

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Product Name: AMCO 2397 CAS number: N/A - mixture
Chemical Name & Synonyms: N/A - mixture
Appearance: Straw colored liquid with alcohol odor
Use: Can and general purpose soldering flux
Manufacturer: Force Industries Division 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 |
|----------------------|----------|------------|------------------------|------------------------|
| Isopropyl alcohol | < 90% | 67-63-0 | 1225 mg/m ³ | 980 mg/m ³ |
| Xylene | < 2.0% | 1330-20-7 | 100 ppm | Flammable |
| Zinc chloride | <1.0% | 7646-85-7 | 1 mg/m ³ | 1.00 mg/m ³ |
| Hydroabietyl alcohol | -- | 13393-93-6 | -- | Combustible |

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

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

NFPA: (H=3 F=3 R=0)

III. POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA

Target organ statement: Caution: Strong irritant to eyes and respiratory system. Dermatitis.
Effects of Chronic Exposure: See target organ statement
Effects of Acute Overexposure
Swallowing: May cause nausea and diarrhea. Chemical burns to digestive system. Drunkenness.
Skin Absorption: None currently known.
Inhalation: Irritant to respiratory system. Inhalation of vapors may result in giddiness, headache, or dizziness. Existing lung disorders will be aggravated.
Skin Contact: May cause chemical burns; dermatitis. Existing skin disorders will be aggravated.
Eye Contact: Irritation to eyes surfaces. Possible damage to the eye - contains resin.

IV. EMERGENCY AND FIRST AID PROCEDURES

Swallowing: Call a physician at once or your Poison Control Center. Do NOT aspirate into lungs; aspiration pneumonitis.
Skin: Wash hands with soap and water to remove all residue. If rash develops, call a physician.
Inhalation: Remove to fresh air. If vapors are inhaled, call a physician.
Eyes: Flush with water for at least 15 minutes to remove all residues. Promptly get medical help - contains resin.

V. FIRE AND EXPLOSION DATA

Flashpoint (°F): 53 TCC
Flammable limits in air (% by volume): LOWER: 2.0 as isopropanol UPPER: 15.7 as isopropanol
Extinguishing media: Foam, dry chemical or CO₂
Special firefighting procedures: Wear protective clothing
Unusual fire and explosion hazards: None

VI. REACTIVITY INFORMATION

Stability considerations/Conditions to avoid: Stable/Heat, sparks, open flames
Hazardous polymerization/Conditions to avoid: Will not occur/None
Incompatibility/Materials to avoid: Concentrated acids and oxidizers
Hazardous combustion or Decomposition products: Carbon monoxide and/or carbon dioxide

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 local, state, and federal regulations.

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VIII. SPECIAL PROTECTION INFORMATION

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| Respiratory protection: | If the workstation is not properly ventilated to exhaust all fumes and vapors, use a NIOSH approved mask. |
| Ventilation: | Maintain airflow away from user to remove all fumes and vapors, so that the PEL is never exceeded. |
| Protective gloves: | Chemical and oil impervious |
| Eye protection: | Chemical tight safety goggles. Do NOT wear contact lenses. |
| Other protective equipment: | Full protective equipment normally used in a soldering operation to prevent any contact. |

IX. STORAGE, HANDLING AND SPECIAL PRECAUTIONS

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| Precautions to be taken in handling and storage: | Wash thoroughly after handling to remove all residues. Store flux at ambient conditions. Vent drums occasionally. |
| Other precautions: | Remove and professionally wash contaminated clothing before re-use. |

X. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---------------------------------------|-----|---|-------------|
| Boiling Point (°F @ 760 mmHg): | 180 | Specific gravity (H ₂ O = 1 @ 72°F): | 0.816 |
| Vapor density (air = 1): | > 1 | Vapor pressure: | 29.4 |
| Percent volatiles by volume: | 89 | Solubility in water: | Appreciable |
| Evaporation rate (butyl acetate = 1): | > 1 | | |

XI. OPTIONAL INFORMATION

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| Department of Transportation: | Domestic Ground |
| Proper shipping name: | Flammable Liquid, Corrosive N.O.S. (Isopropyl Alcohol, Zinc Chloride) |
| Hazard Class: | Class 3 |
| ID & Packing Group Number: | UN 2924 PG II |
| ERG Guide Number: | 132 |
| Toxic Substance Control Act: | All components of this compound are listed within the TSCA inventory. |
| Hazard Communication Program: | Hazardous warnings and training requirements as mandated for flammable liquids |
| State Right-to-Know Programs | |
| Pennsylvania: | This product contains the following chemicals listed in PA Code Title 34, Hazardous Substance List: None |
| 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.