Canada, BC: OEL TWA	2.5 mg/m^3 (calculated as F)
		Canada Quebec: VEMP	2.5 mg/m^3 (calculated as F)
		USA: ACGIH: TWA	2.5 mg/m^3 (Fluorides, calculated as F)
		USA: NIOSH: TWA	2.5 mg/m^3 (calculated as F)
		USA: OSHA: TWA	2.5 mg/m^3 (calculated as F)
14075-53-7	Potassium tetrafluoroborate	Canada, Alberta: OEL 8 hour	2.5 mg/m^3 (calculated as F)
		Canada, BC: OEL TWA	2.5 mg/m^3 (calculated as F)
		Canada Quebec: VEMP	2.5 mg/m^3 (calculated as F)
		USA: ACGIH: TWA	2.5 mg/m^3 (Fluorides, calculated as F)
		USA: NIOSH: TWA	2.5 mg/m^3 (calculated as F)
		USA: OSHA: TWA	2.5 mg/m^3 (calculated as F)

13775-53-6	Trisodium hexafluoroaluminate (cryolite)	Canada, Alberta: OEL 8 hour	2.5 mg/m^3 (calculated as F)
		Canada, BC: OEL TWA	2.5 mg/m^3 (calculated as F)
		Canada Quebec: VEMP	2.5 mg/m^3 (calculated as F)
		USA: ACGIH: TWA	2.5 mg/m^3 (Fluorides, calculated as F)
		USA: NIOSH: TWA	2.5 mg/m^3 (calculated as F)
		USA: OSHA: TWA	2.5 mg/m^3 (calculated as F)
1332-58-7	Kaolin	Canada, Alberta: OEL 8 hour	2 mg/m^3
		Canada, BC: OEL TWA	2 mg/m^3
		Canada Quebec: VEMP	5 mg/m^3
		USA: ACGIH: TWA	2 mg/m^3 respirable fraction (particulate matter containing no asbestos and <1% crystalline silica)
		USA: NIOSH: TWA	10 mg/m^3 (inhalable fraction)
		USA: NIOSH: TWA	5 mg/m^3 (respirable fraction)
		USA: OSHA: TWA	15 mg/m^3 (inhalable fraction)
		USA: OSHA: TWA	5 mg/m^3 (respirable fraction)
13463-67-7	Titanium dioxide	Canada, Alberta: OEL 8 hour	10 mg/m^3
		Canada, BC: OEL TWA	10 mg/m^3
		Canada, BC: OEL TWA	3 mg/m^3 (respirable fraction)
		Canada, Quebec: VEMP	10 mg/m^3 (inhalable fraction)
		USA: ACGIH: TWA	10 mg/m^3
		USA: OSHA:TWA	15 mg/m^3
1309-37-1	Diiron trioxide	Canada, Alberta: OEL 8 hours	5 mg/m^3 (respirable fraction)
		Canada, BC OEL STEL	10 mg/m^3 Smoke; calculated as Fe
		Canada, BC: OEL TWA	10 mg/m^3 (oxide, red)
		Canada, BC: OEL TWA	3 mg/m^3 (oxide, red) respirable fraction
		Canada, BC: OEL TWA	5 mg/m^3 (oxide dust)
		Canada, BC: OEL TWA	5mg/m^3 Smoke; calculated as Fe
		Canada, Quebec; VEMP	10 mg/m^3 (red)
		Canada, Quebec; VEMP	5 mg/m^3
		USA: ACGIH; TWA	5 mg/m^3 (respirable fraction)
		USA: OSHA: TWA	10 mg/m^3 (Iron oxide, fume; calculated as Fe)
		USA: OSHA: TWA	15 mg/m^3 (inhalable fraction, red)
		USA: OSHA: TWA	5 mg/m^3 (red, respirable fraction)
7631-86-9	Silicon dioxide	USA: NIOSH: TWA	6 mg/m^3
		USA: OSHA:TWA	20 mppcf
		USA: OSHA:TWA	80 mg/m^3 total dust
1309-48-4	Magnesium oxide	Canada, Alberta: OEL 8 hours	10 mg/m^3
		Canada, BC OEL STEL	10 mg/m^3 respirable fraction, Smoke and Dusts
		Canada, BC: OEL TWA	3 mg/m^3 respirable fraction, Smoke and Dusts
		Canada, Quebec; VEMP	10 mg/m^3
		USA: ACGIH; TWA	10 mg/m^3 (inhalable fraction)
		USA: OSHA: TWA	15 mg/m^3

