

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Section 1 CHEMICAL PRODUCT SECTION

**Identification:** Product Name: A4 All Purpose Flux Remover and Cleaner  
Product Number: 8624

**Product description:** Removes flux from printed circuit boards  
**Product type:** aerosol chemical cleaner  
**Application:** Industrial applications

**Manufacturer:** ACL Incorporated  
840 W 49<sup>th</sup> PL  
Chicago, IL 60609  
PH: (01) 847.981.9212 [U.S.A.]  
FAX: (01) 847.981.9278 [U.S.A.]

**Email of responsible party for SDS:** [marykay@aclstaticide.com](mailto:marykay@aclstaticide.com)

**US/Canada Emergency TEL:** INFOTRAC: (01) 800.535.5053 (day or night)  
**International Emergency TEL:** INFOTRAC: 352.323.3500 (day or night)

### Section 2 HAZARDOUS IDENTIFICATION

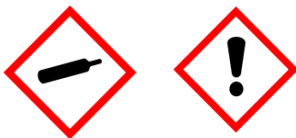
#### 2.1 Classification of the substance or mixture

**Product definition:** Mixture

**Physical:** Aerosol / category 3  
**Health:** Skin irritation / category 2  
Eye irritation / category 2A  
**Environmental:** None

#### 2.2 Label Elements

**Hazard Pictograms:**



**Signal Word:** Warning

#### **Hazard Statement:**

Pressurized container; may burst if heated  
Harmful if swallowed or in contact with skin (H302 + H312)  
Causes skin irritation (H315)  
Causes serious eye irritation (H319)

#### **Precautionary Statements:**

##### **General:**

If medical advice is needed, have container or label at hand (P101)  
Keep out of reach of children (P102)  
Read label before use (P103)

##### **Prevention:**

Wash hands thoroughly after handling (P264)  
Do not eat, drink, or smoke when using this product (P270)  
Wear protective gloves, protective clothing and eye protection (P280)

**Response:**

**IF IN EYES,** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305 +P351 + P338)  
If eye irritation persists, get medical attention or advice (P337 + P313)  
**IF ON SKIN,** wash with plenty of water. (P302 + P352)  
Take off contaminated clothing and wash before reuse (P362 + P364)  
Call doctor center if you feel unwell (P312)  
If skin irritation or rash occurs: Get medical attention (P332 + P313)

**Storage:** NE (see section 7)

**Disposal:** Dispose of contents in accordance with state and local laws as they vary (P501)

**Unknown Acute Toxicity:** No data available

Section 3 COMPOSITION / INFORMATION ON INGREDIENTS				
CHEMICAL	C.A.S. Number	EC#	Weight %	EU Classification and Risk phrases
HFC-4310	138495-42-8	420-640-8	5-15%	R52/53
Trans-1,2-Dichloroethylene	156-60-5	205-860-2	45 – 55%	F;R11 Xn;R20 R52/53
1,1,1,2-Tetrafluoroethane	811-97-2	212-377-0	10-20%	Not classified
Carbon Dioxide	124-38-9	204-696-9	15-25%	Not classified

Section 4 FIRST AID MEASURES	
------------------------------	--

**Inhalation:** Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration. Call a physician if symptoms develop or persist.  
**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get prompt medical attention.  
**Skin Contact:** Immediately flush with plenty of soap and water for at least 15 minutes. If irritation persists, get medical attention.  
**Ingestion:** If the material is swallowed, get immediate medical attention or advice. DO NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Seek immediate medical attention. Do not give anything.

Section 5 FIRE FIGHTING MEASURES	
----------------------------------	--

**Flash Point:** concentrate: N/A                      **propellant:** N/A  
**Flammability limits in air:** 9.5 upper % by volume concentrate      3.8 lower % by volume concentrate  
N/A upper % by volume propellant                      N/A lower % by volume propellant

**Basic Fire Fighting Procedures:** Pressurized Container: May explode when exposed to heat or flame. Empty containers may retain product residue including Flammable or Explosive vapors. DO NOT cut, drill, grind, or weld near full, partially full, or empty product containers.

**Fire Fighting Instructions:** Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

**Extinguishing Media:** Use dry chemical, carbon dioxide, or foam. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools this may result in frothing and increase fire intensity.

**Special Fire Fighting Procedures:** Container could potentially burst or be punctured upon mechanical impact, releasing flammable vapors.

