

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Product Name: AMCO 4327, Amco 4327A CAS number: N/A - mixture
Chemical Name & Synonyms: N/A - mixture
Appearance: Water clear liquid with alcohol odor
Use: Can and general purpose, chloride-free, soldering 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
Isopropyl alcohol	< 75.0%	67-63-0	980 mg/m ³	Flammable
Ethyl alcohol	-	64-17-5	1900 mg/m ³	Flammable
Adipic Acid	-	124-04-9	10 mg/m ³	10 mg/m ³

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

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

III. POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA

Target organ statement: Caution: Strong irritant to skin, eyes and respiratory system.
Dermatitis and contact burns.
Effects of Chronic Exposure: See target organ statement
Effects of Acute Overexposure
Swallowing: May cause nausea and diarrhea. Chemical burns to digestive system.
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): 48 TCC
Flammable limits in air LOWER: 2.0 as isopropanol UPPER: 15.7 as isopropanol (% by volume)
Extinguishing media: Foam, dry chemical or CO₂
Special firefighting method: 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/Conditions 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 EQUIPMENT

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 so as to prevent any contact.

IX. STORAGE, HANDLING AND SPECIAL PRECAUTIONS

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):	199	Specific gravity (H ₂ O = 1 @ 72°F):	0.845
Vapor density (air = 1):	1.55	Vapor pressure:	25.63
Percent volatiles by volume:	76	Solubility in water:	Appreciable
Evaporation rate (butyl acetate = 1):	> 1		

XI. OPTIONAL INFORMATION

Department of Transportation: Domestic Transportation

Proper shipping name: Flammable Liquid, N.O.S. (Isopropyl alcohol, ethyl alcohol)

Hazard Class: Class 3

ID & Packing Group Number: UN 1993, PG II

ERG Guide Number: 128

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: Ethyl Alcohol

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.