



# Material Safety Data Sheet

431-7050 CHEMGUARD II

## 1. Product and company identification

**Code** : 431-7050  
**Synonym** : CHEMGUARD II  
**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  
**Validation date** : **1/15/2008.**  
**Print date** : 1/30/2008.  
**Validator** : **S.Bice**

## 2. Hazardous ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
n-Butyl acetate	123-86-4	15 - 30
Acetone	67-64-1	15 - 30
Xylenes	1330-20-7	5 - 15
Methanol	67-56-1	5 - 15
Isopropanol	67-63-0	5 - 15
Isobutyl alcohol	78-83-1	1 - 5
Isobutyl acetate	110-19-0	1 - 5
Ethylbenzene	100-41-4	1 - 5
Ethyl alcohol	64-17-5	0.1 - 1
Potential additional emission of formaldehyde	50-00-0*	0.1 - 1

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 A5 (Not suspected for humans.) by ACGIH, 4 (Probably not for humans.) by IARC, None. by OSHA [Methanol]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Ethanol]. Classified 1 (Proven for humans.) by IARC [Potential additional emission of formaldehyde]. Classified A2 (Suspected for humans.) by ACGIH, 2 (Reasonably anticipated to be human carcinogens.) by NTP [Potential additional emission of formaldehyde]. Classified A5 (Not suspected for humans.) by ACGIH, 4 (Probably not for humans.) by IARC [Phosphoric acid, monobutyl ester].

### 3. Hazards identification

**MUTAGENIC EFFECTS:** Not available.

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

**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, CO<sub>2</sub>).
- 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 Acid, 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 flames, 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: 6% Upper: 36.5% (Methanol)
- pH** : Neutral.
- Boiling/condensation point** : The lowest known value is 56.2°C (133.2°F) (2-Propanone). Weighted average: 109.19°C (228.5°F)
- Melting/freezing point** : May start to solidify at -48°C (-54.4°F) based on data for: 1,2-Benzenedicarboxylic acid, di-C(8-10)-branched alkyl esters, C9-rich. Weighted average: -87.87°C (-126.2°F)
- Relative density** : 0.9104 (Water = 1)
- Vapor pressure** : The highest known value is 24.1 kPa (181 mm Hg) (at 20°C) (2-Propanone). Weighted average: 9.89 kPa (74.18 mm Hg) (at 20°C)

## 9 . Physical and chemical properties

- Vapor density** : The highest known value is 3.66 (Air = 1) (Benzene, ethyl-). Weighted average: 2.91 (Air = 1)
- Evaporation rate** : The highest known value is 1.4 (Acetic acid, 2-methylpropyl ester) Weighted average: 1.01 compared with Butyl acetate.
- Dispersibility properties** : Not dispersible in cold water, hot water, methanol. See solubility in methanol, diethyl ether, n-octanol, acetone.
- Solubility** : Easily soluble in methanol, diethyl ether, acetone. Soluble in n-octanol. Insoluble in cold water, hot water.

## 10 . Stability and reactivity

- Stability and reactivity** : The product is stable.
- Conditions of instability** : Avoid contact with oxidizing agents. (Benzene, (1-methylethenyl)-)
- Incompatibility with various substances** : Highly reactive or incompatible with the following materials: oxidizing materials. Reactive or incompatible with the following materials: reducing materials, organic materials, metals, acids and alkalis.

## 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
	LD50	8770 mg/kg	Dermal	Guinea pig
2-Propanone	LD50	5800 mg/kg	Oral	Rat
	LD50	3000 mg/kg	Oral	Mouse
	LD50	20000 mg/kg	Dermal	Rabbit.
	LC50	50100 mg/m <sup>3</sup> (8 hour/hours)	Inhalation	Rat
	LC50	44000 mg/m <sup>3</sup> (4 hour/hours)	Inhalation	Mouse
Xylenes	LD50	4300 mg/kg	Oral	Rat
Methanol	LD50	6200 mg/kg	Oral	Rat.
	LD50	5600 mg/kg	Oral	Rat
	LD50	15800 mg/kg	Dermal	Rabbit.
	LC50	64000 ppm (4 hour/hours)	Inhalation	Rat.
1-Propanol, 2-methyl-	LD50	2500 mg/kg	Oral	Rat.
	LD50	3200 mg/kg	Oral	Mouse
	LD50	4200 mg/kg	Dermal	Rabbit.
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 A5 (Not suspected for humans.) by ACGIH, 4 (Probably not for humans.) by IARC, None. by OSHA [Methanol]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Ethanol]. Classified 1 (Proven for humans.) by IARC [Potential additional emission of formaldehyde]. Classified A2 (Suspected for humans.) by ACGIH, 2 (Reasonably anticipated to be human carcinogens.) by NTP [Potential additional emission of

## 11 . Toxicological information

formaldehyde]. Classified A5 (Not suspected for humans.) by ACGIH, 4 (Probably not for humans.) by IARC [Phosphoric acid, monobutyl ester].

