SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**Silver Brazing Flux Paste**
Product Code:	1711879, 1711880, 1711884
Product Use:	Soldering flux
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	**Bromic Group**
Address:	259 James Fletcher Drive, Ōtāhuhu, Auckland 2024, New Zealand
Telephone:	0508 276 642
Emergency Telephone:	**0508 276 642** **0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	6 May 2025 v2

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: Metal Industry Product (Corrosive) – HSR002609

Pictograms

Signal Word: **DANGER**

GHS Classification and Category	Hazard Code	Hazard Statement
Acute oral toxicity Cat. 4	H302	Harmful if swallowed.
Reproductive toxicity Cat. 1	H360	May damage fertility or the unborn child.
Skin corrosion Cat. 1B	H314	Causes severe skin burns and eye damage.
Serious eye damage Cat. 1	H318	Causes serious eye damage.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe fumes, vapours or spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective clothing as detailed in SDS Section 8.

Response Code	Response Statement

P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301 + P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.

Storage Code	**Storage Statement**
P405	Store locked up.

Disposal Code	**Disposal Statement**
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Boric acid	20-30 %	10043-35-3
Potassium bifluoride	20-30 %	7789-29-9
Potassium tetraborate tetrahydrate	5-10 %	12045-78-2
Potassium fluoride	5-10 %	7789-23-3
Ingredients determined not to be hazardous	Balance	

Section 4. First Aid Measures

If in Eyes — Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

If on Skin — Remove all contaminated clothing immediately. Wash gently and thoroughly with water and non-abrasive soap for 15 minutes. Ensure contaminated clothing is washed before re-use or discard. Immediately call a POISON CENTER or doctor/physician.

If Swallowed — Rinse mouth. Do NOT induce vomiting. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Call a POISON CENTER or doctor/physician if you feel unwell.

If Inhaled — Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

If swallowed: Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

Inhalation: Inhalation may cause: irritation, coughing, shortness of breath.

Skin: Causes severe skin burns and eye damage. Burns. Redness. Blisters.

Eyes: Causes serious eye damage.
Chronic: May damage fertility or the unborn child.

Section 5. Fire Fighting Measures

Hazard Type	Non-Flammable
Hazards from combustion products	Under fire conditions this product may emit toxic and/or corrosive vapours including oxides of potassium, boron and fluorine.
Suitable Extinguishing media	Carbon dioxide. Dry powder. Foam.
Precautions for firefighters and special protective clothing	Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self-contained breathing apparatus. Exercise caution when fighting any chemical fire. Do not allow run-off from firefighting to enter drains or water courses. Cool adjacent structures and containers with water spray to protect and prevent ignition.
HAZCHEM CODE	**2X**

Section 6. Accidental Release Measures

Evacuate all unprotected personnel. Do not breathe vapour. Do not breathe aerosol. Do not get in eyes, on skin, or on clothing. Use personal protective equipment as detailed in Section 8. Ensure adequate ventilation.

Avoid release to the environment.

Stop the flow of material, if this is without risk. Take up in non-combustible absorbent material and place into container for disposal. Dispose of waste according to applicable local and national regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Read carefully and follow all instructions.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe fumes, vapours or spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective clothing as detailed in SDS Section 8.
- Use personal protective equipment as required.
- Do not get in eyes, on skin, or on clothing.
- Provide good ventilation in process area to prevent formation of vapour.
- Do not eat, drink or smoke when using this product.
- Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
- Wash contaminated clothing before reuse.

Precautions for Storage:

- Keep out of reach of children.
- Store locked up.
- Keep only in original container tightly closed.
- Store away from oxidising agents, strong bases/acids and halogens.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices FEB 2025 15TH EDITION.

Engineering Controls

Avoid creating mist or spray. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide local exhaust or general room ventilation. Use only in well-ventilated areas.

Personal Protection Equipment

Eyes	Safety glasses with a full-face shield should be used. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 (series) - Eye Protectors for Industrial Applications.
Hands and Skin	Wear gloves of impervious material such as natural rubber, nitrile rubber, neoprene or PVC. Suitable protective workwear, e.g. impervious clothing, rubber apron and safety shoes.
Respiratory	Wear appropriate mask. Use air-purifying respirator equipped with particulate filtering cartridges.
General	Do not eat, drink or smoke when using this product.