**Unusual Fire & Explosion Hazards:** During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a buildup of internal pressures. Cool with water

<b>Section 6</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
------------------	------------------------------------

**Emergency Action:** Remove all sources of ignition and ventilate area. Evacuate the area promptly and keep upwind of the spilled material.

**Containment:** Isolate the spill area to prevent people from entering. Wear appropriate protective equipment and clothing during clean-up. Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Cover spills with non-flammable absorbent and place in closed chemical waste containers.

<b>Section 7</b>	<b>HANDLING AND STORAGE</b>
------------------	-----------------------------

**Handling:** Keep this product away from heat, sparks or open flame. . Avoid getting this material into contact with your skin and eyes. Avoid breathing mists or aerosols of this product. Use this product with adequate ventilation. Do not reuse the empty container.

**Storage:** Store in a cool, dry, well-ventilated area. Keep away from direct sunlight.

**Storage Temperatures:** Ambient. Avoid freezing and do not store at temperatures above 120 ° F (48.9°C)

**Storage Pressure:** Atmospheric

**General:** Read and follow the directions on the product label; they are your best guide to using this product in the most effective way, and give the necessary safety precautions to protect your health.

**Empty Container Precautions:** Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container.

<b>Section 8</b>	<b>EXPOSURE CONTROL / PERSONAL PROTECTION</b>
------------------	---

Component	CAS	Value	Control parameters	Basis
HFC-4310	138495-42-8	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
Trans-1,2-Dichloroethylene	156-60-5	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
1,1,1,2-Tetrafluoroethane	811-97-2	TWA	1,000 ppm	USA Workplace Environmental Exposure Levels (WEEL)
Carbon Dioxide	124-38-9	TWA	5,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	30,000 ppm	USA. ACGIH Threshold Limit Values (TLV)

**Engineering Controls:** Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

**Personal Protection:** Use good hygiene practices in handling this material.

**Respiratory Protection:** Use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA).

**Skin and Body Protection:** Impervious gloves should be used when handling this product. Use of protective coveralls and long sleeves is recommended.

**Eye Protection:** Wear goggles or safety glasses with side shields.

<b>Section 9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
------------------	---

Appearance	Aerosol / colorless
Odor	Mild; slight ethereal
pH	NE
Melting point/freezing point	NE / NE
Initial boiling point and boiling range	NE
Flash point and method	None
Evaporation rate	Slower (relative to n-Butyl Acetate)
Flammability (solid, gas, liquid)	NA
Upper/lower flammability or explosive limits	9.5 upper % by volume concentrate 3.8 lower % by volume concentrate
Vapor pressure	NE
Vapor density (air=1)	Less than air
Relative density	< 1.0
Solubility(ies).	Miscible
Partition coefficient: n-octanol/water	NE
Autoignition temperature	NA
Decomposition temperature	NE
Viscosity	NE
Volatile by weight	NE
VOC	NE

<b>Section 10</b>	<b>STABILITY AND REACTIVITY</b>
-------------------	---------------------------------

**Reactivity:** Stable under recommended storage conditions. Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures.

**Chemical Reactivity:** Stable under recommended storage conditions. Can become unstable (self-react at high temperatures and pressures.

**Possibility of Hazardous Reactions:** None under normal procession

**Hazardous Polymerization:** Under normal conditions of storage and use, will not occur

**Conditions to Avoid:** Keep away from heat, direct sunlight, and sources of ignition.

**Incompatible Materials:** Strong oxidizing agents, reducing agents, acids, bases.

**Hazardous Decomposition:** Not determined

<b>Section 11</b>	<b>TOXICOLOGY INFORMATION</b>
-------------------	-------------------------------

HFC-4310	CAS #138495-42-8	Oral LD50: >5000 mg/kg (rat)
		Dermal LD50: >5000 mg/kg (rabbit)
Trans-1,2-Dichloroethylene	CAS #156-60-5	Oral LD50: >1235 mg/kg (rat)
		Inhalation LC50: >24,100 mg/kg (rat)
		Dermal LD50: >5000 mg/kg (rabbit)
1,1,1,2-Tetrafluoroethane	CAS #811-97-2	No data available
Carbon Dioxide	CAS #124-38-9	Inhalation LD50: 470,000 ppm (15min)

<b>Section 12</b>	<b>ECOLOGICAL INFORMATION</b>
-------------------	-------------------------------

No information

<b>Section 13</b>	<b>DISPOSAL CONSIDERATIONS</b>
-------------------	--------------------------------

**Waste Treatment Methods**

**Disposal of Wastes:** Disposal should be in accordance with applicable regional, national and local laws and regulations. **Do not puncture, incinerate or compact aerosol can.** When contents are depleted continue to depress button until all gas is expelled.

