

**Section 1. Identification of the material and the supplier**

Product: **Silver Brazing Paste**  
 Product Code: 1711879, 1711880, 1711884  
 Product Use: Soldering flux  
 Restriction of Use: Refer to Section 15

New Zealand Supplier: **Bromic Group**  
 Address: Malcolm Total Logistics Auckland  
 39 Richard Pearse Drive  
 Airport Oaks Mangere 2022

Telephone: 0508 276 642

**Emergency Telephone: 0508 276 642**  
**0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 10 August 2020

**Section 2. Hazards Identification**

**This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017**

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

**Pictograms**



Toxic    Chronic    Corrosive

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1D (oral)	H302	Harmful if swallowed.	Acute Tox. 4
6.1E (dermal)	H313	May be harmful in contact with skin.	Acute Tox. 5
6.8B	H361	Suspected of damaging fertility or the unborn child.	Repr. 2
6.9A	H372	Causes damage to organs through prolonged or repeated exposure.	STOT RE 1
8.2B	H314	Causes severe skin burns and eye damage.	Skin Corr. 1B
8.3A	H318	Causes serious eye damage.	Eye Corr. 1
9.1D	H413	May cause long lasting harmful effects to aquatic life.	Aquatic Chronic 4
9.3C	H433	Harmful to terrestrial vertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.

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 and spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.
P281	Use personal protective equipment as required.

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.
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
Boron potassium oxide(B4K2O7), tetrahydrate	5-10 %	12045-78-2
Potassium fluoride	5-10 %	7789-23-3
Arsenic	<0.04 %	7440-38-2
Ingredients determined not to be hazardous	Balance	

### Section 4. First Aid Measures

If in Eyes	If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for at least 15 minutes. 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: Harmful if swallowed. Ingestion of this product will cause nausea, vomiting, abdominal pain and chemical burns to the mouth, throat and stomach.

Inhalation: Inhalation will result in respiratory irritation and possible harmful corrosive effects including lesions of the nasal septum, pulmonary edema, pneumonitis and emphysema.

Skin: May be harmful in contact with skin. Causes severe skin burns. Skin contact can cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.

Eyes: Causes serious eye damage. Eye contact will cause stinging, blurring, tearing, severe pain and possible burns, necrosis, permanent damage and blindness.

Chronic: Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

**Section 5. Fire Fighting Measures**

<b>Hazard Type</b>	Non Flammable
<b>Hazards from combustion products</b>	Under fire conditions this product may emit toxic and/or corrosive vapours including oxides of potassium, boron and fluorine.
<b>Suitable Extinguishing media</b>	Carbon dioxide. Dry powder. Foam.
<b>Precautions for firefighters and special protective clothing</b>	Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.
<b>HAZCHEM CODE</b>	<b>2X</b>

**Section 6. Accidental Release Measures**

Evacuate all unprotected personnel. Do not allow contact with skin and eyes. Do not breathe mist/vapour. It is essential to wear self-contained breathing apparatus (S.C.B.A) and full personal protective equipment and clothing to prevent exposure.

If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

Avoid exposure to spillage by collecting the material using vacuum and transfer into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to applicable local and national regulations.

**Section 7. Handling and Storage**

**Precautions for Handling:**

- Read label before use.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Corrosive material.
- Attacks skin and eyes.
- Use in designated areas with adequate ventilation.
- Keep containers tightly closed.

- Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands after handling, and before eating, drinking, smoking or using the toilet facilities. Avoid exposure.
- It is recommended that pregnant or breastfeeding women should not handle this product unless adequate exposure protection can be assured at all times. Female personnel planning pregnancy should be made aware of the potential risks.
- Do not breathe fumes, vapours and spray.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Use personal protective equipment as required.

**Precautions for Storage:**

- Keep out of reach of children.
- Store locked up.
- Store in a cool dry well-ventilated area.
- Store away from oxidising agents and bases/acids.
- Keep containers closed when not in use, securely sealed and protected against physical damage.
- Inspect regularly for deficiencies such as damage or leaks.
- Provide a catch-tank in a bunded area.
- Store in original packages as approved by manufacturer.
- Ensure that storage conditions comply with applicable local and national regulations.

**Section 8 Exposure Controls / Personal Protection**

**WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Substance	TWA		STEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Arsenic and soluble compounds, [7440-38-2]	-	0.05	-	-

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 NOV 2019 11<sup>TH</sup> EDITION.

**Engineering Controls**

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours/ mist/dust away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations of vapours/mists/dust below the exposure standards, suitable respiratory protection must be worn.

