

# MATERIAL SAFETY DATA SHEET

## I. PRODUCT IDENTIFICATION

Product Name: AMCO 404 CAS number: N/A - mixture  
Chemical Name & Synonyms: N/A - mixture  
Appearance: White powder with no characteristic odor  
Use: Magnesium 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>
Lithium Chloride	No	7447-41-8	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Sodium fluoride	No	7681-49-4	2.5 mg/m <sup>3</sup>	2.5 mg/m <sup>3</sup>

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

Note: Chronic fluoride absorption can result in osseous fluorosis, increased radiographic density of the bones and mottling of the teeth. Read OSHA 29 C.F.R. 1910.1000, July 1, 1980, (standard for fluoride).

Note: Exposure to Lithium is relatively non-hazardous per two NIOSH studies HHE 80-036-422 and HHE 77-59-496. Chronic exposure to Lithium may result in neuromuscular effects, hyperactive reflexes, and weight loss. Consult your industrial hygiene department.

Hazard Rating: HMIS: (H =2 F=0 R=0 PE=C) NFPA: (H=3 F=0 R=0)

## III. POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA

Target organ statement: Danger! May be fatal if swallowed or inhaled. Causes eye and skin burns.  
Effects of Chronic Exposure: Coughing, CNS effects, erythema, nausea, and kidney effects.  
Effects of Acute Overexposure  
Swallowing: Nausea, vomiting. Can cause chemical burn to digestive system and toxic effects due to Lithium ion.  
Skin Absorption: None currently known.  
Inhalation: Irritation to respiratory system. Lithium dust and fumes are absorbed through the lungs. Lung damage. Pre-existing lung disorders will be aggravated.  
Skin Contact: Dermatitis, possible chemical burns. Existing disorders will be aggravated.  
Eye Contact: Irritation/possible burn of eyes surfaces.

## IV. EMERGENCY AND FIRST AID PROCEDURES

Swallowing: Call a physician at once or your poison control center. Corrosive to mucous membranes.  
Skin: Promptly flush with water to remove all residues. If rash or burn develops, consult a physician. Material is corrosive.  
Inhalation: Remove to fresh air. If fumes are inhaled call a physician.  
Eyes: Flush with water for at least 15 minutes to remove all residues. Get medical help NOW. Blindness can result.

## 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. Be aware of other materials in surrounding area to determine if water, fog, foam or CO<sub>2</sub> may be used.  
Special fire fighting method: Metal halide and toxic fumes produced; use Self Contained Breathing Apparatus (SCBA)  
Unusual fire and explosion hazards: None

## VI. REACTIVITY INFORMATION

Stability considerations / Conditions to avoid: Stable / None  
Hazardous polymerization / Conditions to avoid: Will not occur / None  
Incompatibility, Materials to avoid: Strong acids, cyanides, and sulfides.  
Hazardous combustion or decomposition products: In presence of water and heat, HCl and HF may be given off

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**VII. SPILL AND LEAK RESPONSE**

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

**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 vapors, so that the PEL is never exceeded. Adhere to environmental regulations for exhausts.  
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 braze/soldering operation to prevent any contact. Review operations to avoid contact with hazardous gas, liquid or solid. See also: 29 CFR 1910. 132 - 29 CFR 1910. 140. Personal Protective Equipment 29 CFR 1910. 251 - 29 CFR. 257. Welding, Cutting and Brazing

**IX. STORAGE, HANDLING AND SPECIAL PRECAUTIONS**

Precautions to be taken in handling and storage: Store solution at ambient conditions. Wash thoroughly after handling to remove all residues.  
Other precautions: Do not breathe fumes. Professionally wash contaminated clothing before re-use. Existing lung disorders will have increased toxic susceptibility.

**X. PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point (°F @ 760 mmHg):	N/A	Specific gravity (H <sub>2</sub> O = 1 @ 72°F):	2.09
Vapor density (air = 1):	N/A	Vapor pressure:	N/E
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: Sodium Fluoride Mixture  
Hazard Class: 6.1  
ID & Packing Group No. UN 1690, PG III  
ERG Guide Number: 154

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

SARA Title III Program: This product contains the following toxic chemicals subject to the reporting requirements of EPCRA of 1986 and 40 CFR 372. This information must be included in all MSDS that are copied and distributed for this material.

<u>Chemical Name</u>	<u>CAS No.</u>	<u>Concentration</u>
None	None	None

Hazard Communication Program: Hazardous warnings and training requirements as mandated for contact irritants.

State Right-to-Know Programs:  
Pennsylvania: This product contains the following chemicals listed in PA Code Title 34, Hazardous Substance List: Sodium Fluoride  
California: This product contains the following compounds subject to the reporting and labeling requirements of Proposition 65: None  
Miscellaneous: This product contains the following marine pollutants listed under 49 CFR 172.101 Appendix B: 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.