



# Safety Data Sheet

## GEM SEAL CONVERSION SEALER



### 1. Identification

<b>Product identifier</b>	GEM SEAL CONVERSION SEALER		
<b>Product code</b>	CVS-0100		
<b>Other means of identification</b>	None.		
<b>Recommended use of the chemical and restrictions on use</b>	A protective and/or decorative finish or accompanying paint product. Not recommended for any other use not detailed on product data sheet or label.		
<b>Manufacturer</b>	GEMINI INDUSTRIES, INC. 2300 Holloway Drive El Reno, OK 73036 USA  Tel. 1-800-262-5710 Fax 1-405-262-9310 <a href="http://www.geminicoatings.com">www.geminicoatings.com</a>		
<b>Emergency phone number</b>	24-hour Emergency (Spill, Leak, Exposure or accident) INFOTRAC 800-535-5053 Outside USA, Call Collect 1-352-323-3500 (French & English)  HAZMAT Response and MSDS Help: EMI 800-510-8510		

### 2. Hazard identification

<b>Summary</b>	FLAMMABLE LIQUID! Keep away from heat, sparks and open flame. Avoid contact with skin, eyes and clothing. Do not breathe vapours, mists or aerosols. Do not ingest. If ingested consult physician immediately and show this Safety Data Sheet. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved.
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#### WHMIS 2015/OSHA HCS 2012/GHS

- Flammable liquids (Category 2)
- Skin corrosion/irritation (Category 2)
- Serious eye damage/eye irritation (Category 1)
- Respiratory sensitizer (Category 1)
- Skin sensitizer (Category 1)
- Germ cell mutagenicity (Category 1B)
- Carcinogenicity (Category 1A)
- Reproductive toxicity (Category 2)
- Specific target organ toxicity, single exposure (Category 3)
- Specific target organ toxicity, repeated exposure (Category 2)

**Other hazards which do not result in classification :**  
Acute hazard to the aquatic environment (Category 2).

#### DANGER

- H225: Highly Flammable liquid and vapour
- H318: Causes serious eye damage
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled

H350: May cause cancer  
H340: May cause genetic defects  
H315: Causes skin irritation  
H317: May cause an allergic skin reaction  
H335: May cause respiratory irritation  
H336: May cause drowsiness or dizziness  
H361: Suspected of damaging fertility or the unborn child  
H373: May cause damage to organs through prolonged or repeated exposure  
H401: Toxic to aquatic life  
P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P210: Keep away from heat, sparks, open flames and other ignition sources. No smoking.  
P240: Ground or bond container and receiving equipment.  
P241: Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.  
P242: Use only non-sparking tools.  
P243: Take precautionary measures against static discharge.  
P260: Do not breathe mist, vapours and spray.  
P264: Wash skin thoroughly after handling.  
P271: Use only in a well-ventilated area.  
P272: Contaminated work clothing should not be allowed out of the workplace.  
P273: Avoid release to the environment.  
P280: Wear protective gloves, protective clothing and eye protection.  
P284: In case of inadequate ventilation, wear respiratory protection.  
P303+361+353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water and soap or take a shower if necessary.  
P333+313: If skin irritation or a rash occurs: Get medical advice/attention.  
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P342+311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
P314: Get Medical advice/attention if you feel unwell.  
P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P310: Immediately call a POISON CENTER or doctor/physician.  
P308+313: IF exposed or concerned: Get medical advice/attention.  
P321: Specific treatment (see section 4 of SDS or on this label).  
P362+364: Take off contaminated clothing and wash before reuse.  
P370+378: In case of fire: Use the National Fire Protection Association Class B extinguisher for extinction.  
P403+P235+P233: Store in a well-ventilated place. Keep container tightly closed. Keep cool.  
P405: Store locked up.  
P501: Dispose of contents and container to an approved waste disposal plant.

### 3. Composition/information on ingredients

Common name	CAS	Weight % content
Isobutyl acetate	110-19-0	16 - 18 %
Ethyl Alcohol	64-17-5	13 - 15 %
Acetone	67-64-1	12 - 14 %
Butyl acetate (normal)	123-86-4	9.5 - 10.5 %
Urea, polymer with formaldehyde, isobutylated	68002-18-6	8.5 - 9.5 %
Ethyl Acetate	141-78-6	8.5 - 9.5 %
2-Butenedioic acid (Z)-, dibutyl ester, polymer with chloroethene and 1,2-propanediol mono-2-propenoate	114653-42-8	4.5 - 5.5 %
Xylene	1330-20-7	4.5 - 5.5 %
Isobutyl alcohol	78-83-1	3.5 - 4.5 %