**Personal Protection Equipment**



<b>Eyes</b>	Safety glasses with 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.
<b>Hands and Skin</b>	Wear gloves of impervious material such as natural rubber, nitrile rubber, neoprene or PVC. Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.
<b>Respiratory</b>	If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust/ vapour/mist filter should be used. Refer to relevant regulations for further information concerning

respiratory protective requirements. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

## Section 9 Physical and Chemical Properties

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

## Section 10. Stability and Reactivity

<b>Stability of Substance</b>	Stable under normal conditions of storage and handling.
<b>Reactivity</b>	Reacts with incompatible materials.
<b>Conditions to Avoid</b>	Avoid heat, sparks and open flames.
<b>Incompatible Materials</b>	Strong acids. Strong bases. Strong oxidizing agents. Halogens.
<b>Hazardous Decomposition Products</b>	Thermal decomposition may result in the release of toxic and/or corrosive vapours including oxides of potassium, boron and fluorine.

## Section 11 Toxicological Information

### Acute Effects:

<b>Swallowed</b>	Harmful if swallowed. Ingestion of this product will cause nausea, vomiting, abdominal pain and chemical burns to the mouth, throat and stomach.
<b>Dermal</b>	May be harmful in contact with skin.
<b>Inhalation</b>	Not triggered however, inhalation will result in respiratory irritation and possible harmful corrosive effects including lesions of the nasal septum, pulmonary edema, pneumonitis and emphysema.
<b>Eye</b>	Causes serious eye damage. Eye contact will cause stinging, blurring, tearing, severe pain and possible burns, necrosis, permanent damage and blindness.
<b>Skin</b>	Causes severe skin burns. Corrosive to the skin. Skin contact can cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.

### Chronic Effects:

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Suspected of damaging fertility or the unborn child.
<b>Germ Cell Mutagenicity</b>	Not applicable.
<b>Aspiration</b>	Not applicable.
<b>STOT/SE</b>	Not applicable.
<b>STOT/RE</b>	Causes damage to organs through prolonged or repeated exposure.

### **Individual component information:**

#### **Acute Toxicity:**

<b>Chemical Name</b>	<b>Oral – LD50</b>	<b>Dermal – LD50</b>	<b>Inhalation – LC50</b>
Product (Silver Brazing Paste)	387mg/kg (rat)	-	-
Boric Acid (10043-35-3)	2668mg/kg (Mouse)	2000 mg/kg (rabbit)	>2mg/L/4h (rat)
Potassium Fluoride (7789-23-3)	-	300mg/kg	1mg/I/4h ATE (rat) (gases): 700ppm/4h ATE
Boron potassium oxide(B4K207), tetrahydrate (12045-78-2)	-	>2000mg/kg(Rabbit)	-
Potassium Bifluoride (7789-29-9)	160mg/kg (rat)	-	-

### **Section 12. Ecotoxicological Information**

HSNO Classes: 9.1D = May cause long lasting harmful effects to aquatic life.  
9.3C = Harmful to terrestrial vertebrates.

<b>Persistence and degradability</b>	Not readily biodegradable.
<b>Bioaccumulation</b>	<b>Boric acid</b> BCF (fish, Oncorhynchus tshawytscha) : 134 mg/I, 90 days at 12° C Log Pow: -0.757 at 25 °C
<b>Mobility in Soil</b>	Soluble in water
<b>Other adverse effects</b>	Prevent this material entering waterways, drains and sewers.

#### **Acute Toxicity - Fish**

##### **Boric acid**

LC50 (Carassius auratus): 1.02 g/I/3 days

##### **Boron potassium oxide(B4K207), tetrahydrate**

LC50 (fish): 188 mg/I/96h

##### **Potassium bifluoride**

LC50 (fish): 151 (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

##### **Boron potassium oxide(B4K207), tetrahydrate**

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**

Product Name: Silver Brazing Paste  
Date of SDS: 10 August 2020

SDS Prepared by: Technical Compliance Consultants (NZ) Ltd  
Tel: 64 9 475 5240 www.techcomp.co.nz

**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 5433:2012**



**Road, Rail, Sea and Air Transport**

<b>UN No</b>	1740
<b>Class - Primary</b>	8
<b>Packing Group</b>	II
<b>Proper Shipping Name</b>	HYDROGENDIFLUORIDES, SOLID, N.O.S. (Contains potassium bifluoride)
<b>Marine Pollutant</b>	No
<b>Special Provisions</b>	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 2017

EPA Approval Code: Metal Industry Product (Corrosive) – HSR002609

HSNO Classification: 6.1D(oral), 6.1E(dermal), 6.8B, 6.9A, 8.2B, 8.3A, 9.1D, 9.3C

<b>HSW (HS) Regulations 2017 and EPA Notices</b>	<b>Trigger Quantity</b>
Certified Handler	Not required
Location Certificate	250kg (8.2B)
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	250kg (8.2B)
Emergency Response Plan	1000kg (8.2B)
Secondary Containment	1000kg (8.2B)
Restriction of Use	Only use for the intended purpose.

**Section 16 Other Information**

**Glossary**

EC <sub>50</sub>	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC <sub>50</sub>	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD <sub>50</sub>	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 Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
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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