

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Product Name: AMCO 4453-A CAS number: N/A - mixture
Chemical Name & Synonyms: N/A - mixture
Appearance: Water clear solution
Use: General Soldering 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>
Hydrochloric Acid	<4.0%	7647-01-0	7 mg/m ³	7.5 mg/m ³

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

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

III. POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA

Target organ statement: Caution: Strong irritant to eyes and respiratory system. Dermatitis and contact burns.

Effects of Acute Overexposure

Swallowing: Irritation to digestive system.
Skin Absorption: None currently known.
Inhalation: Irritant to respiratory system.
Skin Contact: Irritation from prolonged contact. Pre-existing skin disorders will be aggravated.
Eye Contact: Irritation or corneal burns.

IV. EMERGENCY AND FIRST AID PROCEDURES

Swallowing: Call your physician or Poison Control Center.
Skin: Wash thoroughly with soap and water to remove all residues. If rash or burn develops, call a physician.
Inhalation: Remove to fresh air. If fumes or vapors are inhaled, call a physician.
Eyes: Flush thoroughly with water for at least 15 minutes to remove all residue. Call a physician.

V. FIRE AND EXPLOSION DATA

Flashpoint (°F): N/A
Flammable limits in air: LOWER: N/A UPPER: N/A (% by volume)
Extinguishing media: Material is water based.
Special firefighting procedures: Use NIOSH approved Self Contained Breathing Apparatus (SCBA).
Unusual fire and explosion hazards: Use a SCBA. Smoke and chlorine gases may evolve.

VI. REACTIVITY INFORMATION

Stability considerations/Conditions to avoid: Stable/None
Hazardous polymerization/Conditions to avoid: Will Not Occur/None
Incompatibility/Conditions to avoid: Strong oxidizing agents
Hazardous combustion or Decomposition products: Smoke, chlorine gases, acrolein

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 local, state, and federal regulations.

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VIII. SPECIAL PROTECTION INFORMATION

Respiratory protection: If the workstation is not properly ventilated to remove all fumes, dust, and vapors, use a NIOSH approved mask.
Ventilation: Maintain airflow away from user to exhaust all fumes, dust, and vapors so that the PEL is never exceeded.
Protective gloves: Chemical 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

Precautions to be taken in handling and storage: Wash hands thoroughly after handling to remove all residue. Store solution under ambient conditions.
Other precautions: Remove and professionally wash contaminated clothing before re-use.

X. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F @ 760 mmHg):	> 212	Specific gravity (H ₂ O = 1 @ 72°F):	1.23
Vapor density (air = 1):	1.70	Vapor pressure:	1.56
Percent volatiles by volume:	N/A	Solubility in water:	Miscible
Evaporation rate (butyl acetate = 1):	< 1		

XI. OPTIONAL INFORMATION

Department of Transportation: DOMESTIC GROUND
Proper shipping name: Hydrochloric Acid Mixture
Hazard Class: Class 8
ID & Packing Group Number: UN 1789, PG II
ERG Guide Number: 157

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 corrosive products.

State Right-to-Know Programs:
Pennsylvania: This product contains the following chemicals listed in PA Code Title 34, Hazardous Substance List: Hydrochloric Acid
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.