Cellulose acetate butyrate	9004-36-8	2.5 - 3.5 %
Naphtha (petroleum), hydrotreated heavy (C6-C13)	64742-48-9	0.5 - 1.5 %
Ethylbenzene	100-41-4	0.5 - 1.5 %
Formaldehyde	50-00-0	0.1 - 0.5 %
Stoddard solvent (Mineral Spirits)	8052-41-3	0.1 - 0.5 %
Solvent naphtha (petroleum), light aromatic (C8 to C10)	64742-95-6	0.1 - 0.5 %

#### 4. First-aid measures

<b>Inhalation</b>	Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. If a problem develops or persists, seek medical attention.
<b>Skin contact</b>	Wash skin with warm water and mild soap for at least 15 minutes. Remove contaminated clothing and wash before reuse. Avoid touching eyes with contaminated body parts. If a problem develops or persists, seek medical attention.
<b>Eye contact</b>	IMMEDIATELY! Flush with water for at least 15 minutes. Remove contact lenses. Hold eyelids apart to rinse properly. If a problem develops or persists, seek medical attention.
<b>Ingestion</b>	DO NOT induce vomiting, unless recommended by medical personnel. Never give anything by mouth if victim is unconscious or convulsing. If victim is conscious wash out mouth with water and give 1-2 glasses of water to drink. If spontaneous vomiting occurs, keep head below hip level to prevent aspiration into the lungs. Seek medical attention or contact a Poison Centre immediately.
<b>Other</b>	No information available.
<b>Symptoms</b>	May cause severe eye irritation or eye damage. May cause eye irritation. May cause an allergic reaction of the skin. May cause respiratory tract irritation. Inhalation of vapours may cause central nervous system depression such as drowsiness, headache, dizziness, vertigo, nausea and fatigue. May cause an allergic respiratory reaction with symptoms similar to asthma such as wheezing and chest tightness.
<b>Notes to the physician</b>	Treat symptomatically. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Class B extinguishers. Dry chemicals, alcohol resistant foam, carbon dioxide (CO <sub>2</sub> ). Do not use direct water jet.
<b>Specific hazards arising from the chemical</b>	Very flammable liquid and vapours. May be ignited by heat, sparks, flame or static electricity. Vapours are heavier than air and may travel to an ignition source distant from the material handling point. Do not apply to hot surfaces. Contact with strong oxidizers may cause fire. In a fire or if heated, a pressure increase will occur and the container may burst. Emits toxic fumes under fire conditions.
<b>Special protective equipment</b>	Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.
<b>Special protective actions for fire-fighters</b>	Use water spray to cool fire-exposed containers. Water spray can reduce the intensity of the flames. However, the water jets can spread the fire. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency</b>	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
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<b>procedures</b>	
<b>Environmental precautions</b>	Prevent entry in sewer and other enclosed area. For a large spill, consult the Department of Environment or the relevant authorities.
<b>Methods and materials for containment and cleaning up</b>	Remove sources of ignition. Ventilate the area well. Stop leak, if it's possible to do so without risk. Absorb with inert material (soil, sand, vermiculite) and place in an appropriate waste disposal clearly identified. Use non-sparking and antistatic tools. Dispose via a licensed waste disposal contractor. Finish cleaning the contaminated surface by rinsing with soapy water. PS: Rags and others materials soaked with paint or solvent may spontaneously catch fire if improperly store or discarded. Immediately after each use place rags and paper towels in a sealed water-filled metal container to prevent spontaneous combustion.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Keep away from heat, sparks and open flame. Turn off all pilot lights, flames, stoves, heaters, electric motors, welding equipment and other sources of ignition. Use non-sparking and antistatic tools. Ground/bond all containers when transferring large quantities (5 gallons US or 20 L and more). Use only in well ventilated area. Avoid prolonged or repeated breathing of vapour or mists. Avoid contact with skin, eyes and clothing. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved. Keep containers tightly closed when not in use. Containers of this material may be hazardous even when empty. Since empty containers retain product residues (vapour, liquid), all hazard precautions given in this sheet must be observed. Do not eat, do not drink and do not smoke during use. Wash hands, forearms and face thoroughly after handling this compound and before eating, drinking or using toiletries. Remove contaminated clothing and wash before reuse. Rags, steel wool and paper towels soaked with this product may overheat and spontaneously ignite if piled in a heap. After use immediately store them in water-filled metal can with tight fitting lid.
<b>Conditions for safe storage, including any incompatibilities</b>	Storage and handling should follow the NFPA 30 Flammable and/or Combustible Liquids Code and the National Fire Code of Canada (NFCC). Store tightly closed and in properly labelled container in a dry, cool and well ventilated place. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from oxidizing materials and incompatible materials (see section 10).
<b>Storage temperature</b>	10 to 25°C (50 to 77°F)

