



Material Safety Data Sheet

431-3535 VARICURE

1. Product and company identification

Code : 431-3535
Synonym : VARICURE
Material uses : Coatings: Surface coatings and finishes.
Manufacturer : Chemcraft® Coating Technology Inc.
311 Otterson Drive, Suite 60
Chico, CA 95928
Ph:530-894-3585 Fax:530-896-0657
In case of emergency : 1-800-424-5571
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Validator : S.Bice

2. Hazardous ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
n-Butyl acetate	123-86-4	15 - 30
Isopropanol	67-63-0	5 - 15
Isobutyl alcohol	78-83-1	5 - 15
Propylene glycol monomethyl ether acetate	108-65-6	5 - 15
Acetone	67-64-1	5 - 15
Isobutyl isobutyrate	97-85-8	1 - 5
Ethyl alcohol	64-17-5	0.5 - 1
Potential additional emission of formaldehyde	50-00-0*	0.1 - 0.5
2-Methoxy-1-propanol acetate	70657-70-4	0.1 - 0.5

Trace impurities and additional material names not listed above may appear in other sections of this MSDS. These materials may be listed for toxicological concerns, local compliance, or other reasons.

* Toxicological information, if available, is listed in section 11

3. Hazards identification

Physical state : Liquid.
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA: Standard for Occupational Exposure to Formaldehyde 29CFR 1910.1048 must be consulted before initial use of product.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.
Effects of Acute Exposure : Risk of cancer depends on duration and level of exposure.

Potential chronic health effects : **CARCINOGENIC EFFECTS:** Classified A5 (Not suspected for humans.) by ACGIH, 4 (Probably not for humans.) by IARC, None. by OSHA [2-Propanone]. Classified D (Not classifiable for humans or animals.) by EPA [2-Propanone]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Ethanol]. Classified 4 (Probably not for humans.) by IARC [Silica gel, pptd., cryst.-free]. Classified A2 (Suspected for humans.) by ACGIH, 2A (Probable for human.) by IARC [Potential additional emission of formaldehyde].

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Classified None. for humans [2-Propanone].

3. Hazards identification

Medical conditions aggravated by over-exposure : Repeated or prolonged exposure to the substance can produce target organs damage.

See toxicological information (section 11)

4. First aid measures

- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Skin contact** : Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Get medical attention. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Inhalation** : Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

5. Fire-fighting measures

- Flammability of the product** : Flammable.
- Products of combustion** : These products are carbon oxides (CO, CO₂).
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : No specific hazard.
- Special Remarks on Fire Hazards** : Vapor may travel considerable distance to source of ignition and flash back. (Acetic Ac Butyl Ester)
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Fire Hazards in Presence of Various Substances** : Extremely flammable in the presence of the following materials or conditions: open flame, sparks and static discharge.
Highly flammable in the presence of the following materials or conditions: heat.
- Explosion Hazards in Presence of Various Substances** : Highly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts.

6 . Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7 . Handling and storage

- Handling** : Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection



- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9 . Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : The lowest known value is Closed cup: -18°C (-0.4°F). (T.C.C.). (2-Propanone)
- Auto-ignition temperature** : The lowest known value is 407°C (764.6°F) (Acetic Acid, Butyl Ester).
- Flammable limits** : The greatest known range is Lower: 1.3% Upper: 13.1% (2-Propanol, 1-methoxy, acetate)
- Boiling/condensation point** : The lowest known value is 56.2°C (133.2°F) (2-Propanone). Weighted average: 111.11°C (232°F)
- Melting/freezing point** : May start to solidify at 8.06°C (46.5°F) based on data for: Propanoic acid, 2-methyl-, 2-methylpropyl ester. Weighted average: -84.77°C (-120.6°F)
- Relative density** : Weighted average: 0.93 (Water = 1)
- Vapor pressure** : The highest known value is 24.1 kPa (181 mm Hg) (at 20°C) (2-Propanone). Weighted average: 5.75 kPa (43.13 mm Hg) (at 20°C)

9 . Physical and chemical properties

- Vapor density** : The highest known value is 4.97 (Air = 1) (Propanoic acid, 2-methyl-, 2-methylpropyl ester). Weighted average: 3.31 (Air = 1)
- Evaporation rate** : The highest known value is 1 (Acetic Acid, Butyl Ester) Weighted average: 0.92 compared with Butyl acetate.
- Dispersibility properties** : Not dispersible in cold water, hot water, methanol. See solubility in methanol, diethyl ether, n-octanol.
- Solubility** : Easily soluble in methanol, diethyl ether. Soluble in n-octanol. Insoluble in cold water, hot water.

10 . Stability and reactivity

- Stability and reactivity** : The product is stable.
- Incompatibility with various substances** : Reactive or incompatible with the following materials: oxidizing materials, reducing materials, acids and alkalis. Slightly reactive or incompatible with the following materials: organic materials.

11 . Toxicological information

Toxicity data

<u>Product/ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Acetic Acid, Butyl Ester	LD50	14130 mg/kg	Oral	Rat
	LD50	7100 mg/kg	Oral	Mouse
	LD50	5000 mg/kg	Dermal	Rabbit
1-Propanol, 2-methyl-	LD50	8770 mg/kg	Dermal	Guinea pig
	LD50	2500 mg/kg	Oral	Rat.
	LD50	3200 mg/kg	Oral	Mouse
2-Propanone	LD50	4200 mg/kg	Dermal	Rabbit.
	LD50	5800 mg/kg	Oral	Rat
	LD50	3000 mg/kg	Oral	Mouse
	LD50	20000 mg/kg	Dermal	Rabbit.
	LC50	50100 mg/m ³ (8 hour/hours)	Inhalation	Rat
	LC50	44000 mg/m ³ (4 hour/hours)	Inhalation	Mouse
Potential additional emission of formaldehyde	LD50	100 mg/kg	Oral	Rat
	LD50	270 mg/kg	Dermal	Rabbit

