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Safety Data Sheet
GEM VAR SATIN CONV. VARNISH (1G)

1. Identification

Product identifier	GEM VAR SATIN CONV. VARNISH (1G)		
Product code	UCV-0030		
Other means of identification	None.		
Recommended use of the chemical and restrictions on use	A protective and/or decorative finish or accompanying paint product. Not recommended for any other use not detailed on product data sheet or label.		
Manufacturer	GEMINI INDUSTRIES, INC. 2300 Holloway Drive El Reno, OK 73036 USA Tel. 1-800-262-5710 Fax 1-405-262-9310 www.geminicoatings.com	**Distributor**	Gemini Industries, Inc. 850 Flint Road Toronto, Ontario Canada M3J 2T7 Tel. 1-800-262-5710
Emergency phone number	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

Summary	FLAMABLE 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.

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 1)
Carcinogenicity (Category 1)
Reproductive toxicity (Category 1)
Specific target organ toxicity, single exposure (Category 3)
Specific target organ toxicity, repeated exposure (Category 2)
Aspiration hazard (Category 1)

Other hazards which do not result in classification :
Acute hazard to the aquatic environment (Category 2).
Long-term 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
H360: May damage fertility or the unborn child
H304: May be fatal if swallowed and enters airways
H315: Causes skin irritation
H317: May cause an allergic skin reaction
H335: May cause respiratory irritation
H336: May cause drowsiness or dizziness
H373: May cause damage to organs through prolonged or repeated exposure
H411: Toxic to aquatic life with long lasting effects
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 face, hands and any exposed 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.
P301+310+331: IF SWALLOWED: Immediately call a POISON CENTER or a physician. Do NOT induce vomiting.
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 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.
P391: Collect spillage.
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 a licensed chemical disposal agency in accordance with local, regional and national regulations.

3. Composition/information on ingredients

Common name	**CAS**	**Weight % content**
n-Butyl Alcohol	71-36-3	17 - 19 %
Ethyl Alcohol	64-17-5	12 - 14 %
Toluene	108-88-3	11 - 13 %
Propylene glycol monomethyl ether	107-98-2	8 - 10 %
Xylene	1330-20-7	6.5 - 7.5 %
Cellulose acetate butyrate	9004-36-8	4.5 - 5.5 %
Silica - Amorphous, gel	112926-00-8	1.5 - 2.5 %

Ethylbenzene	100-41-4	1.5 - 2.5 %
Butyl acetate (normal)	123-86-4	1 - 2 %
Methyl Propyl Ketone	107-87-9	1 - 2 %
Formaldehyde	50-00-0	0.1 - 0.5 %
Solvent naphtha (petroleum), light aromatic (C8 to C10)	64742-95-6	0.1 - 1 %
1,2,4-Trimethylbenzene	95-63-6	0.1 - 1 %

4. First-aid measures

Inhalation	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.
Skin contact	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.
Eye contact	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.
Ingestion	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.
Other	No information available.
Symptoms	May cause severe eye irritation or eye damage. May cause skin 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.
Notes to the physician	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

Suitable extinguishing media	Class B extinguishers. Dry chemicals, alcohol resistant foam, carbon dioxide (CO2). Do not use direct water jet.
Specific hazards arising from the chemical	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.
Special protective equipment	Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.
Special protective actions for fire-fighters	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

Personal precautions, protective equipment and emergency	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.

procedures	
Environmental precautions	Prevent entry in sewer and other enclosed area. For a large spill, consult the Department of Environment or the relevant authorities.
Methods and materials for containment and cleaning up	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

Precautions for safe handling	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 transfering 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.
Conditions for safe storage, including any incompatibilities	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). Keep away from direct sunlight and heat.
Storage temperature	10 to 25°C (50 to 77°F)

8. Exposure controls/personal protection

Immediately Dangerous to Life or Health	N-Butyl acetate: 1700 ppm. Ethyl alcohol: 3300 ppm. Toluene: 500 ppm Xylenes: 900 ppm. Silica - Amorphous, gel: 3000 mg/m3. Ethylbenzene: 800 ppm. Formaldehyde: 20 ppm. n-Butyl Alcohol: 1400 ppm. Methyl Propyl Ketone: 1500 ppm.

n-Butyl Alcohol	Ceiling	30 ppm		BC
		50 ppm	152 mg/m^3	RSST (Pc, RP)
	TWA (8h)	15 ppm		BC
		20 ppm		ACGIH , ON
Ethyl Alcohol	STEL	1000 ppm		ACGIH , BC, ON
	TWA (8h)	1000 ppm	1880 mg/m^3	RSST
Toluene	TWA (8h)	20 ppm		ACGIH , BC, ON
		50 ppm	188 mg/m^3	RSST (Pc)
Propylene glycol monomethyl ether	STEL	75 ppm		BC
		100 ppm		ACGIH