## 8. Exposure controls/personal protection

<b>Immediately Dangerous to Life or Health</b>	N-Butyl acetate: 1700 ppm. Ethyl alcohol: 3300 ppm. Isobutyl acetate: 1300 ppm. Isobutyl alcohol: 1600 ppm. Xylenes: 900 ppm. Acetone: 2500 ppm. Ethylbenzene: 800 ppm. Formaldehyde: 20 ppm. Ethyl acetate: 2000 ppm. Stoddard solvent (Mineral Spirits): 20000 mg/m <sup>3</sup> .			
Isobutyl acetate	TWA (8h)	150 ppm		ACGIH , BC, ON
		150 ppm	713 mg/m <sup>3</sup>	RSST
Ethyl Alcohol	STEL	1000 ppm		ACGIH , BC, ON
	TWA (8h)	1000 ppm	1880 mg/m <sup>3</sup>	RSST
Acetone	STEL	500 ppm		ACGIH , BC
		750 ppm	1782 mg/m <sup>3</sup>	ON
		1000 ppm	2380 mg/m <sup>3</sup>	RSST
	TWA (8h)	250 ppm		ACGIH , BC
		500 ppm	1188 mg/m <sup>3</sup>	ON

Butyl acetate (normal)	STEL	500 ppm	1190 mg/m <sup>3</sup>	RSST
		200 ppm		ACGIH , ON
Ethyl Acetate	TWA (8h)	200 ppm	950 mg/m <sup>3</sup>	RSST
		20 ppm		BC
	150 ppm		ACGIH , ON	
	150 ppm	713 mg/m <sup>3</sup>	RSST	
Xylene	TWA (8h)	150 ppm		BC
		400 ppm		ACGIH , ON
	400 ppm	1440 mg/m <sup>3</sup>	RSST	
	150 ppm		ACGIH , BC, ON	
Isobutyl alcohol	TWA (8h)	150 ppm	651 mg/m <sup>3</sup>	RSST
		100 ppm		ACGIH , BC, ON
	100 ppm	434 mg/m <sup>3</sup>	RSST	
Naphtha (petroleum), hydrotreated heavy (C6-C13)	TWA (8h)	50 ppm		ACGIH , BC, ON
		50 ppm	152 mg/m <sup>3</sup>	RSST
Ethylbenzene	TWA (8h)	5 mg/m <sup>3</sup>		ACGIH , RSST
		300 ppm		OSHA
	125 ppm	543 mg/m <sup>3</sup>	RSST	
Stoddard solvent (Mineral Spirits)	TWA (8h)	20 ppm		ACGIH , BC, ON
		100 ppm	434 mg/m <sup>3</sup>	RSST
	100 ppm	580 mg/m <sup>3</sup>	BC	
Formaldehyde	Ceiling	290 mg/m <sup>3</sup>		BC
		100 ppm	525 mg/m <sup>3</sup>	ACGIH , ON, RSST
	0.3 ppm	0.37 mg/m <sup>3</sup>	ACGIH	
	1 ppm		BC	
	1.5 ppm		ON	
	2 ppm	3 mg/m <sup>3</sup>	RSST (C2, EM, RP)	
STEL	1 ppm		ON	
	TWA (8h)	0.3 ppm		BC

<b>Appropriate engineering controls</b>	Provide sufficient mechanical ventilation (general and/or local exhaust) to keep the airborne concentrations of vapours, mists, aerosols or dust below their respective occupational exposure limits.
<b>Individual protection measures</b>	
<b>Eye</b>	Wear chemical splash goggles.
<b>Hands</b>	Wear nitrile or neoprene gloves. Before using, user should confirm impermeability. Discard gloves with tears, pinholes, or signs of wear. Gloves must only be worn on clean hands. Wash gloves with water before removing them. After using gloves, hands should be washed and dried thoroughly.
<b>Skin</b>	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code. Wear an apron or long-sleeve protective coverall suit.
<b>Respiratory</b>	Respiratory protection is not required for normal use. Respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations and CSA Standard Z 94.4 and approved by NIOSH / MSHA. In case of insufficient ventilation or in confined or enclosed space and for an assigned protection factor (APF) up to 10 times the exposure limit, wear a half mask respirator with organic vapour cartridges fitted with P100 filters. For an APF until maximum 100 times of exposure limit, wear a full face respirator mask with organic vapour cartridges and P100 filters.
<b>Feet</b>	Wear rubber boots to clean up a spill.