1305-78-8	Calcium oxide	Canada, Alberta: OEL 8 hours	2 mg/m^3
		Canada, BC OEL TWA	2 mg/m^3
		Canada, Quebec; VEMP	2 mg/m^3
		USA: ACGIH; TWA	2 mg/m^3
		USA: NIOSH: TWA	2 mg/m^3
		USA: OSHA: TWA	5 mg/m^3
14808-60-7	Quartz (SiO2)	Canada Alberta: OEL 8 hour	0.025 mg/m^3
		Canada, BC:OEL TWA	0.025 mg/m^3
		Canada, Ontario: OEL TWA	0.1 mg/m^3 (respirable fraction)
		Canada, Quebec: VEMP	0.1 mg/m^3 (respirable fraction)
		USA: ACGIH:TWA	0.025 mg/m^3 (respirable fraction)
		USA: NIOSH: TWA	0.05 mg/m^3 (respirable fraction)
		USA: OSHA: TWA	10 mg/m^3 /% SiO2+2 (respirable fraction)
		USA:OSHA : TWA	250 mppcf/%SiO2+5 (fine dust)
		USA OSHA: TWA	30 mg/m^3/% SiO2+2 (inhalable fraction)
1333-86-4	Carbon Black	Canada Alberta: OEL 8 hour	3.5 mg/m^3
		Canada, BC:OEL TWA	3 mg/m^3
		Canada, Quebec: VEMP	3.5 mg/m^3
		USA: ACGIH:TWA	3 mg/m^3 (inhalable fraction)
		USA: NIOSH: TWA	0.1 mg PAHs/m^3 Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs)
		USA: NIOSH: TWA	3.5 mg/m^3
		USA: OSHA: TWA	3.5 mg/m^3
50-00-0	Formaldehyde	Canada, Alberta: OEL 8 hour	0.9 mg/m^3, 0.75ppm
		Canada, Alberta: OEL Ceiling	1.3 mg/m^3, 1 ppm
		Canada, BC: OEL Ceiling	1 ppm
		Canada, BC: OEL TWA	0.3 ppm
		Canada, Ontario: OEL Ceiling	1.5 ppm
		Canada, Ontario: OEL STEL	1 ppm
		Canada, Quebec: Plafond	3 mg/m^3, 2 ppm
		NIOSH: Ceiling	0.1 ppm
		USA: ACGIH: STEL	0.3 ppm (DSEN,RSEN,A1)
		USA: ACGIH: TWA	0.1 ppm (DSEN,RSEN,A1)
		USA: NIOSH:TWA	0.016 ppm
		USA: OSHA: STEL	2 ppm
		USA: OSHA: TWA	0.75 ppm

Biological limit values:

CAS NO.	Designation	Type	Limit Value	Parameter	Sampling
60304-36-1	Aluminum potassium fluoride	USA: ACGIH-BEI, blood	3 mg/L	Fluorides	end of exposure or end of shift
		USA: ACGIH-BEI, urine	2 mg/L	Fluorides	prior toshift
14075-53-7	Potassium tetrafluoroborate	USA: ACGIH-BEI, blood	3 mg/L	Fluorides	end of exposure or end of shift
		USA: ACGIH-BEI, urine	2 mg/L	Fluorides	prior toshift
13775-53-6	Trisodium hexafluoroaluminate	USA: ACGIH-BEI, blood	3 mg/L	Fluorides	end of exposure or end of shift
		USA: ACGIH-BEI, urine	2 mg/L	Fluorides	prior toshift

Engineering controls

Provide good ventilation and/or an exhaust system in the work area.
Technical measures and the application of suitable work processes have priority over personal protection equipment.
In case of development of vapors or dust: The use of a local exhaust ventilation is recommended.
Also see information in section 7, storage

Personal protection equipment (PPE)

Eye/face protection: Tighltly sealed goggles according to OSHA Standard-29 CFR: 1910.133 or ANSI Z87.1-2010.

skin protection: Wear suitable protective clothing and shoes.

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.
Use appropriate respiratory protection.:
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

General hygiene considerations: Do not inhale substance.
Avoid contact with skin and eyes.
When using do not eat, drink or smoke. Change contaminated clothing.
Wash hands before breaks and after work.
Work place should be equipped with a shower and an eye rinsing apparatus.
Obtain special instructions before use.

