Safety Data Sheet (SDS)

Section 1: Identification

Product identifier: Super Kroll's
Other name(s): ASTM 187
Item number(s): 174
Identified use: SU24 Scientific research and development.
Details of the supplier of the safety data sheet:
ES Laboratory, LLC
2041 E. Gladstone St. Unit N Glendora, CA 91740 USA
Tel: 626-208-9011
Emergency telephone number:
CHEMTREC® 1-800-424-9300 (US & Canada Only)

Section 2: Hazard(s) Identification

Hazardous classification of the substance or mixture:

Hazard Class	Category code
Acute Toxicity - Oral	2
Acute Toxicity - Dermal	2
Acute Toxicity - Inhalation	1
Skin Corrosion	1A
Eye Damage	1
Respiratory Sensitizer	1
Germ Cell Mutagenicity	2
Specific target organ toxicity - Single exposure	1
Specific target organ toxicity – Repeated exposure	1
Aspiration Hazard	1
Corrosive to Metals	1

Signal word: Danger
Pictogram:

Hazard statement(s):

H290	May be corrosive to metals.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H314	Cause severe skin burns and eye damage.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary statement(s):

P202	Do not handle until all safety precautions have been read and understood.
P234	Keep only in original container.
P264	Wash arms, hands and face thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection, face protection.
P285	In case of inadequate ventilation wear respiratory protection.

Response statement(s):

P303+P361+P353	IF ON SKIN (or hair): remove/take off immediately all contaminated clothing. Rinses skin with water/shower.
P304+P341	IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P301+P330+P331+ P310	IF SWALLOWED: rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
P321	Specific treatment (see section 4 on this label)

Storage statement(s):

P405	Store locked up.

Disposal statement(s):

P501	Dispose of contents/container to an approved waste disposal plant.

Hazard(s) not otherwise classified: No information.
Label elements: See tables above

HMIS Ratings:	NFPA Ratings:
Health: 3	Health: 3
Flammability: 0	Flammability: 0
Reactivity: 0	Reactivity: 0
	Special hazard: None

Section 3: Composition/Information on Ingredients

Component	CAS No.	Concentration
Nitric acid	7697-37-2	33-46%
Hydrofluoric acid	7664-39-3	10-15%

Any concentration shown as a range is to protect the confidentiality or is due to batch variation. Only hazardous components are shown.

Section 4: First-Aid Measures

General information: First aid procedures should be pre-planned for Hydrofluoric Acid emergencies.
Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical aid immediately.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid immediately.
Skin contact: Wash the areas of contact with water for at least 15 minutes while removing contaminated clothing and shoes. Rub in calcium gluconate solution or calcium gluconate gel immediately. Get medical aid immediately.
Ingestion: Do not induce vomiting. Rinse mouth. Get medical aid immediately.
Most important symptoms and effects, both acute and delayed: This product contains hydrofluoric acid which is a contact-poison with the potential for deep, initially painless burns and ensuing bone/tissue damages.
Recommendation for immediate medical care and special treatment needed, when necessary: Use the specific treatment for hydrofluoric acid.

Section 5: Fire-Fighting Measures

Extinguishing media: Does not burn. Use extinguishing media appropriate for surrounding fire.
Special hazards arising from the substance or mixture: In the case of fire, the following can be released: acidic liquid and irritating fumes.
Special protective equipment or precautions for firefighters: Wear full protective clothing and self-contained respirator.

Section 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: This product contains hydrofluoric acid which is a contact-poison. Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.
Environmental precautions: Do not allow the material to be released to the environment without proper government permits.
Methods and materials for containment and cleaning up: Neutralize the spill with sodium carbonate or a soda ash-slaked lime mixture (50:50). Absorb with a liquid binding material (sand, diatomite, acid binder, universal binders, sawdust). Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation.

Section 7: Handling and Storage

Precautions for safe handling: Wear protective equipment. Ensure good ventilation in the workplace. Open and handle with care.
Condition for safe storage: Keep container tightly sealed. Store in an approved corrosive liquid storage container/area.
Incompatibilities: Store away from strong bases and reducing agents.

Specific storage requirement(s): This product will attack glassware. Store in original container or plastic container.

Section 8: Exposure Controls/Personal Protection

Exposure Limits

Component	CAS No.	ACGIH TLV	OSHA PEL
Nitric acid	7697-37-2	2 ppm TWA	2 ppm TWA 4 ppm STEL
Hydrofluoric acid	7664-39-3	3 ppm TWA	3 ppm F STEL

Engineering controls: Use general and/or local exhaust ventilation to control the vapor concentration.
Eye protection: Wear safety glasses/goggles/full-face splash shield.
Skin protection: Wear protective clothing and chemical resistant gloves.
Respiratory protection: Use self-contained respiratory device in an emergency situation.

Section 9: Physical and Chemical Properties

Appearance:	Clear, colorless liquid
UFL/LEL:	Not determined
LFL/LEL:	Not determined
Odor:	Acidic
Vapor pressure:	Not determined
Odor threshold:	Not determined
Vapor density:	Not determined
pH:	Not determined
Relative density:	Not determined
Melting Point/Freezing point:	Not determined
Solubility in water:	Miscible
Boiling point/boiling range:	Not determined
Flash point:	Not determined
Evaporation Rate:	Not determined
Flammability (solid, gas):	Not applicable
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined

Section 10: Stability and Reactivity

Reactivity: No information.
Chemical stability: Stable under normal conditions of use and storage.
Stabilizer(s): Not required.
Safety issues that may arise should the product change in appearance: No information.
Thermal decomposition/ conditions to Avoid: Avoid excessive heat.
Possibility of hazardous reactions: see incompatibilities.
Incompatibilities: Strong bases and reducing agents. Will attack some forms of plastics, rubber, and coatings. May react with metallic aluminum and generate hydrogen gas.
Hazardous decomposition products: Will not occur.

Section 11: Toxicological Information

For Nitric Acid:

Acute toxicity:

Inhalation rat LC50/4H: 0.13 mg/1/4H
Oral (human) LDLo: 430 mg/kg.

Other exposure effect:

On the Skin: Strong corrosive effect.
On the Eye: Strong corrosive effect.
Sensitization: No sensitizing effects were known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from NTP, IARC or OSHA.

For Hydrofluoric Acid:

Acute toxicity:

Inhalation rat LD50/1H: 1276 ppm/1H.

Other exposure effect:

Oral: Toxic effect.
On the Skin: Strong corrosive effect.
On the Eye: Strong corrosive effect.
Sensitization: No sensitizing effects were known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from NTP, IARC or OSHA. Danger through skin absorption.

Section 12: Ecological Information

Toxicity:

Aquatic toxicity: No information.
Persistence and degradability: No information.
Behavior in environmental system:
Bioaccumulative potential: No information.
Mobility in soil: No information.
Additional ecological information: No information.
Other adverse effects: No information.

Section 13: Disposal Considerations

Place in a chemical waste container for proper disposal in an approved waste disposal facility. Dispose of the content and container in accordance with local, regional, national, international regulations.

Section 14: Transport Information

D.O.T. shipping name: Corrosive liquid, toxic, n.o.s. (Nitric Acid, Hydrofluoric Acid)
D.O.T. hazard class: 8 (6.1)
UN number: UN2922
Packing group: II

Section 15: Regulatory Information

Not meant to be all inclusive, selected regulation represented
California Proposition 65: Not listed
TSCA status: All components are listed.

Section 16: Other Information

Disclaimer: The information above is believed to be accurate and represents the best information currently available to us. ES Laboratory, LLC makes no warranty, express or implied, as to its accuracy, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. We shall not be liable for any damages to person or property resulting from its use.
Revised Date: 1/4/2019