

# MATERIAL SAFETY DATA SHEET

## I. PRODUCT IDENTIFICATION

Product Name: AMCO 444 Powder CAS number: N/A - mixture  
Chemical Name & Synonyms: N/A - mixture  
Appearance: Fine, white powder with no characteristic odor.  
Use: General purpose welding flux.  
Manufacturer: Force Industries Division. 28 Industrial Blvd. Paoli, PA 19301 Tel. 610-647-3575  
EMERGENCY PHONE No. CALL CHEMTREC (800) 424-9300 \* Available 24 Hours

## II. CHEMICAL COMPOSITION

Material	SARA III	CAS Number	OSHA PEL	ACGIH TLV
Boric Acid	--	10043-35-3	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Borax	--	1303-96-4	10 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>

This mixture includes a compound that contains boron oxide B<sub>2</sub>O<sub>3</sub>. When used as intended fumes of B<sub>2</sub>O<sub>3</sub> 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: May be harmful if swallowed, irritating to skin and eyes.  
Effects of Chronic Exposure: Coughing, erythema, nausea.  
Effects of Acute Overexposure  
Swallowing: Nausea, vomiting and diarrhea  
Skin Absorption: Boron is not absorbed through intact skin  
Inhalation: Irritation to respiratory system. Sneezing and coughing. Pre-existing lung disorders will be aggravated.  
Skin Contact: Dermatitis. Pre-existing skin damage will be aggravated.  
Eye Contact: Irritation to eye surfaces.

## IV. EMERGENCY AND FIRST AID PROCEDURES

Swallowing: Call a physician, or your poison control center,  
Skin: Promptly flush with water for at least 15 minutes to remove all residue. If rash develops, call a physician.  
Inhalation: Remove to fresh air. If fumes are inhaled, call a physician.  
Eyes: Flush with water at least 15 minutes. Get medical attention.

## V. FIRE AND EXPLOSION DATA

Flash point (°F): N/A  
Flammable limits in air: LOWER: N/A UPPER: N/A (% by volume)  
Extinguishing media: None. Product is an inherent fire retardant.  
Special fire fighting procedures: None  
Unusual fire and explosion hazards: None

## VI. REACTIVITY INFORMATION

Stability considerations/Conditions to avoid: Stable/None  
Hazardous polymerization/Conditions to avoid: None/None  
Incompatibility/Materials to avoid: Acetic anhydride, elemental potassium.  
Hazardous combustion or Decomposition products: None

## VII. SPILL AND LEAK RESPONSE

Steps to be taken if material is released or spilled: Contain spill, absorb, sweep-up, dispose. Flush area with water to chemical sewer. Avoid breathing dust.  
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 workstation is not ventilated to remove all dusts and fumes, use a NIOSH approved mask.

Ventilation: Maintain airflow away from user to exhaust all dust and fumes, so that the TLV is never exceeded.

Protective gloves: Chemical Impervious

Eye protection: Chemical safety goggles

Other protective equipment: Full protection equipment as is used in braze/welding operating, so as to prevent any contact.

## IX. STORAGE, HANDLING AND SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Wash hands thoroughly after handling to remove all residue. Store flux under ambient conditions.

Other precautions: Remove and professionally wash contaminated clothing before reuse.

## X. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F @ 760 mmHg):	N/A	Specific gravity (H <sub>2</sub> O = 1 @ 72°F):	1.62
Vapor density (air = 1):	N/A	Vapor pressure:	N/A
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.