## 9. Physical and chemical properties

Physical state	Liquid	Flammability	Flammable
Colour	Clear or coloured	Flammability limits	N/Av.
Odour	Solvent odor	Flash point	-4°C (24.8°F)
Odour threshold	N/Av.	Auto-ignition temperature	N/Av.
pH	N/Av.	Sensibility to electrostatic charges	Yes
Melting point	N/Av.	Sensibility to sparks and/or friction	No
Freezing point	N/Av.	Vapour density	>1 (Air = 1)
Boiling point	56 to 141°C (132.8 to 285.8°F)	Relative density	0.904 kg/L (Water = 1)
Solubility	Partially soluble in water.	Partition coefficient n-octanol/water	N/Av.
Evaporation rate	> Butyl Acetate	Decomposition temperature	N/Av.
Vapour pressure	N/Av.	Viscosity	N/Av.
Percent Volatile	76.56%	Molecular mass	N/Av.
N/Av.: Not Available    N/Av.: Not Applicable    Und.: Undetermined    N/E: Not Established			

## 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions (including polymerizations)	A dangerous reaction will not occur.
Conditions to avoid	Avoid heat, flame and sparks. Avoid electro-static discharge. Avoid contact with incompatible materials.
Incompatible materials	Strong bases, mineral acids, strong oxidizing agents (such as nitric acid, perchloric acid, peroxides, chlorates and perchlorates).
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

Numerical measures of toxicity	Isobutyl acetate	Ingestion	13400 mg/kg	Rat	LD50
		Inhalation	>38 mg/l/4h	Rat	LC50
		Skin	>17400 mg/kg	Rabbit	LD50
	Ethyl Alcohol	Ingestion	7060 mg/kg	Rat	LD50
		Inhalation	39 mg/l/4h	Mouse	LC50
		Skin	20000 mg/kg	Rabbit	LD50
	Acetone	Ingestion	5800 mg/kg	Rat	LD50
		Inhalation	71.4 mg/l/4h	Rat	LC50
		Skin	15800 mg/kg	Rabbit	LD50
	Butyl acetate (normal)	Ingestion	10768 mg/kg	Rat	LD50

		Inhalation >32.5 mg/l/4h	Rat	LC50
		Skin >17600 mg/kg	Rabbit	LD50
	Ethyl Acetate	Ingestion 5620 mg/kg	Rat	LD50
		Inhalation 38.2 mg/l/4h	Mouse	LC50
		Skin >18000 mg/kg	Rabbit	LD50
	Urea, polymer with formaldehyde, isobutylated	Ingestion >5000 mg/kg	Rat	LD50
		Skin >5000 mg/kg	Rabbit	LD50
	2-Butenedioic acid (Z)-, dibutyl ester, polymer with chloroethene and 1,2-propanediol mono-2-propenoate	Ingestion >2000 mg/kg	Rat	LD50
		Skin >2000 mg/kg	Rabbit	LD50
	Xylene	Ingestion 3523 mg/kg	Rat	LD50
		Inhalation 27.6 mg/l/4h	Rat	LC50
		Skin 3200 mg/kg	Rabbit	LD50
	Isobutyl alcohol	Ingestion 2460 mg/kg	Rat	LD50
		Inhalation 19.2 mg/l/4h	Rat	LC50
		Skin 3400 mg/kg	Rabbit	LD50
	Cellulose acetate butyrate	Ingestion >3200 mg/kg	Rat	LD50
			Guinea	
		Skin >1000 mg/kg	pig	LD50
	Naphtha (petroleum), hydrotreated heavy (C6-C13)	Ingestion >10000 mg/kg	Rat	LD50
		Inhalation >8.5 mg/l/4h	Rat	LC50
		Skin >3200 mg/kg	Rabbit	LD50
	Ethylbenzene	Ingestion 3500 mg/kg	Rat	LD50
		Inhalation 17.3 mg/l/4h	Rat	LC50
		Skin 15380 mg/kg	Rabbit	LD50
	Formaldehyde	Ingestion 42 mg/kg	Mouse	LD50
		Inhalation 250 ppm/4h	Rat	LC50
			414 ppm/4h	Mouse
		Skin 270 mg/kg	Rabbit	LD50
	Solvent naphtha (petroleum), light aromatic (C8 to C10)	Ingestion 8400 mg/kg	Rat	LD50
		Inhalation >5.2 mg/l/4h	Rat	LC50
		Skin >3750 mg/kg	Rabbit	LD50
	Stoddard solvent (Mineral Spirits)	Ingestion >5000 mg/kg	Rat	LD50
		Inhalation >12 mg/l/4h	Rat	LC50
		Skin >3000 mg/kg	Rabbit	LD50

**Likely routes of exposure**

Skin, eyes, inhalation, ingestion.

