



# Safety Data Sheet

according to WHMIS 2023 and HCS 2024

## 1 Identification

· **Product identifier**

· **Trade name: 4140**

- **Other Means of Identification:** Flux Remover for PC Boards
- **Related Part Number:** 4140-Liquid, 4140-50ML, 4140-1L, 4140-4L, 4140-20L, 4140-P

· **Application of the substance / the mixture** Flux remover for electronics

· **Uses advised against** Not available

· **Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**  
MG Chemicals (Head Office)  
1210 Corporate Drive  
Burlington, Ontario L7L 5R6  
CANADA  
+(1) 800-340-0772  
+(1) 905-331-1396  
info@mgchemicals.com

**Distributor:**  
Masline  
511 Clinton Ave S  
Rochester, New York 14620  
United States  
+(1) 586-546-5373

· **Information department:** sds@mgchemicals.com

· **Emergency telephone number:**

For hazardous material incidents ONLY (leaks, spills, fires, exposures or accidents)  
USA or CANADA-Call 3E at +1-866-519-4752 or +1-760-476-3962 (Service access code: 335388)

For emergencies involving the transport of dangerous goods; 24/7 service  
CANADA-Call CANUTEC collect at +1-613-996-6666 or \*666 on cellular phones

## 2 Hazard identification

· **Classification of the substance or mixture**

Flammable liquids – Category 2 H225 Highly flammable liquid and vapour.  
Eye damage/irritation – Category 2A H319 Causes serious eye irritation.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Danger

· **Hazard statements**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

· **Precautionary statements**

P102 Keep out of reach of children.

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 equipment.

P243 Take action to prevent static discharges.

P264 Wash thoroughly after handling.

P280 Wear protective gloves, protective clothing, and eye protection.

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

P370+P378 In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents and container in accordance with local, regional, and national regulations.

· **Other hazards** Repeated exposure may cause skin dryness or cracking.

## 3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

64-17-5	ethanol	93% w/w
67-63-0	Propan-2-ol	5% w/w
141-78-6	ethyl acetate	2% w/w

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## 4 First-aid measures

### · Description of first aid measures

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**

Remove person to fresh air and keep comfortable for breathing.

If feeling unwell: Call a POISON CENTRE or doctor.

· **After skin contact:**

Take off immediately all contaminated clothing.

Wash with plenty of soap and water.

· **After eye contact:**

Rinse cautiously with water for 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice or attention.

· **After swallowing:**

Rinse mouth.

Do NOT induce vomiting.

If symptoms persist consult doctor.

· **Information for doctor:** Treat symptomatically

### · Most important symptoms and effects, both acute and delayed

See section 11 for additional information.

### · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## 5 Fire-fighting measures

### · Extinguishing media

· **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

### · Special hazards arising from the substance or mixture

Vapors are heavier than air. Vapors may travel to sources of ignition near the ground. They can cause flash fire or ignite explosively.

Prevent fire-fighting wash from entering waterway or sewer system.

· **Hazardous combustion products:** Carbon Oxides (CO<sub>x</sub>)

### · Advice for firefighters

· **Protective equipment:** Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

## 6 Accidental release measures

### · Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Remove or keep away all sources of extreme heat or open flames.

### · Environmental precautions:

Dilute with plenty of water.

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Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Collect liquid in a sealable, chemical-resistant container.

Wash residue with a paper towel and place dirty towels in container.

Use soap and water to remove the last traces of residue.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

· **Precautions for safe handling**

Wear protective gloves and eye protection.

Wash hands and exposed skin thoroughly after handling.

Take off contaminated clothing and wash it before reuse.

Avoid breathing mist, spray, or vapors.

· **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Use explosion-proof apparatus / fittings and spark-proof tools.

Ground and bond container and receiving equipment.