- Chronic effects on humans** : **CARCINOGENIC EFFECTS:** Classified A5 (Not suspected for humans.) by ACGIH, 4 (Probably not for humans.) by IARC, None. by OSHA [2-Propanone]. Classified D (Not classifiable for humans or animals.) by EPA [2-Propanone]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Ethanol]. Classified 4 (Probably not for humans.) by IARC [Silica gel, pptd., cryst.-free]. Classified A2 (Suspected for humans.) by ACGIH, 2A (Probable for human.) by IARC [Potential additional emission of formaldehyde].
TERATOGENIC EFFECTS: Classified None. for humans [2-Propanone]. Contains material which causes damage to the following organs: blood, kidneys, lungs, the nervous system, liver.

- Other toxic effects on humans** : Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).
- Special remarks on toxicity to animals** : Formaldehyde has caused cancer in test animals at high concentrations (5-15 ppm). (Potential additional emission of formaldehyde)
- Special remarks on chronic effects on humans** : Detected in maternal milk in human. (2-Propanol)
- Special remarks on other toxic effects on humans** : Material is irritating to mucous membranes and upper respiratory tract. (Acetic Acid, Butyl Ester)

11 . Toxicological information

Specific effects

- Carcinogenic effects** : Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenic effects** : No known significant effects or critical hazards.
- Teratogenicity / Reproductive toxicity** : No known significant effects or critical hazards.

12 . Ecological information

- Environmental precautions** : No known significant effects or critical hazards.
- Octanol/water partition coefficient** : The product is much more soluble in octanol.
- Bioconcentration factor** : Not available.
- Products of degradation** : These products are carbon oxides (CO, CO₂) and water.
- Toxicity of the products of biodegradation** : The product itself and its products of degradation are not toxic.

13 . Disposal considerations


- Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Class	PG*	Label
TDG Classification	1263 PAINT	3	II	

PG* : Packing group

15 . Regulatory information

United States

- HCS Classification** : Carcinogen
Target organ effects
- U.S. Federal regulations** : SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Acetic Acid, Butyl Ester; 2-Propanol: Fire hazard, Delayed (chronic) health hazard; Isobutyl alcohol: Fire hazard, Delayed (chronic) health hazard; 1-Propanol, 2-methyl-: Fire hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.

15 . Regulatory information

Clean Air Act (CAA) 112 accidental release prevention: No products were found.
 Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
 Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations

: **WARNING:** This product contains chemical/chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.: Benzene, methyl-; Formaldehyde
WARNING: This product contains chemical/chemicals known to the state of California to cause birth defects or other reproductive harm.: Benzene, methyl-
WARNING: This product contains chemical/chemicals known to the state of California to cause cancer.: Formaldehyde
 New York release reporting list: Acetic Acid, Butyl Ester
 Pennsylvania RTK: Acetic Acid, Butyl Ester; Isopropyl alcohol; 2-Propanol; Acetic acid, 2-methylpropyl ester; Benzene, methyl-; Ethanol
 Florida: Acetic Acid, Butyl Ester
 Minnesota: Acetic Acid, Butyl Ester; Ethanol
 Massachusetts RTK: Acetic Acid, Butyl Ester; Isopropyl alcohol; 2-Propanol; Acetic acid 2-methylpropyl ester; Ethanol
 New Jersey: Acetic Acid, Butyl Ester; Isopropyl alcohol; 2-Propanol; Acetic acid, 2-methylpropyl ester; Benzene, methyl-; Ethanol
 TSCA 8(b) inventory: Acetic Acid, Butyl Ester; Isopropyl alcohol; 2-Propanol; Acetic acid 2-methylpropyl ester; Benzene, methyl-; Ethanol; 1-Butanol
 TSCA 5(e) substance consent order: Acetic Acid, Butyl Ester
 TSCA 12(b) annual export notification: Acetic Acid, Butyl Ester
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Acetic Acid, Butyl Ester; 2-Propanol: Fire hazard, Delayed (chronic) health hazard; Isobutyl alcohol: Fire hazard, Delayed (chronic) health hazard; 1-Propanol, 2-methyl-: Fire hazard, Delayed (chronic) health hazard
 CERCLA: Hazardous substances.: Acetic Acid, Butyl Ester; Acetic acid, 2-methylpropyl ester; Benzene, methyl-: 1000 lbs. (453.6 kg); Isobutyl alcohol; 1-Propanol, 2-methyl-; 1-Butanol; Acetone;

<u>Ingredient name</u>	<u>Cancer</u>	<u>Reproductive</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage level</u>
Acetic acid, 2-methylpropyl ester	No.	No.	No.	No.
Benzene, methyl-	No.	Yes.	No.	No.
Formaldehyde	Yes.	No.	No.	No.

Canada

WHMIS (Canada)

: Class B-2: Flammable liquid
 Class D-2A: Material causing other toxic effects (Very toxic).
 Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

16 . Other information

Label requirements

: EXTREMELY FLAMMABLE LIQUID AND VAPOR.
 VAPOR MAY CAUSE FLASH FIRE.
 SUSPECT CANCER HAZARD.
 CONTAINS MATERIAL WHICH MAY CAUSE CANCER.
 CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
 BLOOD, KIDNEYS, LUNGS, NERVOUS SYSTEM, LIVER.

16 . Other information

Hazardous Material
Information System (U.S.A)

Health	*	1
Fire hazard		3
Reactivity		0
Personal protection		G

* Indicates may be chronic effects

National Fire Protection
Association (U.S.A)



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, 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 that exist.