SAFETY DATA

Potassium Silicofluoride

SECTION 1 IDENTIFICATION

Product identifier used on a label:	Potassium Silicofluoride (Potassium fluosilicate or dipotassium hexafluorosilicate)
CAS NO.:	16871-90-2
Product code:	1226
Recommended use of the chemical and restrictions on use:	Additive in metal finishing for hard chrome, ore refining, glass and ceramics and specialized applications. The usage of this product is not meant to be used to diagnose or treat anybody.
Chemical family:	Mixture
Name, address and phone # of supplier:	Aqua Bond Inc. 440 Passmore Ave. Toronto, ON, M1V 5J8 (416) 754-7211
24 Hr. Emergency phone #	**CANUTEC (613) 996-6666**

SECTION 2 HAZARDS IDENTIFICATION

Classification of the Chemical: This material is classified as hazardous under U.S. OSHA regulations

Hazard Classification: (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Acute toxicity - Oral Category 4
Acute toxicity - Dermal Category 3
Acute toxicity - Inhalation (Dust/Mists) Category 3

Label elements:



Signal word: Danger

Hazard Statements:
H301 If swallowed, it can cause harm.
H311 Toxic when in touch with skin
H331 Inhaled toxin
H432 Toxic to terrestrial vertebrates

Precautionary Statements:
P261 Avoid breathing dust.
P280 Wear protective gloves/ protective clothing.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P311 Call a POISON CENTER /doctor.

Other Hazards: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative vPvB at levels of 0.1% or higher. Strong hydrogen fluoride-releaser.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/ mixture:	Mixture	**Classification**	**Concentration (%)**
Ingredient name	**CAS Number**		
Potassium Silicofluoride Formula: K_2SiF_6 Molecular Weight: 220.27 g/mol	16871-90-2	Acute Tox. 3; H301,H331, H311	≤ 100 %

SECTION 4 FIRST-AID MEASURES

Description of first aid measures:

Consult a physician. Show this SDS to the doctor in attendance. Hydrofluoric (HF) acid burns require immediate and specialized first aid depending on the concentration of HF. Skin exposures can be treated with 2.5% calcium gluconate gel. Exposures may require subcutaneous calcium gluconate.

Ingestion: Do NOT encourage vomiting. Contact a physician or poison control center immediately and relocate the patient to an environment that is well-ventilated and encourage drinking plenty of water. Never give anything to eat to an unconscious person.

Inhalation: There is an urgent need for medical treatment. Get more fresh air. Provide artificial respiration if the patient isn't breathing. Keep your skin away from it. When doing mouth-to-mouth resuscitation, provide a barrier between the patient and the rescuer.

Skin contact: There is an urgent need for medical assistance. Remove all contaminated clothing and footwear and wash promptly with soap and lots of water.

Eye contact: Flush with a lot of water as soon as possible. Remove any contact lenses after the first flushing and continue flushing for at least 15 minutes. While rinsing, keep your eyes wide open. Consult a doctor right away.

Most important symptoms and effects, both acute and delayed:

Acute Symptoms/Effects: Listed below.
Inhalation (Breathing): Irritation of the upper respiratory tract and shortness of breath may result from inhaling mist, spray, or other forms of vapours.
Skin: Itching and burning of the skin. Minor redness and swelling may result from skin contact.
Eye: There is a risk of blindness and major eye damage.
Ingestion (Swallowing): No data available

Delayed Symptoms/Effects: No data available.

I**nteraction with Other Chemicals Which Enhance Toxicity:** None known

Indication of any immediate medical attention and special treatment needed: No data available.

Notes to Physician: Treat symptomatically.

SECTION 5 FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable: Water spray, alcohol-resistant foam, dry chemical, or carbon dioxide can be used.

Unsuitable Not known.

Special hazards arising from the substance: Potassium oxides, silicon oxides, and hydrogen fluoride

Hazardous thermal decomposition Products: Hydrogen fluoride

Special protective precautions and equipment for firefighters: Make sure to use a pressure-demand breathing apparatus, MSHA/NIOSH (or a similar authorized or equivalent), and complete protective gear in the event of a fire. Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe area. Avoid breathing dust.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Respiratory protection is necessary. Do not inhale any mist, vapors, or gas. Make sure there is enough airflow. Personnel should be relocated to safe locations. Dust should be avoided at all costs.

Environmental precautions:

If it's safe to do so, stop any further leaks or spills. Do not allow products to enter drains.

Methods and materials for containment and cleaning up:

Pick up and dispose of the trash without causing any dust. Clean up and shovel. Dispose of in appropriate containers.

Special spill response procedures: In case of a transportation accident, contact CANUTEC at 1-613-996-6666

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling: Avoid skin, eye, or clothing contact. Protect yourself from harm by using the appropriate personal protective equipment (PPE).
Before reusing infected clothes, make sure to wash them thoroughly. Dust, fumes, vapors, and sprays should not be inhaled.
Do not eat, drink, or smoke while using this product; it might cause serious health complications.
Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

Conditions for safe storage: Keep it in a cool place. Ensure container tightly closed in a dry and well-ventilated location. Susceptible to moisture. Avoid storing in glass containers**.**
Storage class (TRGS 510): Inflammable solids, toxic
Incompatible materials: Glass

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:
Exposure limits

Ingredient	**Exposure limits**
Potassium Silicofluoride	**OSHA Final PEL**
	TWA
	TWA: 2.5 mg/m^3 F
	TWA: 2.5 mg/m^3 dust
	(vacated) TWA: 2.5 mg/m^3
	ACGIH TWA
	TWA: 2.5 mg/m3 F

Engineering controls: Make sure that you don't come into direct touch with your skin, eyes, or clothes. During breaks and after handling the product, be sure you thoroughly wash your hands. Special precautions for users: Always use closed containers that are upright and secure while transporting within the user's home or business. In the case of an accident, make sure the people who are delivering the goods know what to do.