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

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store in a well-ventilated place. Keep cool.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· **Specific end use(s)** See section 1.2

## 8 Exposure controls/ Personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

64-17-5 ethanol	
EL (Canada)	STEL: 1000 ppm
EV (Canada)	TWA: 1,900 mg/m <sup>3</sup> , 1,000 ppm
PEL (USA)	TWA: 1900 mg/m <sup>3</sup> , 1000 ppm
REL (USA)	TWA: 1900 mg/m <sup>3</sup> , 1000 ppm

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TLV (USA)	STEL: 1880 mg/m <sup>3</sup> , 1000 ppm A3
<b>67-63-0 Propan-2-ol</b>	
EL (Canada)	STEL: 400 ppm TWA: 200 ppm
EV (Canada)	STEL: 400 ppm TWA: 200 ppm
PEL (USA)	TWA: 980 mg/m <sup>3</sup> , 400 ppm
REL (USA)	STEL: 1225 mg/m <sup>3</sup> , 500 ppm TWA: 980 mg/m <sup>3</sup> , 400 ppm
TLV (USA)	STEL: 984 mg/m <sup>3</sup> , 400 ppm TWA: 491 mg/m <sup>3</sup> , 200 ppm BEI, A4
<b>141-78-6 ethyl acetate</b>	
EL (Canada)	TWA: 150 ppm
EV (Canada)	TWA: 1,440 mg/m <sup>3</sup> , 400 ppm
PEL (USA)	TWA: 1400 mg/m <sup>3</sup> , 400 ppm
REL (USA)	TWA: 1400 mg/m <sup>3</sup> , 400 ppm
TLV (USA)	TWA: 1440 mg/m <sup>3</sup> , 400 ppm
<b>Ingredients with biological limit values:</b>	
<b>67-63-0 Propan-2-ol</b>	
BEI (USA)	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)

**Additional information:**

The lists that were valid during the creation were used as basis.  
 Refer to the national or regional occupational exposure limit regulation for abbreviations and acronyms.

**Exposure controls**

**Appropriate engineering controls** Keep airborne concentrations below exposure limits.

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.  
 Avoid contact with the eyes and skin.

**Breathing equipment:**

If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply.

**Protection of hands:**



Protective gloves: EN374

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Safety glasses or tightly sealed goggles: EN 166

**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

· <b>Physical state</b>	Liquid
· <b>Form:</b>	Low viscosity
· <b>Color:</b>	Colorless
· <b>Odor:</b>	Alcohol-like
· <b>Odor threshold:</b>	Not available
· <b>Boiling point/Boiling range:</b>	78 °C (172.4 °F)
· <b>Flammability:</b>	Highly flammable.
· <b>Explosion limits:</b>	
· <b>Lower:</b>	3.5 Vol %
· <b>Upper:</b>	15 Vol %
· <b>Flash point:</b>	12 °C (53.6 °F)
· <b>Auto igniting:</b>	425 °C (797 °F)
· <b>Solubility in / Miscibility with</b>	
· <b>Water:</b>	Fully miscible.
· <b>Vapor pressure at 20 °C (68 °F):</b>	59 hPa (44.3 mm Hg)
· <b>Relative density at 25 °C (77 °F):</b>	0.791
· <b>Vapor density (air=1):</b>	Not available
· <b>Particle characteristics</b>	Not applicable

· **Other information**

· **Important information on protection of health and environment, and on safety.**

· <b>Ignition temperature:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

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· <b>Organic solvents:</b>	100.50 %
· <b>VOC content:</b>	100.000 %
	1,005.0 g/l / 8.39 lb/gal
· <b>Solids content:</b>	0.0 %
· <b>Evaporation rate</b>	Not available

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Chemically stable at normal temperatures and pressures.
  - **Thermal decomposition / conditions to be avoided:**  
 No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Avoid ignition sources, open flames, and incompatible substances.
- **Incompatible materials:**
  - Strong acids
  - Strong bases
  - Halogenated compounds
  - Strong oxidizing agents
  - Aluminum at temperatures  $\geq 49$  °C
- **Hazardous decomposition products:** Hazardous combustion products: see section 5.

## 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>64-17-5 ethanol</b>		
Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4 h	20,000 mg/L (rat)
<b>67-63-0 Propan-2-ol</b>		
Oral	LD50	5,045 mg/kg (rat)
Dermal	LD50	12,800 mg/kg (rabbit)
Inhalative	LC50/4 h	30 mg/L (rat)
<b>141-78-6 ethyl acetate</b>		
Oral	LD50	5,620 mg/kg (rabbit)
Inhalative	LC50/4 h	1,600 mg/L (rat)

- **Primary irritant effect:**
  - **on the eye:** Irritating effect.

