

# Material Safety Data Sheet

<b>Revision Date</b> April 14, 2009	<b>Prepared by</b> Patti Rogers	<b>Technical Information</b> 1-800-201-8822 or <a href="mailto:support@mgchemicals.com">support@mgchemicals.com</a>
<b>Head Office</b> 9347 - 193 Street, Surrey, B.C., V4N 4E7		<b>Emergency</b> Phone Canutech (613) 996-6666 Collect 24 hrs

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## Section 1: Product Identification

**MSDS Code: 419B - aerosol**      **Name: Acrylic Lacquer Conformal Coating**

**Related Part Numbers: 419B-340G**

Use: Protective coating for pc boards.

## Section 2: Hazardous Ingredients

CAS#	Chemical Name	Percentage by weight	ACGIH TWA	Osha Pel	Osha Stel
811-97-2	1,1,1,2 - tetrafluoroethane	44-49%	1000ppm	N/E	N/E
67-64-1	2-propanone	19-21%	750ppm	1000ppm	1000ppm
108-88-3	Toluene	10-12%	50ppm	100ppm	150ppm
64-17-5	Ethyl alcohol	3-4%	200ppm	200ppm	250ppm
141-78-6	Ethyl acetate	3-4%	400ppm	400ppm	N/E
108-65-6	1-methoxy-2 propanone acetate	2-3%	N/E	N/E	N/E
110-43-0	2-heptanone	3-4%	50ppm	100ppm	N/E
110-19-0	2-methylpropyl ester acetic acid	3-4%	150ppm	150ppm	N/E
67-56-1	Methanol	0.1 – 0.2%	200ppm	200ppm	250ppm

## Section 3: Hazards Identification

<b>Eyes:</b>	Causes severe eye irritation.
<b>Skin:</b>	May cause skin irritation with pain and stinging, especially if skin is abraded.
<b>Inhalation:</b>	Solvents may cause respiratory tract irritation, headaches, and possible dizziness.
<b>Ingestion:</b>	May cause respiratory and digestive tract irritation.
<b>Chronic:</b>	Prolonged and repeated exposure may cause dermatitis, defatting of the skin, liver and kidney damage, and adverse central nervous system effects.

## Section 4: First Aid Measure

<b>Eyes:</b>	Remove contact lenses. Flush with water or saline. Get medical aid.
<b>Skin:</b>	Wash skin with large quantities of soap and water. Get medical aid if symptoms persist.
<b>Inhalation:</b>	Immediately remove from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
<b>Ingestion:</b>	Do not induce vomiting. If conscious, give 1-2 glasses of water. Get medical aid.

### Section 5: Fire Fighting Measures

**Autoignition Temperature:** 465°C    **Flash Point:** -18°C    **LEL / UEL:** 1 / 36

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam.

**General Information:** Will burn if involved in a fire. Containers may explode in the heat of a fire. Flash back along vapor trail is possible.

### Section 6: Accidental Release Measures

**Spill Procedure:** Remove all sources of ignition. Provide adequate ventilation. Wear appropriate personal protection. Sprinkle absorbent compound onto spill, then sweep into a plastic or metal container. Wipe up further residue with paper towel and place in container. Wash spill area with soap and water.

### Section 7: Handling and Storage

**Handling:** Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Do not expose container to heat or flame.

**Storage:** Keep away from sources of ignition. Store in a cool, dry, well-ventilated area, away from incompatible substances. Keep from freezing.

### Section 8: Exposure Controls

**Routes of entry:** Eyes, ingestion, inhalation, and skin.

**Ventilation:** Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.

**Personal Protection:** Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective clothing to prevent skin contact. Use a NIOSH approved respirator when necessary.

### Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Aerosol	<b>Odor:</b>	Ethereal	<b>Solubility in water:</b>	Partial	<b>Evaporation Rate:</b>	Fast		
<b>Boiling Point:</b>	N/A	<b>Specific Gravity:</b>	0.85	<b>Vapor Pressure:</b>	48PSI @21°C	<b>Vapor Density:</b>	4.1 (Air=1)	<b>pH:</b>	N/A

### Section 10: Stability and Reactivity

**Stability:** Stable at normal temperatures and pressures.

**Conditions to avoid:** Temperatures over 40°C, ignition sources, and incompatible substances.

**Incompatibilities:** Alkali and alkaline earth metals, powdered aluminum, zinc, magnesium, and beryllium, strong oxidizers, hydrogen peroxide, Lewis or mineral acids.

**Polymerization:** Will not occur.

**Decomposition:** Halogens, halogen acids, possibly carbonyl halides, carbon dioxide, and carbon monoxide, nitrogen oxides

### Section 11: Toxicological Information

**Sensitization:** (effects of repeated exposure) Prolonged or repeated skin contact may cause dermatitis.  
**Carcinogenicity:** (risk of cancer) No  
**Teratogenicity:** (risk of malformation in an unborn fetus) No  
**Reproductive Toxicity:** (risk of sterility) No  
**Mutagenicity:** (risk of heritable genetic effects) No