Potassium Silicofluoride

Individual Protection Measures:

Eyes/face: Safety glasses and a face shield are required for protection. Use eye protection equipment that has been tested and certified by the authorities.

Skin: Gloves should be worn. Inspection of re-used gloves is mandatory. Avoid skin contact with this substance by removing gloves properly (without contacting the gloves outside surface). Ensure that contaminated gloves are disposed of in line with relevant regulations and good laboratory practice. Hands must be well cleaned and dried.

Body Protection: Chemical-resistant full-body suit The sort of protective equipment to be used must be based on the concentration and quantity of the hazardous material present at the worksite.

Respiratory: NIOSH/MSHA certified respiratory protection should be worn if exposure limits are exceeded or irritation occurs. When airborne pollutant concentrations are high, positive-pressure supplied-air respirators may be necessary. Respiratory protection must be given according to local standards.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Crystalline white solid
Odor:	No data available
Odor threshold:	No data available
Decomposition temperature:	No data available
Boiling Point/Range:	No data available
Melting point:	No data available
Freezing Point/Range:	No data available
Specific Gravity:	No data available
PH:	No data available
Flash point:	No data available
Upper and Lower Flammability:	No data available
Auto-ignition temperature:	No data available
Water Solubility:	No data available
Density:	2.665 g/ml
Hygroscopic:	No data available

Potassium Silicofluoride

SECTION 10 STABILITY AND REACTIVITY

Reactivity: Not applicable
Chemical stability: Stable under recommended storage conditions
Reactions: None under normal processing
Conditions to avoid: Extreme temperatures and direct sunlight and reacts dangerously with glass.
Incompatible materials: Strong oxidizing agents and glass.
Hazardous decomposition products: Hydrogen fluoride, potassium oxides, silicon oxides.

Hazardous Polymerization: None known

SECTION 11 TOXICOLOGICAL INFORMATION

TOXICITY DATA:

PRODUCT TOXICITY DATA:

LD50 Oral:	LD50 Dermal:	LD50 Inhalation:
LD50 Oral - Rat - 156 mg/kg	No data available	No data available

Potential health effects (acute):

Eye contact: No data available
Skin contact: No data available
Inhalation: No data available
Ingestion: No data available

Chronic Effects: The fluoride ion may cause dangerous hypocalcemia by lowering blood calcium levels.

SIGNS AND SYMPTOMS OF EXPOSURE:

Inhalation (Breathing): No data available
Skin: No data available
Eye: Damages the eyes severely, increasing the chance of blindness.
Ingestion (Swallowing): No data available

MUTAGENIC DATA: None known
DEVELOPMENTAL TOXICITY: None known

Potassium Silicofluoride

SECTION 12 ECOLOGICAL INFORMATION

Aquatic Toxicity: It may have long-term detrimental impacts on aquatic life.
Freshwater Fish Toxicity: No data available
Invertebrate Toxicity: No data available
FATE AND TRANSPORT: No data available
BIODEGRADATION: No data available

PERSISTENCE: No data available

BIOCONCENTRATION: No data available

BIOACCUMULATIVE POTENTIAL: No data available

MOBILITY IN SOIL: No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal methods: Disposal should be done in line with local, state, and federal rules and regulations. The container should not be reused. The user should allocate waste codes to products depending on the application for which they were utilized.

SECTION 14 TRANSPORT INFORMATION

CANADIAN TRANSPORTATION OF DANGEROUS GOODS

Status: Regulated Toxic powder, inorganic, N.O.S.(Potassium Silicofluoride) Class 6.1, UN2674, PK Group III.

Road and Rail Transport
Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

UN No: 2674
Transport Hazard Class: 6.1 Toxic
Packing Group: III
Proper Shipping Name: SODIUM FLUOROSILICATE
Hazchem or Emergency Action Code: 2X

Marine Transport
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No: 2674
Transport Hazard Class: 6.1 Toxic
Packing Group: III
Proper Shipping Name: SODIUM FLUOROSILICATE
IMDG EMS Fire: F-A
IMDG EMS Spill: S-A

Air Transport
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No. 2674
Transport Hazard Class: 6.1 Toxic
Packing Group III

SECTION 15: REGULATORY INFORMATION

Canada inventory (DSL): All components are listed.

SECTION 16: OTHER INFORMATION

Revision date: December 11, 2021

Full text of H-Statements referred to under sections 2 and 3.

H301:	Toxic if swallowed.
H301 + H311 +	Toxic if swallowed, in contact with skin or if inhaled
H331: H311:	Toxic in contact with skin
H331:	Toxic if inhaled
H432:	Toxic to terrestrial vertebrates

Disclaimer

While the information and recommendations set forth are believed to be accurate as of data hereof, Aqua Bond Inc. makes no warranty with respect thereto and disclaims all liability from reliance thereon.