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- **Sensitization:** No sensitizing effects known.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **Specific target organ toxicity - single exposure**  
Based on available data, the classification criteria are not met.
- **Specific target organ toxicity - repeated exposure**  
Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Summary of effects and symptoms by route of exposure**
  - **Eyes:**  
pain  
tearing of the eyes  
redness, serious irritation
  - **Skin:** dry skin, redness
  - **Inhalation:** Excessive exposure may cause narcotic effects, weakness, headaches, and unconsciousness.
  - **Swallowed:**  
drowsiness or dizziness  
nausea, vomiting  
headache  
slurred speech
- **Delayed and immediate effects as well as chronic effects from short and long-term exposure**  
No further relevant information available.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

· **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>		
64-17-5	ethanol	1
67-63-0	Propan-2-ol	3

· <b>NTP (National Toxicology Program)</b>		
None of the ingredients is listed.		

**12 Ecological information**

· **Toxicity**

· <b>Aquatic toxicity:</b>		
<b>64-17-5 ethanol</b>		
LC50	>1,000 mg/L (fish) Biodegradable	

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67-63-0 Propan-2-ol	
EC50/ 24 h	5,102 mg/L (daphnia)
EC50/ 72 h	>2,000 mg/L (algae)
LC50 96h	9,640 mg/L (minnow)

- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:** This material and its container must be disposed of as hazardous waste.
- **Uncleaned packagings:**
  - **Recommendation:**  
 Containers may still present a chemical hazard/ danger when empty.  
 Dispose of contents in accordance with all local, regional, national, and international regulations.  
 Where possible retain label warnings and SDS and observe all notices pertaining to the product.
  - **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

· <b>UN-Number</b>	
· <b>DOT/TDG, IMDG, IATA</b>	UN1987
· <b>UN proper shipping name</b>	
· <b>DOT/TDG, IATA</b>	Alcohols, n.o.s. (ethanol, Propan-2-ol)
· <b>IMDG</b>	ALCOHOLS, N.O.S. (ethanol, Propan-2-ol)
· <b>Transport hazard class(es)</b>	
· <b>DOT/TDG (Transport dangerous goods):</b>	
	
· <b>Class</b>	3 Flammable liquids

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· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT/TDG, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
 Limited Quantity	
4140-50ML, 4140-1L, 4140-P	
· DOT/TDG	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Special precautions for user	Not applicable.
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E,S-D
· Stowage Category	B
· UN "Model Regulation":	UN 1987 ALCOHOLS, N.O.S. (ETHANOL, PROPAN-2-OL), 3, II

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**15 Regulatory information**

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **OSHA Hazard Communication Standard (29 CFR Part 1900)**

The safety data sheet and label comply with HCS 2024.

· **Hazardous Products Act (R.S.C., 1985, c. H-3)**

The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2023.

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

67-63-0 | Propan-2-ol

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

64-17-5 | ethanol

· **Note:**

While ethanol is present in this product, the Proposition 65 warning does NOT apply since this product is not an alcoholic beverage.

· **Carcinogenic categories**

· **TLV (Threshold Limit Value)**

64-17-5	ethanol	A3
67-63-0	Propan-2-ol	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

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· <b>Canadian Ingredient Disclosure list (limit 0.1%)</b>	
64-17-5	ethanol
· <b>Canadian Ingredient Disclosure list (limit 1%)</b>	
67-63-0	Propan-2-ol
141-78-6	ethyl acetate

· **HMIS-ratings (scale 0 - 4)**

Health = 2  
 Fire = 3  
 Reactivity = 0

· **Europe**

· **RoHS (Restriction of Hazardous Substances Directive)**

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

· **WEEE (Waste Electrical and Electronic Equipment Directive)**

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

· <b>Per- and polyfluoroalkyl substances (PFAS)</b>
None of the ingredients is listed.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Regulatory department

· **Contact:** sds@mgchemicals.com

· **Version number of previous version:** 1.00

· **Date of preparation** 10/31/2025

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 VOC: Volatile Organic Compounds (USA, EU)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 NIOSH: National Institute for Occupational Safety