

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Product Name: AMCO 444 Powder CAS number: N/A - mixture
Chemical Name & Synonyms: N/A - mixture
Appearance: White powder with no characteristic odor.
Use: General purpose braze/welding flux.
Manufacturer: Force Industries Division Tel. 610-647-3575
EMERGENCY PHONE No. CALL CHEMTREC (800) 424-9300 * Available 24 Hours

II. CHEMICAL COMPOSITION

<u>Material</u>	<u>SARA III</u>	<u>CAS Number</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Boric Acid	<60%	10043-35-3	15 mg/m ³	10 mg/m ³
Borax	<40%	1330-43-4	10 mg/m ³	1 mg/m ³
Iron oxide	<3%	1309-37-1	-----	5 mg/m ³

This mixture includes a compound which contains boron oxide B₂O₃. When used as intended fumes of B₂O₃ may be given off which are hazardous.

Others, if any, are non-hazardous and are claimed as trade secret.

Hazard Rating: HMIS: (H = 0 F = 0 R = 0 PE = C) NFPA: (H = 0 F = 0 R = 0)

III. POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA

Target organ statement: Caution: May be harmful if swallowed; irritating to skin and eyes.
Effects of Chronic Exposure: Coughing, erythema, and nausea.
Effects of Acute Overexposure
Swallowing: Nausea, vomiting, and diarrhea
Skin Absorption: Boron is not absorbed through skin.
Inhalation: Irritation to respiratory system. Coughing and sneezing. Existing lung disorders will be aggravated.
Skin Contact: Mild dermatitis or irritation. Existing disorders will be aggravated.
Eye Contact: Mild Irritation to eyes surfaces. Existing eye disorders may be aggravated

IV. EMERGENCY AND FIRST AID PROCEDURES

Swallowing: Contains boric acid. Call a physician, or your Poison Control Center.
Skin: Wash hands with soap and water to remove all residue. If rash develops, consult a physician.
Inhalation: Remove to fresh air. If fumes, vapors or dust are inhaled, call a physician.
Eyes: Flush with water for at least 15 minutes to remove all residue. Promptly get medical help.

V. FIRE AND EXPLOSION DATA

Flash point (°F): N/A
Flammable limits in air : LOWER: N/A UPPER: N/A (% by volume)
Extinguishing media: Does not support combustion. Product is an inherent retardant.
Special fire fighting method: Fumes of boron oxide may be given off.
Unusual fire and explosion hazards: None.

VI. REACTIVITY INFORMATION

Stability consideration/Conditions to avoid Stable/None
Hazardous polymerization/Conditions to avoid Will not occur/None
Incompatibility, Materials to avoid: Acetic anhydride, elemental potassium
Hazardous combustion or decomposition products: Boron oxides fumes

VII. SPILL AND LEAK RESPONSE

Steps to be taken if material is released or spilled: Contain spill, absorb, sweep-up. Remove to chemical sewer. Flush area to chemical sewer.
Waste disposal method: Dispose of in accordance with all federal, state, and local regulations.

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VIII. SPECIAL PROTECTION INFORMATION

Respiratory protection: If the work station is not properly ventilated to exhaust all fumes and vapors, use a NIOSH approved mask.

Ventilation: Maintain air flow away from user to remove all fumes and dust, so that the PEL is never exceeded.

Protective gloves: Chemical and acid impervious.

Eye protection: Chemical tight safety goggles. Do not wear contact lenses.

Other protective equipment: Full protective equipment normally used in a soldering operation so as to prevent any contact. Review operations to avoid contact with hazardous gas, liquids or solids.

See also:
29 CFR 1910.132 - 29 CFR 1910.140. Personal Protective Equipment
29 CFR 1910.251 - 29 CFR 1910.257. Welding, Cutting and Brazing

IX. STORAGE, HANDLING AND SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store flux at ambient conditions. Keep under extremely dry and controlled conditions. Wash thoroughly after handling to remove all residue.

Other precautions: Remove and professionally wash contaminated clothing before re-use.

X. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F @ 760 mmHg):	N/A	Bulk Density (lbs./cu.ft.)	91.2
Percent volatiles by volume:	N/A	Solubility in water:	Moderate
Evaporation rate (butyl acetate = 1):	N/A		

XI. OPTIONAL INFORMATION

Department of Transportation: DOMESTIC GROUND

Proper shipping name: Not a regulated product

Hazard Class: N/A

ID & Packing Group No. N/A

ERG Guide Number: N/A

Toxic Substance Control Act: All components of this compound are listed within the TSCA inventory.

SARA Title III Program: RCRA. None of the components of this compound are listed in 40CFR 261.
SARA. None of the components of this compound are listed in 40CFR 372.
CERCLA. None of the components of this compound are listed in 40CFR 302.

Hazard Communication Program: Hazardous warnings and training requirements as mandated for corrosive material.

State Right-to-Know Programs:

Pennsylvania: This product contains the following chemicals listed in PA Code Title 34, Hazardous Substance List: Borax

California: This product contains the following compounds subject to the reporting and labeling requirements of Proposition 65: None

NOTES: NA=Not Applicable NE=Not Established H=Health
F=Fire R=Reactivity PE=Personal Equipment

While we believe all information presented herein is accurate and reliable, the data are not to be taken as a guarantee or representation of any kind for which Force Industries assumes legal responsibility. They are offered solely for your consideration, investigation, and verification.