**Delayed, immediate and chronic effects**

<b>Eye contact</b>	May cause severe eye irritation or eye damage. Isobutyl alcohol is a severe eye irritant in rabbits (OECD 405). Eye Irritation/Corrosion, Rabbit (OECD TG 405): tests performed with the other ingredients of this mixture gave not irritating to irritating results.
<b>Skin contact</b>	May be harmful by skin contact. May cause redness, dryness, rash and skin irritation. Prolonged and repeated contact may cause dry skin, irritation or dermatitis. Skin Irritation/Corrosion, Rabbit (OECD 404) : tests performed with each ingredient of this mixture gave not irritating to irritating results.
<b>Inhalation</b>	Excessive inhalation is harmful. May cause respiratory tract irritation. Inhalation of vapours may cause central nervous system depression such as drowsiness, headache, dizziness, vertigo, nausea and fatigue. The severity of symptoms may vary depending on exposure conditions.
<b>Ingestion</b>	May be harmful if swallowed. Ingestion of large amounts may cause depression of the central nervous system characterized by headache, dizziness, convulsions and loss of consciousness.
<b>Respiratory or skin sensitization</b>	Aqueous formaldehyde solutions cause skin sensitization. However, free formaldehyde gas does not cause skin sensitization. Formaldehyde can cause asthma attacks due to allergic sensitization of the respiratory tract.

	<p><b>IARC/NTP Classification</b>      <b>Common name IARC NTP</b>  Ethylbenzene    2B    -  Formaldehyde    1      R  IARC : 1- Carcinogenic; 2A- Probably carcinogenic; 2B- Possibly carcinogenic.  NTP : K- Known to be carcinogens; R- Reasonably anticipated to be carcinogens.</p> <p><b>Carcinogenicity</b>      Contains material which can cause cancer. Contains trace amounts (&gt;0.1%) of free formaldehyde (CAS no. 50-00-0) which is classified as carcinogenic to humans (IARC, Group 1). In the absence of specific test data, the classification of stoddard solvent (Mineral Spirits) (CAS no 8052-41-3) should be determined based on the levels of benzene (CAS no. 71-43-2). This classification need not apply if it can be shown that the chemical contains less than 0.1 % w/w benzene. In the absence of specific test data, the classification of the mixture solvent naphtha (petroleum), light aromatic (C8-C10) (CAS No. 64742-95-6) should be determined based on the levels of benzene (CAS no. 71-43-2). This classification need not apply if it can be shown that the chemical contains less than 0.1 % w/w benzene. In the absence of specific test data, the classification of Naphtha (petroleum), hydrotreated heavy (C6-C13) (CAS no 64742-48-9) should be determined based on the levels of benzene (CAS no. 71-43-2). This classification need not apply if it can be shown that the chemical contains less than 0.1 % w/w benzene.</p> <p><b>Mutagenicity</b>      Formaldehyde has positive data on somatic cell mutagenicity tests in vivo (SIDS). In the absence of specific test data, the classification of the mixture solvent naphtha (petroleum), light aromatic (C8-C10) (CAS No. 64742-95-6) should be determined based on the levels of benzene (CAS no. 71-43-2). This classification need not apply if it can be shown that the chemical contains less than 0.1 % w/w benzene. In the absence of specific test data, the classification of stoddard solvent (Mineral Spirits) (CAS no 8052-41-3) should be determined based on the levels of benzene (CAS no. 71-43-2). This classification need not apply if it can be shown that the chemical contains less than 0.1 % w/w benzene. In the absence of specific test data, the classification of Naphtha (petroleum), hydrotreated heavy (C6-C13) (CAS no 64742-48-9) should be determined based on the levels of benzene (CAS no. 71-43-2). This classification need not apply if it can be shown that the chemical contains less than 0.1 % w/w benzene.</p> <p><b>Reproductive toxicity</b>      Xylene overexposure may affect fetal development in laboratory animals by inhalation during pregnancy.  <b>Specific target organ toxicity - single exposure</b>      Central nervous system, respiratory system.  <b>Specific target organ toxicity - repeated exposure</b>      Hearing organs.</p>
<b>Interactive effects</b>	No information available for this product.
<b>Other information</b>	The acute toxicity estimate (ATE) by inhalation of the mixture was calculated to be greater than 20 mg/L/4h. This value is not classified according to GHS. The oral and skin acute toxicity estimates (ATE) of the mixture were calculated to be greater than 2000 mg/kg. These values are not classified according to WHMIS 2015 and OSHA HCS 2012.


