



Safety Data Sheet

Issue Date: 28-Feb-2011

Revision Date: 01-May-2018

Version 3

1. IDENTIFICATION

Product Identifier

Product Name Type "B" Bronze Brazing Paste Flux

Other means of identification

SDS # GFM-004

Synonyms Type "B"-Blue Paste.

Recommended use of the chemical and restrictions on use

Recommended Use All-purpose high temperature paste flux for brazing with bronze and nickel silver alloys.

Details of the supplier of the safety data sheet

Manufacturer Address:

The Gasflux Company
32 Hawthorne Street
P.O. Box 1170
Elyria, Ohio 44036 U.S.A.

Emergency Telephone Number

Company Phone Number (440) 365-1941 (8am - 4:30pm EST M-F)

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International) 1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Light blue paste

Physical State Solid

Odor No odor

Classification

Reproductive toxicity

Category 2

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed

May be harmful in contact with skin

Signal Word

Warning

Hazard Statements

Suspected of damaging fertility or the unborn child

Causes serious eye irritation



Precautionary Statements

Do not handle until all safety precautions have been read and understood.

Wear eye protection.

IF exposed or concerned, get medical advice / attention.

IF IN EYES rinse cautiously with water for several minutes. Remove contact lenses if present and easily removed, continue rinsing.

Dispose of contents / container in accordance with local regulations.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms Type "B"-Blue Paste.

Chemical Name	CAS No	Weight-%
Boric Acid	10043-35-3	40-70
Water	Proprietary	Remainder
Sodium Tetraborate Decahydrate	1303-96-4	5-10

4. FIRST-AID MEASURES

First Aid Measures

General Advice	If exposed or concerned: Get medical advice/attention.
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists: Get medical advice/attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Call a physician immediately.
Ingestion	Induce vomiting, but only if victim is fully conscious. Call a physician or Poison Control Center.

Most important symptoms and effects

Symptoms	May cause skin and eye irritation. May cause irritation to the mucous membranes and upper respiratory tract. Ingestion may cause weakness, abdominal pain, vomiting, and diarrhea.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Non-flammable.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Avoid contact with eyes and skin.
Environmental Precautions	See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Sweep up and shovel into suitable containers for disposal. Dilute and wash remaining with water and dispose of in accordance with federal, state, and local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protection recommended in Section 8. Wash thoroughly after handling. Use only in well-ventilated areas. Do not breathe dust/fume/gas/mist/vapors/spray.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.
Incompatible Materials	Elemental zirconium. Potassium acetic anhydride.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Use enough ventilation and local exhaust at the flame site to keep the fumes below the threshold limit value-time weighted average (TLV-TWA) for welding fumes of 5 mg/m³ in the brazer's breathing zone and in the general air. Train the employee to keep his/her head out of the fumes

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Boric Acid 10043-35-3	STEL: 6 mg/m ³ inhalable fraction TWA: 2 mg/m ³ inhalable fraction	-	-
Sodium Tetraborate Decahydrate 1303-96-4	STEL: 6 mg/m ³ inhalable fraction TWA: 2 mg/m ³ inhalable fraction	(vacated) TWA: 10 mg/m ³	TWA: 5 mg/m ³

Appropriate engineering controls

Engineering Controls

Ventilation systems. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Chemical goggles or full face shield. Use appropriate shaded eye protection when brazing.

Skin and Body Protection

Rubber gloves.

Respiratory Protection

Use approved fume respirator or air-supplied respirator when brazing in a confined space or where local exhaust or ventilation does not keep exposure below the applicable TLV-TWA.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State
Appearance
Color

Solid
Light blue paste
Light blue

Odor
Odor Threshold

No odor
Not determined

Property

Values

Remarks • Method

pH Not determined
Melting Point/Freezing Point 566 °C / 1050 °F
Boiling Point/Boiling Range Not determined
Flash Point Non-flammable
Evaporation Rate Not applicable
Flammability (Solid, Gas) Non-flammable
Upper Flammability Limit Not applicable
Lower Flammability Limit Not applicable
Vapor Pressure Not applicable
Vapor Density Not applicable
Specific Gravity ~1.472
Water Solubility Moderately soluble
Solubility in other solvents Not determined
Partition Coefficient Not determined
Auto-ignition Temperature Not determined
Decomposition Temperature Not determined
Kinematic Viscosity Dynamic Not determined
Viscosity Not determined
Explosive Properties Not determined
Oxidizing Properties Not determined

(1=Water)

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	Not reactive under normal conditions.
<u>Chemical Stability</u>	Stable under recommended storage conditions.
<u>Possibility of Hazardous Reactions</u>	None under normal processing.
<u>Hazardous Polymerization</u>	Hazardous polymerization does not occur.
<u>Conditions to Avoid</u>	Keep out of reach of children.
<u>Incompatible Materials</u>	Elemental zirconium. Potassium acetic anhydride.

Hazardous Decomposition Products

Brazing fumes and gases cannot be classified simply. The composition and quantity of the fumes and gases are dependent upon the base metal, the process, procedures, and filler metal being used. Coatings or residue on the base metal such as cleaning or degreasing agents, paint, galvanizing or plating will produce fumes as well. Other conditions which influence the composition and quality of the fumes and gases to which workers may be exposed are: the number of operators relative to the volume of the work area, the quality and amount of ventilation, the position of the brazer's head in respect to the fume plume, as well as the presence of contaminants in the atmosphere such as halogenated hydrocarbon vapors from cleaning and degreasing activities. When brazing, the composition of the fumes and gases are usually different from the composition of the ingredients mentioned in Section 3. Fume ingredients of normal operation include those originating from volatilization, reaction, or oxidation of the materials noted in the above paragraph. Reasonably expected by-products include fumes containing oxides of boron (TWA 10mg/m³).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Avoid contact with eyes.
Skin Contact	May be harmful in contact with skin.
Inhalation	Fatal if inhaled.
Ingestion	May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Boric Acid 10043-35-3	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 0.16 mg/L (Rat) 4 h

Information on physical, chemical and toxicological effects

Symptoms	Please see section 4 of this SDS for symptoms.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity*	May damage fertility or the unborn child. *A human study of occupationally exposed borate worker population showed no adverse reproductive effects. Animal studies indicate that boric acid reduces or halts sperm production, causes testicular atrophy, and when given to pregnant animals during gestation, may cause developmental changes. These feed studies were conducted under chronic exposure conditions leading to doses many times in excess of those that could occur through inhalation of dust in the occupational setting.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Boric Acid 10043-35-3		1020: 72 h Carassius auratus mg/L LC50 flow-through		115 - 153: 48 h Daphnia magna mg/L EC50

Persistence/Degradability Not determined.

Bioaccumulation Not determined.

Mobility

Chemical Name	Partition Coefficient
Boric Acid 10043-35-3	-0.757

Other Adverse Effects Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Boric Acid 10043-35-3	Toxic
Sodium Tetraborate Decahydrate 1303-96-4	Toxic

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

Not determined

US Federal Regulations

SARA 313

Not determined

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sodium Tetraborate Decahydrate 1303-96-4	X	X	X

16. OTHER INFORMATION

NFPA

Health Hazards

Not determined

Flammability

Not determined

Instability

Not determined

Special Hazards

Not determined

HMIS

Health Hazards

Not determined

Flammability

Not determined

Physical Hazards

Not determined

Personal Protection

Not determined

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Revision Note:

Update

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet