

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

### Product identifier

**Product name:** AMCO 4327

### Other means of identification

**Product code:** 154

### Recommended use of the chemical and restrictions on use

**Recommended use:** Can and general purpose, chloride-free, soldering flux

### Details of the supplier of the safety data sheet

**Manufacturer:** Force Industries Division.  
28 Industrial Blvd. Paoli, PA 19301.

### Emergency Telephone number

For hazardous material incidents only, call CHEMTREC Emergency Response  
Number: 1-800-424-9300.

For all other questions about this product, call Force Industries Division at:  
610-647-3575.

**Revision Date:** August 29, 2016

**Supersedes Date:** March 12, 2016

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### **GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 2), H225

Serious Eye Damage (Category 1), H318

Specific target organ toxicity – single exposure (Category 3), Central Nervous  
System, H336

Acute Aquatic Toxicity (Category 3), H402

### **Hazard statement(s)**

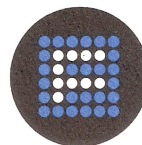
H225: Highly flammable liquid and vapor

H232: May ignite spontaneously if exposed to air

H318: Causes serious eye damage

H336: May cause drowsiness or dizziness

H402: Harmful to aquatic life



## 2.2 GHS Label elements, including precautionary statements

## Emergency overview

<b>Appearance:</b>	Water clear
<b>Physical state:</b>	Liquid
<b>Odor:</b>	Alcohol Odor
<b>Signal Word:</b>	Danger

## Precautionary statement(s)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/light/.../equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P261: Avoid breathing dust/fumes/gas/mist/vapors/spray

P264: Wash skin thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P301+P312+P330+P331: IF SWALLOWED: Immediately call a POISON CENTER or physician. Do not induce vomiting.

P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Contact a physician

P312: Call a physician if you feel unwell.

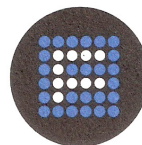
P337+P313: If eye irritation persists: Get medical advice/attention.

P370+378: In case of fire: Use an alcohol-resistant foam fire extinguisher to extinguish.

P403+P233 + P235: Store in a well-ventilated place and keep container tightly closed in a cool area.

P405: Store locked up.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS**

None

**SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

<u>Component</u>	<u>CAS No.</u>	<u>EINECS No.</u>	<u>Weight %</u>
Isopropanol	67-63-0	200-117-00-0	< 75
Resin, partially hydrogenated	65997-06-0	266-041-3	10-25
Ethyl Alcohol	64-17-5	200-278-6	1-10
Adipic Acid	124-04-9	204-673-3	1-10
Other Non-hazardous ingredients	Trade Secret	Trade Secret	0 - 10

**SECTION 4: FIRST AID MEASURES****4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

**Eyes:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician immediately. Continue rinsing eyes during transport to hospital—contains resin.

**Skin:** Wash off with plenty of water. Consult a doctor if a rash or burn develops.

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center.

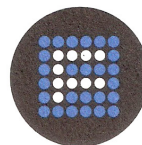
**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available



## **SECTION 5: FIRE-FIGHTING MEASURES**

### **5.1 Extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **5.2 Special hazards arising from the substance or mixture**

Will release flammable vapors. Maintain airflow away to remove all fumes and vapors, so that PEL is never exceeded.

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary. Full protective equipment required.

### **5.4 Further information**

No data available.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

### **6.3 Methods and materials for containment and cleaning up**

Contain spill, absorb, and dispose. Flush area to chemical sewer. Soda ash (sodium bicarbonate) is neutralizer for acid.

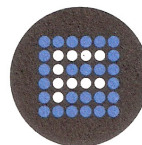
### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of vapor or mist. Provide appropriate exhaust ventilation. Professionally wash contaminated clothes before re-use. For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in tightly closed container and in a cool area. Wash thoroughly after handling to remove all residue.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

<b>SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
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**8.1 Control parameters****Components with workplace control parameters**

Components	CAS	OSHA TWA	ACGIH TLV
Isopropanol	67-63-0	980 mg/m <sup>3</sup>	Flammable
Ethyl Alcohol	64-17-5	1900 mg/m <sup>3</sup>	Flammable
Adipic Acid	124-04-9	-	5 mg/m <sup>3</sup>

**8.2 Exposure controls****Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment****Eye/face protection**

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**

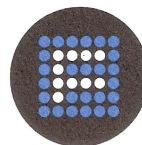
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection**

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges



as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**

Prevent further leakage or spillage if safe to do so.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Physical state:	Water clear liquid
Odor:	Alcohol Odor
Flash point:	48 °F TCC
Vapor pressure:	25.63
Vapor density:	1.55
Boiling Point:	199 °F
Specific gravity:	0.845 (H <sub>2</sub> O = 1 at 72°F)
Solubility in water:	Appreciable
Evaporation Rate (butyl acetate = 1) >1	

**9.2 Other safety information**

None

**SECTION 10: STABILITY AND REACTIVITY****10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable under recommended storage conditions

**10.3 Possibility of hazardous reactions**

Combustion.