## 12. Ecological information

<b>Ecological toxicity</b>	Fish - Oncorhynchus mykiss - Rainbow trout      LC50 4.74-6.33 mg/L; 96 h (acetone) Aquatic Invertebrate - Daphnia magna      EC50 12600-12700 mg/L; 48 h (acetone) Fish - Pimephales promelas [flow-through]      LC50 18 mg/L; 96h (Butyl acetate) Aquatic Plant - Algea, Desmodesmus subspicatus      EC50 675 mg/L; 72h (Butyl acetate) Fish - Pimephales promelas - Fresh water      LC50 1370-1670 mg/L; 96 h (Isobutyl alcohol) Aquatic Invertebrate - Daphnia magna      EC50 1300 mg/L; 48 h (Isobutyl alcohol) Fish - Oncorhynchus mykiss - Rainbow trout      LC50 13.5-17.3 mg/L; 96 h (Xylene) Aquatic Invertebrate - Daphnia magna      EC50 3.82 mg/L; 48 h (Xylene) Fish - Pimephales promelas - Fresh water      LC50 22.6-25.7 mg/L; 96 h (Formaldehyde)
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	<p>Aquatic Invertebrate - Daphnia magna EC50 2 mg/L; 48 h (Formaldehyde)</p> <p>Fish - Pimephales promelas [flow-through] LC50 13400-15100 mg/L; 96 h (ethyl alcohol)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 9268-14221 mg/L; 48 h (ethyl alcohol)</p> <p>Fish - Oncorhynchus mykiss - Rainbow trout LC50 4.2 mg/L; 96 h (Ethylbenzene)</p> <p>Aquatic invertebrate - Crangon franciscorum EC50 0.49 mg/L; 48 h (Ethylbenzene)</p> <p>Fish - Pimephales promelas - Fresh water LC50 220 mg/L; 96h (ethyl acetate)</p> <p>Aquatic Invertebrate - Daphnia magna (static) EC50 560 mg/L; 48h (ethyl acetate)</p>
<b>Persistence</b>	Inorganic compounds persist in the environment indefinitely or incorporate into biological systems. Contains an or many ingredients that may be persistent in aquatic environment.
<b>Degradability</b>	Isobutyl acetate is expected to biodegrade in soil and water environments based on 5- and 20- day theoretical biochemical oxygen demands of 60% and 81%, respectively, in fresh water dilution tests (TOXNET). Ethanol is readily biodegradable under aerobic and anaerobic conditions (OECD Test Guideline 301D). Acetone undergoes slow photolysis in air (half-life time T <sub>1/2</sub> = 80 h) and in water (T <sub>1/2</sub> >43 h). n-Butyl acetate is readily biodegradable (96% in 28 days) OECD Guideline 301D. Ethyl acetate is readily biodegradable, 94% in 28 days (OECD Guideline 301B). Isobutyl alcohol is readily biodegradable, 74% in 28 days (OCDE 301D). Xylene in air is rapidly decomposed by photochemical processes, mainly through oxidation by hydroxyle free radicals as well as some decomposition by direct photolysis. The half-life time in air is estimated to be from 9.5 to 19.7 hours depending to the isomer. Xylene is readily biodegradable at 68% in 10 days and at 88% in 28 days (OECD Guideline 301F) with BOD <sub>5</sub> /COD ratio of 0.97 (IUCRID). Degradation of Nitrocellulose involves complex dissociation into a wide variety of products. Since it is not soluble in water, the biodegradation by a sludge-soil mixture will be done over a long period of time (TOXNET). Formaldehyde is readily biodegradable, 90% in 28 days (OECD 301D). Stoddard solvent (Mineral Spirits) is not rapidly degrading, according to Biochemical Oxygen Demand (BOD) of 12-13% (EHC187, 1996).
<b>Bioaccumulative potential</b>	Isobutyl alcohol has a low potential to bioaccumulate with a bioconcentration factor (BCF) of 3 (TOXNET). Ethanol has a Bioconcentration Factor (BCF) value of <10, and its Log Kow value is <0, indicating its potential to bioaccumulate is low. Acetone has a Bioconcentration Factor (BCF) of 0.65 and a partition factor Log Kow of -0.24, indicating no bioaccumulation. n-Butyl acetate has a low potential for bioaccumulation based on estimated bioconcentration factors (BCF) of 15.3 and low partition coefficient (Log Kow 2.3). Ethyl acetate has a Bioconcentration Factor (BCF) of 3 in fish and a partition factor Log Kow of 0.73, indicating no bioaccumulation in aquatic organisms (TOXNET). Isobutyl acetate is not expected to bioaccumulate based on a bioconcentration factor (BCF) of 7 and a partition coefficient Log Kow of 1.78 (TOXNET). Xylene has Bioconcentration Factor (BCF) of of 6 to 23.4 and a partition factor Log Kow of 3.1 to 3.2, depending to the isomer. These values suggest a low potential of bioaccumulation (TOXNET). Ethylbenzene has a low potential for bioaccumulation (BCF) of 1.1 to 15 were measured in four species of fish. It has low water solubility and a moderate partition coefficient (Log Kow of 3.15). Formaldehyde is not expected to bioaccumulate with an estimated bioconcentration factor (BCF) of 3 (TOXNET).
<b>Mobility in soil</b>	Isobutyl acetate is expected to have very high mobility in water based on an estimated Koc of 16 (TOXNET). Ethanol is very soluble in water. The resultant Koc of 1 indicates that ethanol released in soil would move quickly through the soil. It will be distributed mainly in the atmosphere (57%) and water (34%). Acetone evaporates very rapidly from dry soil surfaces. It is very soluble in water and it is expected to have very high mobility in soil with no adsorption to sediment. n-Butyl acetate will be distributed to air (93.4%), water (5.78%), soil (0.792%), and sediment (<0.1%). The Koc value of n-butyl acetate can be estimated to be 19, suggesting that it is expected to have very high mobility in soil. The Koc value of ethyl acetate can be estimated to be 18, suggesting that it is expected to have very high mobility in soil (TOXNET). Isobutyl alcohol should have a very high mobility in soil with an estimated Koc value of 2.9 (TOXNET) and it distributes itself into the atmosphere (32.02%), water (67.92%), soil (0.03%), and sediments (0.03%). Xylene will rapidly evaporate into the atmosphere because of its low soil absorption and its low solubility in water. Koc values range from 39-365 for the individual isomers. These values suggest that xylenes are expected to have high to moderate mobility in soil (TOXNET). Ethylbenzene is expected to have a moderate mobility in soil with an estimated Koc value of 520 (TOXNET). Formaldehyde is expected to have high mobility in soil with an estimated Koc value of 8 (TOXNET).
<b>Other adverse effects</b>	This chemical does not deplete the ozone layer.

