



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 PRODUCT NAME

Powder Brazing Flux: Hot Max Model 24000 Brazing Flux Powder

1.2 MANUFACTURER

Selectrode Industries, Inc.
230 Broadway
Huntington Station, NY 11746 U.S.A.
Phone: 631-547-5470
Fax: 631-547-5475
E-mail: info@selectrode.com

1.3 EMERGENCY TELEPHONE NUMBER: 631-547-5470

2. COMPOSITION / INFORMATION ON INGREDIENTS

PREPARATION:

Important: This section covers the materials of which the products are manufactured. The fumes and gases produced during normal use of this product are covered in Section V. The term "Hazardous" in "Hazardous Material" should be interpreted as a term required and defined in OSHA Hazard Communication Standard 29CFR 1910-1200 and it does not necessarily imply the existence of hazard. The chemicals or compounds reportable by Section 313 of SARA are marked by the symbol #.

INGREDIENTS	CAS#	% RANGE	OSHA PEL mg/m ³	ACGIH-TLV mg/m ³	CARCINOGENICITY	R-PHASE
5 Mol Borax	12179-04-3	75-85	15.0	NR	NO	
Borax, Pentahydrate	1303-43-4	15-25	10.0	1.0	NO	

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: Sodium Tetraborate Pentahydrate is a white odorless, powdered substance that is not flammable, combustible, or explosive, and it presents no unusual hazard if involved in a fire. Sodium Tetraborate Pentahydrate presents little or no hazard (to humans) and has low acute oral and dermal toxicities. Care should be taken to minimize the amount of Sodium Tetraborate Pentahydrate released to the environment to avoid ecological effects.

POTENTIAL ECOLOGICAL EFFECTS: Large amounts of Sodium Tetraborate Pentahydrate can be harmful to boronsensitive plants and other ecological systems.

POTENTIAL HEALTH EFFECTS:

Routes of Exposure: Inhalation is the most significant route of exposure in occupational and other settings. Dermal exposure is not usually a concern because Sodium Tetraborate Pentahydrate is not absorbed through intact skin.

Inhalation: Occasional mild irritation effects to nose and throat may occur from inhalation of Sodium Tetraborate Pentahydrate dusts at levels greater than 10mg/m³.

Eye Contact: Sodium Tetraborate Pentahydrate is non-irritating to eyes in normal industrial use.

Skin Contact: Sodium Tetraborate Pentahydrate does not cause irritation to intact skin.

Ingestion: Products containing Sodium Tetraborate Pentahydrate are not intended for ingestion. Sodium Tetraborate Pentahydrate has a relatively low acute toxicity. Small amounts (e.g., a teaspoonful) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms.

Cancer: Sodium Tetraborate Pentahydrate is not considered carcinogen.



Reproductive: Long-term, high dose animal ingestion studies of similar inorganic borate chemicals have demonstrated reproductive effects in male animals. A human study of occupational exposure to borate dust showed no adverse effect to reproduction.

Development: High dose animal ingestion studies of similar inorganic borate chemicals have demonstrated developmental effects in fetuses of pregnant animals, including fetal weight loss. A human study showed no adverse effect.

Target Organs: No target organ has been identified in humans. High dose animal ingestion studies of similar inorganic borate chemicals indicate the testes are the target organs in male animals.

Signs and Symptoms of Exposure: Symptoms of accidental over-exposure to borate products have been associated with ingestion or by absorption through large areas of damaged skin. These may include nausea, vomiting, and diarrhea, with delayed effects of skin redness and peeling.

Primary Route(s) of Entry: Inhalation, skin contact- and ingestion

Health Hazards (Acute and Chronic):

Inhalation-

Acute- Considered a nuisance dust, high concentrations may cause upper respiratory irritation.

Chronic- None known

Skin Contact-

Acute- Mild irritation or drying

Chronic- Not absorbed through intact skin, prolonged contact damages skin. May result in absorption of boron leading to systemic poisoning as seen with ingestion. See ingestion.

EYE CONTACT

Acute- Irritation

Chronic- None known

INGESTION

Acute- Nausea, vomiting, diarrhea, possibly followed by weakness, depression and headache. Skin rashes, cracked lips, and loss of hair may follow ingestion. Shock may occur following ingestion of large quantities.

Chronic- Same as acute.

Signs and Symptoms of Exposure: Respiratory, skin or eye irritation, nausea, vomiting, and diarrhea from ingestion.

Medical Conditions Generally Aggravated by Exposure: None Known

4. FIRST AID MEASURES

Inhalation - Remove to fresh air. Seek medical attention if irritation persists. **Skin** - Wash with water. If irritation persists, seek medical attention. **Eyes** - Wash with running water for at least 15 minutes. Seek medical attention. **Ingestion** - Obtain medical attention as soon as possible. Note to Physicians: Observation only is required for adult ingestion of a few grams of Sodium Tetraborate Pentahydrate.

Ingestion of larger amounts, maintain adequate kidney function and force liquids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine should not be used to evaluate severity of poisoning or to guide treatment.

5. FIRE FIGHTING MEASURES

General Hazard: None

Flash Point (°F): NA

Method Used: NA

Flammability Limits: NEL: NA

UEL: NA



Auto-Ignition Temperature (°F): NA
Extinguishing Media: NA (Noncombustible; inherent fire retardant)
Special Fire-Fighting Instructions: None
Unusual Fire and Explosion Hazards: None
Flammability Classification: 29 CFR 1910.120 (Non Flammable Solid)

This information and recommendations are based upon data believed to be accurate. However, no guarantee or warranty of any kind expressed or implied is made with respect to this information.

6. ACCIDENTAL RELEASE MEASURES

Action To Take For Spills (Use Appropriate Safety Equipment): Sweep up
Waste Disposal Method: As an inert solid waste in accordance with state, local, and federal regulations.
California: Sodium Tetraborate Pentahydrate is a "hazardous waste" in California and should be handled in accordance with state regulations.
EPA Hazardous Waste Number: None
RCRA (40 CFR 261): Sodium Tetraborate Pentahydrate is not listed under any sections of the Federal Resource Conservation and Recovery Act.
Water Spill: Sodium Tetraborate Pentahydrate will cause localized contamination of surrounding waters based on the quantity dissolved in these waters. At high concentrations, some damage to local vegetation, fish, and other aquatic life may be expected. Advise local water authority that none of the affected water should be used for irrigation or for potable water until natural dilution returns boron level to normal.

7. HANDLING AND STORAGE

Ventilation: Natural
Respiratory Protection: A NIOSH/MSHA approved nuisance dust mask should be worn to prevent irritation if exposure exceeds guidelines.
Protective Clothing: Goggles, gloves, and long sleeved clothing to prevent excessive contact with dry materials. **Work/Hygienic Practices:** No special requirements.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Technical measures: Avoid Fume inhalation.
Avoid grinding dust inhalation
Exposure limits: see section 2.
Personal protection:

- **Respiratory protection:** use an air purifying dust respirator.
- **Hands protection:** wear appropriate gloves to prevent skin contact.
- **Eyes protection:** wear-brazing glasses.
- **Skin protection:** wear appropriate overalls to prevent skin or body contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: YAfite Crystals, Orderless
Specific Gravity (H2O = 1): 1.82
Melting Point: 200°C (Decomposition) 741°C (Melt)
Vapor Pressure (mmHg @ 20°C): Negligible

