Aufhauser Corporation

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Safety Data Sheet

1. Supplier and Manufacturer

Aufhauser Corporation
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Telephone: 516-694-8696 www.brazing.com
Emergency Phone Number: 516-694-8696 or 212-246-0205
24-hour Emergency Response: 212-246-9420 or 911
SDS Number: Flux Backside SS 202304
Product Codes: **Backside StainFlux**
Product Use(s): Flux for metal brazing

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2. Hazards identification

Classification(s)
GHS Classified: Acute Tox 2 (Oral): H300; Skin Sens 2: H315; Eye Sens 2A: H319; STOT SE 3: H335
GHS Label Symbol(s): Skull and Crossbones, Health

GHS Label Signal Word(s): Danger
GHS Label Hazard Statement(s): Fatal if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.
GHS Label Precautionary Statement(s): Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not eat, drink, or smoke when using this product. Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective clothing, and eye/face protection. If exposed or concerned, get medical advice or attention. Call a doctor or Poison Control Center if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF ON SKIN: Take off immediately all contaminated clothing. Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do. Continue rinsing. Immediately call a doctor or Poison Control Center. If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Wash contaminated clothing before reuse. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

3. Composition/information on ingredients

Ingredient	CAS #	% ww	GHS note
Calcium fluoride	7789-75-5	50 - 70	Acute Tox. 5 (Oral): H313; Skin Sens 2: H315; Eye Sens 2A: H319; STOT SE 3: H335
Sodium fluoride	7681-49-4	15 - 30	Acute Tox. 2 (Oral): H300; Skin Sens 2: H315; Eye Sens 2A: H319; Aquatic Acute 3: H402
Boric acid	10043-35-3	5 - 10	Repr 1B: H360
Silicon dioxide	7631-86-9	5 - 10	Carc 1A: H350; STOT RE 1: H372; STOT SE 3 (Resp): H335
Titanium dioxide	1317-13-9	5 - 10	Carc 2: H351
Manganese dioxide	1313-13-9	1 - 4	Acute Tox. 5 (Oral): H303; Acute Tox. 4 (Inhale): H332
Calcium silicate (Wollastonite)	10101-39-0	4 - 6	Eye Irrit. 2A: H319; STOT SE 3 (Resp): H335

4. First aid measures

Eyes: Flush affected areas with water for at least fifteen minutes. Remove contact lenses if present and easy to do. Seek medical attention/ contact poison control center immediately.
Skin: Remove contaminated clothing. Wash affected area with large quantities of water. Chemical burns must be treated by a physician. Seek medical attention. Launder or dry-clean clothing before reuse.
Ingestion: Seek immediate medical assistance. Rinse mouth. Do not induce vomiting unless explicitly instructed by medical personnel. Do not give anything by mouth to an unconscious or convulsive person.
Inhalation: If signs and symptoms of toxicity are observed, remove subject from area, administer oxygen, and seek medical attention. Keep the subject warm and at rest. Perform artificial respiration if breathing has stopped.
Additional indications/ medical attention: Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Consult a physician. Show this safety data sheet to the doctor. Move out of dangerous area.

Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/ absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases. More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure.

5. Firefighting measures

Suitable extinguishing media: Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media: Do not use water jet as an extinguisher; water jetting will spread fire. No water on molten metal.
Special PPE and equipment for firefighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions: Use water spray to cool unopened containers. Remove containers from fire area if possible.
Specific methods: Use standard firefighting procedures and consider other hazardous materials involved.
General fire hazards: Hazardous decomposition products formed under fire conditions: Hydrogen fluoride, Calcium oxides, Sodium oxides

6. Accidental release measures

Personal Precautions: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak.
Avoid contact with skin, eyes, and mucous membranes. Wear appropriate protective equipment (e.g., gloves, chemical goggles) during cleanup. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.
Methods and Materials: Isolate spilled product and transfer to impervious containers. Avoiding formation of dust and airborne particulates. Prevent entry into waterways, sewer, basements or confined areas.
Environmental Precautions: Prevent spills from entering sewers or contaminating soil.

7. Handling and storage

Handling Precautions: Do not get this material in contact with eyes or skin. Avoid prolonged exposure. Avoid formation of dust and aerosols. Provide adequate ventilation. Use protective equipment as needed.
Work and Hygiene Practices: To prevent ingestion following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing or protective equipment before entering eating/drinking areas.
Storage Precautions: Store in a cool, dry, locked, well-ventilated location away from incompatible materials (see Section #10).