## 13. Disposal considerations

	<p><b>Container</b></p> <p>Important! Prevent waste generation. Use in full. DO NOT dispose of residue in sewers, streams or drinking water supply. Paint residues, including lacquers, stains, shellac, varnish, solvents and paint thinners, can be reprocessed (recycle) anywhere there is a recovery program. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities.</p>
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## 14. Transport information

<b>UN Number</b>	UN 1263
<b>UN Proper Shipping Name</b>	PAINT
<b>Environmental hazards</b>	This material does not contain marine pollutant.
<b>Special precautions for user</b>	Permit required for transportation with proper placards displayed on vehicle.
<b>TDG - Transportation of Dangerous Goods (Canada)</b>	
<b>Transport hazard class(es)</b>	 Class 3
<b>Packing group</b>	II
<b>IMO/IMDG - International Maritime Transport</b>	
<b>Classification</b>	UN 1263. PAINT. Class 3, PG II. Emergency schedules (EmS-No) F-E, S-E
<b>IATA - International Air Transport Association</b>	
<b>Classification</b>	UN 1263. PAINT. Class 3, PG II.
<p>These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. In addition, if a domestic exemption exists, it is the responsibility of the shipper to define the application of it.</p>	

## 15. Regulatory information

### CANADA

Common name	CAS	CEPA	DSL	NDSL	NPRI
Isobutyl acetate	110-19-0		X		
Ethyl Alcohol	64-17-5	X	X		X
Acetone	67-64-1		X		
Butyl acetate (normal)	123-86-4	X	X		X
Urea, polymer with formaldehyde, isobutylated	68002-18-6		X		
Ethyl Acetate	141-78-6	X	X		X
2-Butenedioic acid (Z)-, dibutyl ester, polymer with chloroethene and 1,2-propanediol mono-2-propenoate	114653-42-8		X		
Xylene	1330-20-7	X	X		X
Isobutyl alcohol	78-83-1	X	X		X
Cellulose acetate butyrate	9004-36-8		X		
Naphtha (petroleum), hydrotreated heavy (C6-C13)	64742-48-9	X	X		X
Ethylbenzene	100-41-4	X	X		X
Formaldehyde	50-00-0	X	X		X
Stoddard solvent (Mineral Spirits)	8052-41-3	X	X		X

Solvent naphtha (petroleum), light aromatic (C8 to C10)	64742-95-6	X	X		X
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- CEPA: List of Toxic Substances Managed Under Canadian Environmental Protection Act
- DSL: Domestic Substances List Inventory
- NDSL: Non-Domestic Substances List Inventory
- NPRI: National Pollutant Release Inventory Substances