Section 9 Physical and Chemical Properties

Appearance	White Paste
Odour	Odourless
Odour Threshold	Not available
pH	8-10
Boiling Point	100°C
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Non-Flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Specific Gravity	1.6 – 1.7
Solubility in water	Soluble
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Volatile Component	VOC content: 0%

Section 10. Stability and Reactivity

Stability of Substance	Stable under normal conditions of storage and handling.
Reactivity	Reacts with incompatible materials.
Conditions to Avoid	Extremely high or low temperatures. Moisture.
Incompatible Materials	Strong acids. Strong bases. Strong oxidizing agents. Halogens.
Hazardous Decomposition Products	Thermal decomposition generates: Corrosive vapours. Potassium oxides. boron. Fluorine (F).

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.
Dermal	Not applicable.
Inhalation	Not triggered however, inhalation may cause: irritation, coughing, shortness of breath.
Eye	Causes serious eye damage.
Skin	Causes severe skin burns. Burns. Redness. Blisters.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	May damage fertility or the unborn child.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Individual component information:

Acute Toxicity:

Chemical Name	Oral – LD50	Dermal – LD50	Inhalation – LC50
Product (Silver Brazing Paste	387mg/kg (rat)	-	-
Boric Acid (10043-35-3)	2660mg/kg (Mouse)	2000 mg/kg (rabbit)	>2mg/L/4h (rat)
Potassium Fluoride (7789-23-3)	148.5 mg/kg	300mg/kg	1mg/I/4h ATE (rat) Gases: 700ppm/4h Dust/mist: 1 mg/l/4h
Potassium tetraborate tetrahydrate (12045-78-2)	3500-4100 mg/kg (rat)	>2000mg/kg(Rabbit)	-
Potassium Bifluoride (7789-29-9)	100 mg/kg (rat)	-	-

Section 12. Ecotoxicological Information

Not hazardous to the environment.

Persistence and degradability	Product: Not established. Boric Acid: Not readily biodegradable. Potassium tetraborate tetrahydrate: Not biodegradable.
Bioaccumulation	Product: Not established. Boric acid BCF (fish, Oncorhynchus tschawytscha) : 34 mg/I, 90 days at 12° C Log Pow: -0.757 at 25 °C
Mobility in Soil	Product: Not established.

Other adverse effects	Prevent this material entering waterways, drains and sewers.

Acute Toxicity - Fish
Boric acid
LC50 (Carassius auratus): 1.02 g/I/3 days
Potassium tetraborate tetrahydrate (12045-78-2)
LC50 (fish): 88 mg/I/96h
Potassium bifluoride
LC50 (fish): 51 (51 —340) mg/I/96h
Potassium fluoride
LC50 (fish): 1299 mg/I/48h

Acute Toxicity - Other Organisms
Boric acid
EC50 (crustacea): 658 —875 mg/I/48h
Potassium tetraborate tetrahydrate (12045-78-2)
EC50 (crustacea): 242 mg/I/24h
Potassium bifluoride
EC50 (crustacea): 26 (26 —48) mg/I/96h
Potassium fluoride
EC50 (crustacea): 26 (26 —48) mg/I/96h

Other Information
Chronic
Boric acid
LOEC (Salmo gairdneri): > 97 mg/I

Section 13. Disposal Considerations

Disposal Method:
The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

Precautions and methods to avoid: Do not allow to enter waterways.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2020

Road, Rail, Sea and Air Transport

UN No	1740
Class - Primary	8
Packing Group	II
Proper Shipping Name	HYDROGENDIFLUORIDES, SOLID, N.O.S. (Contains potassium bifluoride)
Marine Pollutant	No
Special Provisions	If the product's individual container is below 1kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	250kg
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	250kg
Emergency Response Plan	1000kg
Secondary Containment	1000kg
Restriction of Use	Only use for the intended purpose.

Section 16 Other Information

Glossary

EC_{50}	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC_{50}	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD_{50}	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Feb 2025 15th edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the New Zealand distributor, if further information is required.

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