**10.4 Conditions to avoid**

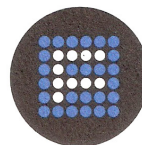
Avoid heat, sparks and open flames.

**10.5 Incompatible materials**

Concentrated acids and oxidizers.

**10.6 Hazardous decomposition products**

Carbon dioxide, carbon monoxide



## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Component toxicity

Components	LC50/Inhalation	LC50/Dermal/Rat	LD50/Oral/Rat
Isopropanol	16000 ppm (Rat 8h)	No data available	5,045 mg/kg
Ethyl Alcohol	No data available	No data available	No data available
Adipic Acid	7.7 mg/L (Rat 4h)	No data available	5,560 mg/kg

### 11.2 Effects of Acute Overexposure:

- a. Inhalation: No data available.
- b. Eyes: No data available.
- c. Skin Contact: No data available.
- d. Ingestion: No data available.

### 11.3 Primary Route of Exposure:

No data available

### 11.4 Effects of Chronic Exposure:

No data available.

### 11.5 Target Organs:

No data available

### 11.6 Reproductive Effects

No data available

### 11.7 Carcinogenicity:

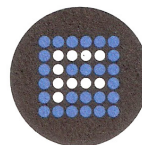
No data available

## SECTION 12: ECOLOGICAL INFORMATION

### 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

Components	LC50/96hr/48hr/24hr	EC50/96/48hr/24hr	Bioaccumulation Concentration Factor	No Observable Effect Concentration/96hr/48hr/24 hr
Isopropanol	9,640.00 mg/L (fathead minnow – 96h)	5,102.00 mg/L (water flea – 24h)	No data available	No data available
Ethyl Alcohol	No data available	No data available	No data available	No data available
Adipic Acid	46 mg/L (Water flea – 48h)	59 mg/L (Aglae – 72 h)	No data available	No data available



## 12.2 Persistence and degradability

No data available

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Product: offer surplus and non-recyclable solutions to a licensed disposal company. Dispose of in accordance with all federal, state, and local regulations.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: TRANSPORT INFORMATION

**DOT (US):** Flammable Liquid NOS (Isopropyl alcohol, ethyl alcohol)

**Hazard Class:** Class 3

**ID and Packaging Group:** UN 1993, PGII

**ERG Guide:** 128

**Marine Pollutant:** No

## SECTION 15: REGULATORY INFORMATION

### International Inventories

**USA (TSCA):** Complies

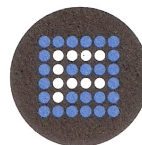
### Federal Regulations

#### SARA Title III 313 Reportable Substances

This product does not contain chemicals which are subject to the reporting requirements of the Act and of Title 40 of the Code of Federal Regulations, Part 372



# SAFETY DATA SHEET



FORCE  
INDUSTRIES  
DIVISION

## **SARA Title III Section 311/312 Hazard Categories:**

Acute Health Hazard

Chronic Health Hazard

## **Toxic Substance Control Act (TSCA)**

If listed below, non-proprietary substances are subject to export notification Section 12 (b) of TSCA:

None

## **State Regulations (RTK)**

### **Massachusetts Right to Know Components**

<b>Component</b>	<b>CAS No.</b>
Isopropanol	67-63-0
Resin, partially hydrogenated	65997-06-0
Ethyl Alcohol	64-17-5
Adipic Acid	124-04-9

### **Pennsylvania Right to Know Components**

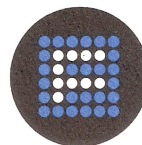
<b>Component</b>	<b>CAS No.</b>
Isopropanol	67-63-0
Resin, partially hydrogenated	65997-06-0
Ethyl Alcohol	64-17-5
Adipic Acid	124-04-9

### **New Jersey Right to Know Components**

<b>Component</b>	<b>CAS No.</b>
Isopropanol	67-63-0
Resin, partially hydrogenated	65997-06-0
Ethyl Alcohol	64-17-5
Adipic Acid	124-04-9

### **California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.



## SECTION 16: OTHER INFORMATION

**HMIS:**

**Health:** 2

**Flammability:** 3

**Reactivity:** 0

**PREPARATION INFORMATION:** Technical Service Department, Force Industries Division

**DISCLAIMER:** The data set forth in these sheets are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Force Industries makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereon. Force Industries warrants only that its products conform to their published specifications and no other express warranty is made with regards thereof. We do not guarantee favorable results, and we assume no liability in connection with the use of the products. They are intended for use by persons having technical skill and knowledge, at their own discretion and risk.