9. Physical and Chemical Properties

Information on basic physical and chemcial properties

Appearance:	Form: Solid Color: varying colors
Odor:	No data available
Odor threshold:	No data available
pH value:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	No data available
Solubility:	No data available
Partition coefficient: n-octanol/water:	No data available

auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Additional information:	No data available

10. Stability and Reactivity

Reactivity:	No data available
Chemical Stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	No hazardous reaction when handled and stored according to provisions.
Conditions to avoid:	No data available
Incompatible materials:	Oxidizing agents, acids.
Hazardous decomposition products:	Hydrogen fluoride, boron compounds, carbon monoxide and carbon dioxide (CO2).
Thermal decomposition:	No data available

11. Toxicological Information

Toxicological tests

Toxicological effects:

The statements are derived from the properties of the single components. No Toxicological data is available for the product as such.
Acute toxicity (oral): Based on available data, the classification criteria are not met.
Acute toxicity (dermal): Lack of data.
Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
Skin corrosion/irritation: Lack of data.
Serious eye damage/irritation: Eye irritation 2A = Causes serious eye irritation.
Sensitisation to the respiratory tract: Lack of data.
Skin sensitisation: Lack of data.
Germ cell mutagenicity/Genotoxicity: Lack of data
Carcinogenicity: Carcinogenicity 1A = May cause cancer.
Reproductive toxicity: Lack of data
Effects on or via lactation: Toxic to reproduction (lactation) = May cause harm to breast-fed children.
Specific target organ toxicity (single exposure): Lack of data.
Specific target organ toxicity (repeated exposure): 1 = Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard: Lack of data.

Other information:

Information about Aluminum potassium fluoride.
LD50, Rat, oral: >2000 mg/kg
LC50, Rat, inhalative: > 3.4 mg/L/h
LD50, Rabbit, dermal: >2000 mg/kg

Information about Trisodium hexafluoroaluminate (cryolite):
LD50, Rat, oral: >5000 mg/kg
LC50, Rat, inhalative: > 4.47 mg/L/h
LD50, Rabbit, dermal: >2100 mg/kg

Chronic toxicity carcinogenic effects:

Information about Titanium dioxide:
IARC Rating: Group 2B
OSHA Carcinogen: not listed
NTP Rating: not listed

Information about Diiron trioxide:
IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed

Information about Silicon dioxide:

IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed

Information about Quartz (SiO2):
IARC Rating: Group 1
OSHA Carcinogen: not listed
NTP Rating: listed

12. Ecological Information

Ecotoxicity

Aquatic toxicity: Harmful to aquatic life with long lasting effects.
Information about Trisodium hexafluoroaluminate (cryolite);
Algae toxicity:
EC50 Pseudokirchneriella subcapitata (green algae): 8.8 mg/L/72h (OECD 201)
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 156 mg/L/48h (OECD 202)
Fish toxicity:
LC50 Brachydanio rerio (zebra-fish): 99 mg/L/96h (OECD 203)

Mobility in soil

No data available

Persistence and degradability

Further detailas: No data available

Additional ecological information

General information: Do not allow to enter into ground-water, surface water or drains.

13. Disposal Considerations

Product

Recommendation: Dispose of waste according to applicable legislation.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Packing can be recycled or disposed of.

14. Transport Information

USA: Department of Transportation (DOT)

Proper shipping name: Not restricted

Canada: Transportation of Dangerous Goods (TDG)

Shipping name: Not restricted

Sea transport (IMDG)

Proper shipping name: Not restricted
Marine pollutant: No

Air transport (IATA)

Proper shipping name: Not restricted

Further information

No dangerous goods in sense of these transport regulations.

15. Regulatory Information

National regulations - Canada

No data available

National regulations - U.S. Federal Regulations

Product:	This product is an aticle as defined by TSCA regulations, and is exempt from TSCA inventory listing requirements.
Alluminum oxide:	Other Environmental Laws: SARA Title III Section 313, Toxic Release: Conc. 1.0% / Threshold Standard NIOSH Recommendations: Occupational Health Guideline: 0021
Silicon carbide:	NIOSH Recommendations: Occupational Health Guideline: 0555
Kaolin:	NIOSH Recommendations: Occupational Health Guideline: 0364
Titanium dioxide:	Carcinogen Status: IARC Rating: Group 2B OSHA Carcinogen: not listed NTP Rating: not listed NIOSH Recommendations: Occupational Health Guideline: 0617
Diiron trioxide:	Carcinogen Status: IARC Rating: Group 3 OSHA Carcinogen: not listed NTP Rating: not listed NIOSH Recommendations: Occupational Health Guideline: 0344
Silicon dioxide:	Carcinogen Status: IARC Rating: Group 3 OSHA Carcinogen: not listed NTP Rating: not listed NIOSH Recommendations: Occupational Health Guideline: 0552
Magnesium oxide:	NIOSH Recommendations: Occupational Health Guideline: 0374
Calcium oxide:	NIOSH Recommendations: Occupational Health Guideline: 0093
Quartz (SiO2):	Carcinogen Status: IARC Rating: Group 1 OSHA Carcinogen: not listed NTP Rating: not listed NIOSH Recommendations: Occupational Health Guideline: 0553
Carbon black:	Carcinogen Status: IARC Rating: Group 2B OSHA Carcinogen: not listed NTP Rating: not listed NIOSH Recommendations: Occupational Health Guideline: 0102