**UNITED STATE OF AMERICA**

Common name	CAS	TSCA	CERCLA	EPCRA 313	EPCRA 302/304	CAA 112(b) HON	CAA 112(b) HAP	CAA 112(r)	CWA 311	CWA Priority
Isobutyl acetate	110-19-0	X	X							
Ethyl Alcohol	64-17-5	X								
Acetone	67-64-1	X	X			X				
Butyl acetate (normal)	123-86-4	X	X						X	
Urea, polymer with formaldehyde, isobutylated	68002-18-6	X								
Ethyl Acetate	141-78-6	X	X							
2-Butenedioic acid (Z)-, dibutyl ester, polymer with chloroethene and 1,2-propanediol mono-2-propenoate	114653-42-8									
Xylene	1330-20-7	X	X	X		X	X		X	
Isobutyl alcohol	78-83-1	X	X							
Cellulose acetate butyrate	9004-36-8	X								
Naphtha (petroleum), hydrotreated heavy (C6-C13)	64742-48-9	X								
Ethylbenzene	100-41-4	X	X	X		X	X		X	X
Formaldehyde	50-00-0	X	X	X	X	X	X	X	X	
Stoddard solvent (Mineral Spirits)	8052-41-3	X								
Solvent naphtha (petroleum), light aromatic (C8 to C10)	64742-95-6	X								

- TSCA: Toxic Substance Control Act
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act list of hazardous substances
- EPCRA 313: Emergency Planning and Community Right-to-Know Act, Section 313 Toxic Chemicals
- EPCRA 302/304: Emergency Planning and Community Right-to-Know Act, Section 302/304 Extremely Hazardous Substances
- CAA 112(b) HON: Clean Air Act - Hazardous Organic National Emission Standard for Hazardous Air Pollutant
- CAA 112(b) HAP: Clean Air Act - Hazardous Air Pollutants lists pollutants
- CAA 112(r): Clean Air Act - Regulated Chemicals for Accidental Release Prevention
- CWA 311: Clean Water Act - List of Hazardous Substances
- CWA Priority: Clean Water Act - Priority Pollutant list

**California Proposition 65**

Common name	CAS	Cancer	Reproductive and Developmental Toxicity
Ethyl Alcohol	64-17-5	X	
Ethylbenzene	100-41-4	X	
Formaldehyde	50-00-0	X	

**Other regulations**

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**WHMIS 1988**

B2 D2A D2B

Class B2 : Flammable Liquid

Class D2A : Very toxic material causing other toxic effects

Class D2B : Toxic material causing other toxic effects

**HMIS****NFPA****16. Other information**

<b>Date</b> (YYYY-MM-DD)	GEMINI INDUSTRIES, INC. 2016-02-29
<b>Version</b>	01
<b>Other information</b>	<p>- This SDS and the GHS hazards classification is a French translation of the original English version (SDS) from the manufacturer.</p> <p>REFERENCES:</p> <ul style="list-style-type: none"> <li>- Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, <a href="http://hazmap.nlm.nih.gov/index.php">http://hazmap.nlm.nih.gov/index.php</a></li> <li>- TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a></li> <li>- Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), <a href="http://www.reptox.csst.qc.ca">http://www.reptox.csst.qc.ca</a></li> <li>- NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, <a href="http://www.cdc.gov/niosh/npg/npg.html">http://www.cdc.gov/niosh/npg/npg.html</a></li> <li>- IPCS INCHEM, Chemical Safety Information from Intergovernmental Organizations, Canadian Centre for Occupational Health and Safety (CCOHS), Copyright International Programme on Chemical Safety (IPCS), <a href="http://www.inchem.org">http://www.inchem.org</a></li> <li>- OECD Existing Chemicals Database, Chemicals Screening Information DataSet (SIDS) for High Volume Chemicals, UNEP publications, <a href="http://webnet.oecd.org/HPV/UI/Search.aspx">http://webnet.oecd.org/HPV/UI/Search.aspx</a></li> </ul> <p>ACGIH: American Conference of Governmental Industrial Hygienists          AIHA: American Industrial Hygiene Association          HMIS: Hazardous Materials Identification System          NFPA: National Fire Protection Association          OSHA: Occupational Safety and Health Administration (USA)          NIOSH: National Institute for Occupational Safety and Health          NTP: National Toxicology Program          RSST: Règlement sur la santé et la sécurité du travail (Québec)          GHS: Globally Harmonized System          IARC: International Agency for Research on Cancer          IDLH: Immediately Dangerous to Life or Health          STEL: Short Term Exposure Limit (15 min)          TWA: Time Weighted Averages          WHMIS: Workplace Hazardous Materials Information System</p> <p>To the best of our knowledge, the information contained herein is accurate. However, neither Préventis System 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.</p>