8. Exposure controls/personal protection.

Ingredients – Exposure Limits

Ingredient	CAS #	ACGIH TLV (mg/m3)	OSHA PEL (mg/m3)	Carc
Calcium fluoride	7789-75-5	2.5	2.5	
Sodium fluoride	7681-49-4	2.5	2.5	
Boric acid	10043-35-3	2	10	
Silicon dioxide	7631-86-9	0.025	10	IARC-1, A2
Titanium dioxide	1317-13-9	ne	10	IARC-2B, A4
Manganese dioxide	1313-13-9	0.2	5	
Wollastonite	10101-39-0	ne	10	

Ingredients – Biological Limits: No data available.
Engineering Controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
Eye/Face Protection: Wear eye protection adequate to prevent eye contact with the product and injury from the hazards of product use.
Skin Protection: Wear protective gloves and clothing to prevent skin contact and injuries from the hazards of product use and/or for prolonged contact with the product. Avoid flammable fabrics.
Respiratory Protection: If an exposure level to a component(s) exceeds an applicable standard, use a NIOSH-approved respirator having a configuration (face piece, filter media, assigned protection factor, etc.) effective for the concentration of the component(s) generated. For guidance on selection and use of respirators, consult American National Standard Z88.2 (ANSI, New York, NY 10036, USA).
General hygiene: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and PPE to remove contaminants.

9. Physical and chemical properties

Appearance: powder, dark gray
Odor threshold: n/a
Melting point: ~1250 C (2282 F)
Boiling point/boiling range: n/a
Evaporation Rate (nBuAc = 1): > n/a
Lower Explosive Limit: n/a
Vapor pressure (mm Hg): 14
Relative vapor density (air = 1): n/a
Oil-water partition coefficient: not determined
Decomposition temperature: not determined
Specific gravity @ 20C (water = 1): n/a

Odor: odorless
pH: n/a
Freezing point: n/a
Flash Point: n/a
Flammability Class: n/a
Upper Explosive Limit: n/a
Vapor density: n/a
Solubility (H2O): Sparingly soluble
Auto ignition Point: n/a
Viscosity: not determined
Percent volatile by volume: 0.5%

10. Stability and reactivity

Reactivity: Non-reactive under normal conditions of use, storage and transport.
Stability: stable
Hazardous Polymerization: will not occur
Conditions to avoid: Excess heat. Contact with incompatible materials.
Incompatible Materials: Strong oxidizers, acids, alkalis and their carbonates, hydrogen cyanide, interhalogens, ammonium nitrate, potassium chlorate, lead and silver salts.
Potential Hazardous Decomposition Products: Fluorides and oxides.

11. Toxicological information

Ingredients - Toxicological Data

Calcium fluoride	LD50 (oral, rat): 4250 mg/kg (somnolence, ataxia) LDLo (oral, guinea pig) > 5000 mg/kg IARC-3 (not classifiable as to carcinogenicity to humans)
Sodium fluoride	LD50 (oral, rat): 31 mg/kg LD50 (oral, mouse): 44 mg/kg LD50 (oral, rabbit): 200 mg/kg LD50 (oral, domestic animals): 100 mg/kg LD50 (oral, wild bird): 110 mg/kg TDLo Oral - Human - 0.214 mg/kg Remarks: Behavioral: Headache. Gastrointestinal: Changes in structure or function of salivary glands. TDLo Oral - Human - 3.57 mg/kg Remarks: Gastrointestinal: Changes in structure or function of salivary glands. Gastrointestinal: Other changes. TDLo Oral - Human - male - 1,662 mg/kg TDLo Oral - Human - female - 7 mg/kg Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Ptosis. Cyanosis TDLo Oral - mouse - 0.0084 mg/kg Remarks: Gastrointestinal: Decreased motility or constipation. TDLo Oral - mouse - 0.034 mg/kg LDLo Oral - Human - 71 mg/kg Remarks: Behavioral: Tremor. Musculoskeletal: Changes in teeth and supporting structures.