**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** : Very hazardous in case of ingestion.  
Hazardous in case of skin contact (permeator), of inhalation.
- 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** : Prolonged or repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. Prolonged exposure to high vapour concentration can cause headache, dizziness, nausea and central nervous system depression.  
High level exposure to Xylene in laboratory animals, often at levels which are toxic to the mother, have affected the development of the fetus. The relevance of this to humans is not known. (Benzene, dimethyl-)
- Special remarks on other toxic effects on humans** : Material is irritating to mucous membranes and upper respiratory tract. (Acetic Acid, Butyl Ester)
- Specific effects**
- Carcinogenic effects** : Contains material which can 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, CO<sub>2</sub>) 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: Methanol  
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:  
2-Propanol: Fire hazard, Delayed (chronic) health hazard; Benzene, ethyl-: Fire hazard, Immediate (acute) health hazard; Benzene, dimethyl-: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Acetic Acid, Butyl Ester; Acetic acid, 2-methylpropyl ester: Fire hazard, Immediate (acute) health hazard; 1-Propanol, 2-methyl-: Fire hazard, Delayed (chronic) health hazard; Isobutyl alcohol: Fire hazard, Delayed (chronic) health hazard  
Clean Water Act (CWA) 307: Benzene, ethyl-  
Clean Water Act (CWA) 311: No products were found.  
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  
Illinois toxic substances disclosure to employee act: Benzene, ethyl-  
New York release reporting list: Acetic Acid, Butyl Ester; Methanol  
New York acutely hazardous substances: Benzene, ethyl-  
Rhode Island RTK hazardous substances: Benzene, ethyl-; Methanol  
Pennsylvania RTK: Benzene, 1,2,4-trimethyl-; 2-Propanol; Acetic acid, 2-methylpropyl ester; Benzene, ethyl-; Benzene, dimethyl-; Acetic Acid, Butyl Ester; Acetic acid, 2-methylpropyl ester; Isopropyl alcohol; Benzene, methyl-; Ethanol; Methanol: (environmental hazard)  
Florida: Benzene, ethyl-; Acetic Acid, Butyl Ester; Methanol  
Minnesota: Benzene, ethyl-; Acetic Acid, Butyl Ester; Ethanol; Methanol  
Massachusetts RTK: 2-Propanol; Acetic acid, 2-methylpropyl ester; Benzene, ethyl-; Acetic Acid, Butyl Ester; Acetic acid, 2-methylpropyl ester; Isopropyl alcohol; Ethanol; Methanol  
New Jersey: Benzene, 1,2,4-trimethyl-; 2-Propanol; Acetic acid, 2-methylpropyl ester; Benzene, ethyl-; Acetic Acid, Butyl Ester; Acetic acid, 2-methylpropyl ester; Isopropyl alcohol; Benzene, methyl-; Ethanol; Methanol  
TSCA 8(b) inventory: 2-Propanol; Acetic acid, 2-methylpropyl ester; Benzene, ethyl-; Benzene, dimethyl-; Acetic Acid, Butyl Ester; Acetic acid, 2-methylpropyl ester; Isopropyl alcohol; Benzene, methyl-; Ethanol; N-Butyl Alcohol  
TSCA 5(e) substance consent order: Acetic Acid, Butyl Ester  
TSCA 8(d) H and S data reporting: Benzene, ethyl-  
TSCA 12(b) annual export notification: Acetic Acid, Butyl Ester  
SARA 302/304/311/312 hazardous chemicals: Methanol



## 15 . Regulatory information

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:  
 2-Propanol: Fire hazard, Delayed (chronic) health hazard; Benzene, ethyl-: Fire hazard, Immediate (acute) health hazard; Benzene, dimethyl-: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Acetic Acid, Butyl Ester; Acetic acid, 2-methylpropyl ester: Fire hazard, Immediate (acute) health hazard; 1-Propanol, 2-methyl-: Fire hazard, Delayed (chronic) health hazard; Isobutyl alcohol: Fire hazard, Delayed (chronic) health hazard  
 CERCLA: Hazardous substances.: Acetic acid, 2-methylpropyl ester; Benzene, ethyl-: 1000 lbs. (453.6 kg); Benzene, dimethyl-: 100 lbs. (45.36 kg); Acetic Acid, Butyl Ester; Acetic acid, 2-methylpropyl ester; Benzene, methyl-: 1000 lbs. (453.6 kg); 1-Propanol, 2-methyl-; Acetone; Methanol; Isobutyl alcohol; N-Butyl Alcohol;

<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.
Formaldehyde	Yes.	No.	No.	No.
Benzene, methyl-	No.	Yes.	No.	No.

### Canada

- WHMIS (Canada)** :
- Class B-2: Flammable liquid
  - Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
  - 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.
  - CANCER HAZARD.
  - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.
  - CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, KIDNEYS, LUNGS, NERVOUS SYSTEM, LIVER.

### **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

## 16 . Other information

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.