Formaldehyde:	Carcinogen Status: IARC Rating: Group 1 OSHA Carcinogen: not listed NTP Rating: listed Clean Air Act: Accidental Release Prevention: Threshold 15000 lbs. / Basis for llisting = b Hazardous Air Pollutants: Code XOV SOCMI Chemical: yes Clean Water Act: Hazardous Substances: RQ 100 lbs. Other Environmental Laws: CERCLA: RQ 100 lbs. RCRA Hazardous Wastes: Code U122 SARA Title III Section 302, EHS: TPQ 500 lbs. / RQ 100 lbs. SARA Title III Section 313, Toxic Release: Conc. 0.1% / Threshold Standard NIOSH Recommendations: Current Intelligence Bulletin: 81-111, 86-122 Occupational Health Guideline: 0293* OSHA Process Safety Management: Threshold 1000 lbs.

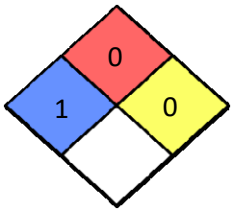
National regulations - U.S. State Regulations

Aluminum Oxide:	Delaware Air Quality Management List: DRQ: 100 - RQ State: State requirement differs from Federal Massachusetts Haz. Substance codes: F9 Minnesota Haz. Substance: Codes: A - Ratings: 10.16 - Status: Title III. TRI. New Jersey RTK Hazardous Substance: DOT: - - Sub No.: 2891 - TPQ: Pennsylvania Haz. Substance code: E Washington Air Contaminant: TWA: 10 mg
Zirconium dioxide:	Massachusetts Haz. Substance codes: 2
Titanium dioxide:	California Proposition 65: cancer Rhode Island HSL: listed
Diiron trioxide:	Idaho Air Pollutant List: Title 585 -- AAC: 0.25 -- EL: 0.333 -- WEL: 5 Title 586 - Massachusetts Haz. Substance codes: 2 Pennsylvania Haz. Substance code: - Washington Air Contaminant: TWA: 5 mg
Quartz (SiO2):	California Proposition 65: cancer Rhode Island HSL: listed
Carbon black:	California Proposition 65: cancer Rhode Island HSL: listed

Formaldehyde:
California Proposition 65: cancer
Delaware Air Quality Management List:
DRQ: 100 - RQ State: Federal Regulations Apply
Idaho Air Pollutant List:
Title 585: AAC: - EL: - OEL: - Title 586: AAAC: 7.7E-02 - EL: 5/1E-04 - OEF: 1.3E-05
Maine: HAP - 1000
Massachusetts Haz. Substance codes: 1,2,3,4,5,6,7 *E*C* F6
Minnesota Haz. Substance:
Codes: ANORT - Rating: 10.91 - Status: Air Pollutant. Carcinogen. Title III. TRI.
New Jersey Extraordinarily Hazardous Substance:
EPA Threshold: - NJ Threshold: 175 - NJ Group: II - NJ Table: I Part A - NJ Basis: Not on list
New Jersey RTK Hazardous Substance:
DOT: 1198 - Sub No.: 0946 - TPQ: - EHS: Yes
New York List of Hazardous Substances:
RQ-Air: 100 - RQ-Land 1 - Note: No Note Associated with this chemical.
Pennsylvania Haz. Substance code: ES
Washington Air Contaminant:
TWA: 75 ppm -- mg - STEL: 2 ppm -- mg - Ceiling - ppm -- mg - Skin: -
West Virginia Toxic Air Pollutant List (Pounds per Year): 1,000
California Proposition 65: cancer
Rhode Island HSL: listed

16. Other Information

Hazard rating systems:



NFPA Hazard Rating:
Health: 1 (Slight)
Fire: 0 (Minimal)
Reactivity: 0 (Minimal)
HMIS Version III Rating:
Health: 1 (Slight) - Chronic effects
Flammability: 0 (Minimal)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor

Reason of Change: None
Date of Revision: None

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products.