**Contaminated Packaging:** Disposal should be in accordance with applicable regional, national and local laws and regulations

<b>Section 14</b>	<b>TRANSPORTATION INFORMATION</b>
-------------------	-----------------------------------

	Proper Shipping Name	Hazard Class	UN number	NOTE
<b>US DOT ground</b>	Consumer Commodity	ORM-D	NA	Flame projection testing in accordance with 16CFR1500.45 found no flame projection.
<b>US DOT air</b>	AEROSOLS, non-flammable, (each not exceeding 1L capacity)	2.2	UN1950	May be classified as Consumer commodity, ID 8000, class 9, Y963 packing instruction DOT Labels required: Non-Flammable Gas
<b>IATA</b>	AEROSOLS, non-flammable, (each not exceeding 1L capacity)	2.2	UN1950	IATA Labels required: Non-Flammable Gas
<b>IMDG</b>	AEROSOLS, non-flammable, (each not exceeding 1L capacity)	2.2	UN1950	Limited Quantity: Y203

<b>Section 15</b>	<b>REGULATORY INFORMATION</b>
-------------------	-------------------------------

United States Federal Regulations: MSDS complies with the OSHA, 29 CFR 1910.1200.

SARA Superfund and Reauthorization Act of 1986 Title III sections 302, 311,312 and 313:

Section 302 – None of the chemicals are EPCRA hazards

CERCLA/Superfund, 40 CFR 117, 302: Trans-1,2-Dichloroethylene 1,000 RQ;

Section 311/312 – Material Safety Data Sheet Requirements (40 CFR 370): By our hazard evaluation, this product is non-hazardous.

Section 313 – List of Toxic Chemicals (40CFR 372): This product does not contain chemicals ( at level of 1% or greater) found on the 313 list of Toxic Chemicals.

Toxic Substance Control Act (TSCA): **All substances are TSCA listed.**

Resource Conservation and Recovery Act (RCRA 40 CFR 261) Subpart C & D: Refer to Section 13

Federal Water Pollution Control Act, Clean Water Act, 40 CFR 401.15 (formerly section 307) 40 CFR 116 (formerly section 311): This product does not contain listed chemicals

**STATE REGULATIONS:**

This MSDS contains specific health and safety data is applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

California Proposition 65: This product does not contain substances listed.

**INTERNATIONAL REGULATIONS:**

**Canada WHMIS:** This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**REACH:** To the best of our ability, this MSDS is written in accordance to REACH Directive EC1907/2006 Annex II and GHS requirements. This product does not contain substances listed on the Candidate List of Substances of Very High Concern (SvHC).

<b>Sections 16</b>	<b>OTHER INFORMATION</b>
--------------------	--------------------------

**HMIS HAZARD RATING:**

**Health:** Irritation or minor reversible injury possible

**Fire:** Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

**Reactivity:** Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures

**Protective Equipment:** Safety goggles and gloves

1	HEALTH
1	FLAMMABILITY
1	PHYSICAL HAZARD
B	PROTECTIVE EQUIPMENT

**REVISION DATES, SECTIONS, REVISED BY:**

30-Dec-14      Original Preparer: Mary Kay Botkins

13-Oct-15      Sections 1, 10, 13, 14 and 16, mkb

**ABBREVIATIONS USED IN THIS DOCUMENT:**

NE – Not Established, NA – Not Applicable, NIF – No Information Found, ND – Not Determined

**ABRIDGED LIST OF REFERENCES:**

Code of Federal Regulations (CFR)

The Sigma-Aldrich Library of Regulatory and Safety Data

Chemical Guide and OSHA Hazardous Communication Standard

The Environmental Protection Agency ([www.epa.gov](http://www.epa.gov))

[http://oehha.ca.gov/prop65/prop65\\_list](http://oehha.ca.gov/prop65/prop65_list)

<http://orise.orau.gov/emi/hazards-assessment/files/resources/epa-title3.pdf>

To the best of our knowledge, the information contained herein is accurate. **However, neither ACL STATICIDE nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.** Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.