	Musculoskeletal: Other changes. LDLo Oral - Human - 32 mg/kg LDLo Oral - Human - 0.07 mg/kg Remarks: Cardiac: Arrythmias (including changes it conduction). Peripheral Nerve and Sensation: Recording from peripheral motor nerve. LDLo Oral - Human - female - 90 mg/kg Remarks: Behavioral: Fluid intake. Behavioral: Muscle weakness. LDLo Oral - Human - female - 360 mg/kg Remarks: Cyanosis
Boric acid	LD50 (oral, rat): 2660 mg/kg LD50 (dermal, rabbit): 2000 mg/kg
Silicon dioxide	LD50 (oral, rat): 3160 mg/kg IARC-1 (Carcinogenic to humans), ACGIH-A2 (Suspected human carcinogen)
Titanium dioxide	IARC-2B (Possibly carcinogenic to humans), ACGIH-A4 (Not classifiable as a human carcinogen)
Manganese dioxide	LD50 (oral, rat) > 3478 mg/kg

Primary Routes(s) of Entry: Ingestion; inhalation.
Eye Hazards: Causes eye irritation.
Skin Hazards: Causes skin irritation. May be harmful if absorbed through skin.
Ingestion Hazards: May be fatal if swallowed.
Inhalation Hazards: Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Symptoms Related to Overexposure: Burning pain and severe corrosive skin damage. Causes eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Damage to the lungs may result from prolonged inhalation.
Chronic Effects: Prolonged inhalation may be harmful.
Carcinogenicity: Silicon dioxide: IARC-1 (Carcinogenic to humans), ACGIH-A2 (Suspected human carcinogen). Titanium dioxide: IARC-2B (Possibly carcinogenic to humans), ACGIH-A4 (Not classifiable as a human carcinogen).
Mutagenicity: Not reported to produce mutagenic effects in humans.
Embryotoxicity: Not reported to cause embryotoxic effects in humans
Teratogenicity: Not reported to cause teratogenetic effects in humans.
Reproductive Effects: Boric acid (component) may damage fertility or the unborn child.
Biological Exposure Index: No data available.

12. Ecological information

Ecological data for the components is as follows:

Sodium fluoride	NOEC (minnow): 500 mg/L (96h) LC50 (fish): 200 mg/L (96h - Oncorhynchus mykiss) EC50 (other aquatic organisms): 98 mg/L (48h - Daphnia magna)
Boric acid	LC50 (fish): 5600 mg/L (Gambusia affinis) EC50 (other aquatic organisms): 115 mg/L (Daphnia magna 1) EC50 (other aquatic organisms): 658 - 875 mg/L (Daphnia magna 2)
Silicon dioxide	LC50 (fish): 5000 mg/L (96h - Brachydanio rerio) EC50 (other aquatic organisms): 7600 mg/L (48h - Ceriodaphnia dubia) EC50 (plant): 440 mg/L (72hr - Pseudokirchneriella subcapitata)

Ecotoxicity: Harmful to aquatic life.
Persistence and degradability: No data available.
Bioaccumulative potential: No data available.
Mobility in soil: No data available.
Other adverse effects: Large releases of this product may be harmful or fatal to exposed aquatic life.

13. Disposal considerations

Disposal instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Consult applicable Federal, State/ Provincial, and local regulations.

14. Transport information

DOT, IATA, IMDG: not dangerous goods.

15. Regulatory information

United States Regulatory Information

Components of this product are listed on the EPA's TSCA inventory.
SARA Hazard Classes: n/a

Components are listed under various State regulations.

Proposition 65 (California):
· Chemicals known to cause cancer: silicon dioxide (silica, crystalline airborne particles of respirable size), titanium dioxide (airborne, unbound particles of respirable size)
· Chemicals known to cause reproductive toxicity for females: none
· Chemicals known to cause reproductive toxicity for males: none
· Chemicals known to cause developmental toxicity: none

Canadian Regulatory Information

Components of this product are listed on either the Domestic Substances List (DSL) or the Nondomestic Substances List (NDSL).
WHMIS Class(es) and Division(s): n/a

16. Other information including information on preparation and revision of the SDS

NFPA Ratings for Product	HMIS Ratings for Product (Legend)
Health - 3	Health - 3 (serious, chronic hazard)
Flammability - 0	Flammability – 0 (minimal hazard)
Reactivity - 0	Physical Hazard – 0 (minimal hazard)

Date of Preparation: 2023-04

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