Lethal Exposure Concentrations:	Ingestion (LD50):	Inhalation (LC50):	Skin (LD50):	Inhalation (TCLo):
1,1,1,2 - tetrafluoroethane	N/E	1500 gm/m <sup>3</sup> /4H Rat	N/E	50000 ppm/6H/2Y Rat
2-propanone	3gm/kg Mouse	44 mg/m <sup>3</sup> /4H Mouse	20 ml/kg Rabbit	1250 mg/m <sup>3</sup> Rabbit
Toluene	636 mg/kg Rat	49 gm/ m <sup>3</sup> /4H	14100 UI/kg Rabbit	1000 ppm/6H Rat
Ethyl alcohol	7060 mg/kg Rat	20000 ppm/10H Rat	N/A	50000 mg/ m <sup>3</sup> /2H Mouse
Ethyl acetate	5620 mg/kg Rat	200 gm/m <sup>3</sup> Rat	>20 mL/kg Rabbit	200 ppm/6H Mouse
1-methoxy-2 propanone acetate	8532 mg/kg Rat	<b>N/E</b>	>5 gm/kg Rabbit	N/E
2-heptanone	1670 mg/kg Rat	N/A	12600 uL/kg Rabbit	7000 mg/ m <sup>3</sup> /4H Guinea pig
2-methylpropyl ester acetic acid	13400 mg/kg Rat	N/A	>17400 mg/kg Rabbit	N/A
Methanol	7300 mg/kg Mouse	50 gm/m <sup>3</sup> /2H Mouse	15800 mg/kg Rabbit	5000 ppm/6H Rat

### Section 12: Ecological Information

**General Information:** Avoid runoff into storms and sewers, which lead into waterways. Water runoff can cause environmental damage.  
 Volatile Organic Compounds, % by weight: 41%  
 Volatile Organic Compounds, grams per litre: 348.5g/l

### Section 13: Disposal Information

**General Information:** Dispose of in accordance with all local, provincial, state, and federal regulations. Water runoff can cause environmental damage.

### Section 14: Transportation Information

**Ground Canada:**  
 Classified as **Consumer Commodity**.  
**Recommend Shipper be trained and certified. Refer to TDG regulations** (Canadian Transportation of Dangerous Goods regulations).  
**Ground USA:**  
 Classified as **ORM-D**.  
**Recommend Shipper be trained and certified. Refer to USA CFR 49 Regulations** (Parts 100 to 185).  
**Air:**  
**Shipper must be trained and certified. Refer to IATA Dangerous Goods Regulations.**  
 UN number: **1950**, Shipping Name: **AEROSOLS, Flammable**, Class: **2.1**, Flash Point: **-18°C**.  
 Refer to Pkg Instr Y203. Recommend using original MG Chemicals certified outer cartons. Tape all seams on the

carton. Hazard Label required – Aerosols, flammable. A double arrow orientation label is required and is already printed on the original outer carton.

**Sea - All Sizes:**

**Shipper must be trained and certified. Refer to IMDG regulations.**

UN number: **1950**, Shipping Name: **AEROSOLS, Flammable**, Class: **2.1**, Flash Point: **-18°C**.

Storage category "A", segregation as for class 9 but away from sources of heat and separated from goods of class 1 except for those in division 1.4.

**Section 15: Regulatory Information**

**CANADA**

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations. DSL**

All ingredients in this product are listed on the Domestic Substances List

**Health Canada**

Products produced by MG Chemicals intended for retail display conform to the Canadian Consumer Labeling regulations.

**Industry and Science Canada**

MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product are in compliance.

**WHMIS**

This product belongs to the following categories: **A,B5,D2B**

**USA**

**CAA** (Clean Air Act, USA)

This product does not contain any class 1-ozone depletors.

This product does not contain any class 2-ozone depletors.

This product does not contain any chemicals listed as hazardous air pollutants.

**SARA** (Superfund Amendments and Reauthorization Act of 1986, USA, 40CFR 372.4)

This product contains the following chemical subject to the reporting requirements of section 313 title III of the SARA of 1986 and the 40 CFR part 372: Methanol CAS# 64-56-1 0.1% and Toluene CAS# 108-88-3.

**EPCRA** (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product contains the following chemical subject to the reporting requirements of section 313 title III of the SARA of 1986 and the 40 CFR part 372: Methanol CAS# 64-56-1 0.1% and Toluene CAS# 108-88-3.

**TSCA** (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

**California Proposition 65** (Chemicals know to cause cancer or reproductive toxicity, May 1, 1997 revision, USA)

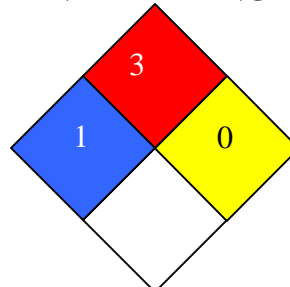
This product contains toluene, listed under the chemicals know to the state to cause reproductive toxicity.

**HMIS RATING**

<b>HEALTH:</b>	1
<b>FLAMMABILITY:</b>	3
<b>PHYSICAL HAZARD:</b>	0
<b>PERSONAL PROTECTION (PPE):</b>	H

Protection = H (Splash goggles, gloves, protective apron, and vapor respirator.)

**NFPA RATING**





## **EUROPE**

### **RoHS**

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, or PBDE's, and complies with European RoHS regulations.

### **WEEE**

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

## **Section 16: Other Information**

**Definitions:** N/A = not applicable, N/E = not established

**Disclaimer:** This material safety data sheet is provided as an information resource only. M.G. Chemicals believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.