			150 ppm		ON
			150 ppm	553 mg/m^3	RSST
	TWA (8h)		50 ppm		ACGIH , BC
			100 ppm		ON
			100 ppm	369 mg/m^3	RSST
Xylene	STEL		150 ppm		ACGIH , BC, ON
			150 ppm	651 mg/m^3	RSST
	TWA (8h)		100 ppm		ACGIH , BC, ON
			100 ppm	434 mg/m^3	RSST
Ethylbenzene	STEL		125 ppm	543 mg/m^3	RSST
	TWA (8h)		20 ppm		ACGIH , BC, ON
			100 ppm	434 mg/m^3	RSST
Silica - Amorphous, gel	TWA (8h)	Respirable Dust		6 mg/m^3	RSST
		Total Dust		10 mg/m^3	ACGIH , ON
Butyl acetate (normal)	STEL		200 ppm		ACGIH , ON
			200 ppm	950 mg/m^3	RSST
	TWA (8h)		20 ppm		BC
			150 ppm		ACGIH , ON
			150 ppm	713 mg/m^3	RSST
Methyl Propyl Ketone	Ceiling		150 ppm		ACGIH , ON
	STEL		250 ppm		BC
	TWA (8h)		150 ppm		BC
			150 ppm	530 mg/m^3	RSST
1,2,4-Trimethylbenzene	TWA (8h)		25 ppm		ACGIH , BC, ON
			25 ppm	123 mg/m^3	RSST
Formaldehyde	Ceiling		0.3 ppm	0.37 mg/m^3	ACGIH
			1 ppm		BC
			1.5 ppm		ON
			2 ppm	3 mg/m^3	RSST (C2, EM, RP)
	STEL		1 ppm		ON
	TWA (8h)		0.3 ppm		BC

Appropriate engineering controls	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.
Individual protection measures	
Eye	Wear chemical splash goggles.
Hands	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.
Skin	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. If necessary, wear an apron or long-sleeve protective coverall suit.
Respiratory	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.
Feet	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 (39.2°F)
Odour threshold	N/Av.	**Auto-ignition temperature**	N/Av.
pH	N/Ap.	**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	78 to 141°C (172.4 to 285.8°F)	**Relative density**	0.944 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	65.56%	**Molecular mass**	N/Ap.

N/Av.: Not Available N/Ap.: 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 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	n-Butyl Alcohol	Ingestion	2510 mg/kg	Rat	LD50
		Inhalation	24.2 mg/l/4h	Rat	LC50
		Skin	3400 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
	Toluene	Ingestion	5600 mg/kg	Rat	LD50
		Inhalation	30.2 mg/l/4h	Rat	LC50
		Skin	12600 mg/kg	Rabbit	LD50
	Propylene glycol monomethyl ether	Ingestion	6600 mg/kg	Rat	LD50

		Inhalation	36.4 mg/l/4h	Rat	LC50
		Skin	13000 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
	Cellulose acetate butyrate	Ingestion	>3200 mg/kg	Rat	LD50
		Skin	>1000 mg/kg	Guinea pig	LD50
	Ethylbenzene	Ingestion	3500 mg/kg	Rat	LD50
		Inhalation	17.3 mg/l/4h	Rat	LC50
		Skin	15380 mg/kg	Rabbit	LD50
	Silica - Amorphous, gel	Ingestion	3160 mg/kg	Rat	LD50
		Inhalation	>2.08 mg/l/4h	Rat	LC50
		Skin	>2000 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
	Methyl Propyl Ketone	Ingestion	1600 mg/kg	Mouse	LD50
			3730 mg/kg	Rat	LD50
		Inhalation	11 mg/l/4h	Rat	LC50
		Skin	6472 mg/kg	Rabbit	LD50
	1,2,4-Trimethylbenzene	Ingestion	5000 mg/kg	Rat	LD50
		Inhalation	18 mg/l/4h	Rat	LC50
		Skin	>3160 mg/kg	Rabbit	LD50
	Formaldehyde	Ingestion	42 mg/kg	Mouse	LD50
		Inhalation	250 ppm/4h	Rat	LC50
			414 ppm/4h	Mouse	LC50
		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

Likely routes of exposure	Skin, eyes, inhalation, ingestion.	
Delayed, immediate and chronic effects	**Eye contact**	May cause severe eye irritation or eye damage. Butyl Alcohol instilled in rabbit eyes resulted in severe corneal irritation and eye damage (OECD 405). Application in excess of 5% dilution solution gave irritating effect. Eye Irritation/Corrosion, Rabbit (OECD TG 405): tests performed with the other ingredients of this mixture gave not irritating to irritating results.
	Skin contact	May cause redness, dryness, rash and skin irritation. May cause an allergic reaction of the skin. Prolonged and repeated contact may cause dry skin, irritation or dermatitis. Widespread contact with skin for several hours can cause harmful amounts of material to be absorbed. Skin Irritation/Corrosion, Rabbit (OECD 404) : tests performed with each ingredient of this mixture gave not irritating to irritating results.
	Inhalation	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. May cause an allergic respiratory reaction with symptoms similar to asthma such as wheezing and chest tightness. The severity of symptoms may vary depending on exposure conditions. Repeated and prolonged occupational overexposure to solvents may cause brain and nervous system damage.
	Ingestion	Ingestion of large amounts may cause depression of the central nervous system characterized by headache, dizziness, convulsions and loss of consciousness. Aspiration hazard for the lungs (ingestion/vomiting). Can enter lungs and cause damage. Signs of lung involvement include increased respiratory rate, increased heart rate, and a bluish discolouration of the skin. Coughing, choking and gagging are often noted at the time of aspiration.
	Respiratory or skin sensitization	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.
	IARC/NTP Classification	**Common name IARC NTP** 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.
	Carcinogenicity	Contains material which can cause cancer. Contains trace amounts (>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 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. There is sufficient evidence for the carcinogenicity of alcoholic beverages in humans (IARC). The occurrence of malignant tumors of the oral cavity, pharynx, larynx, oesophagus, liver, breast and colorectal is causally related to the excessive consumption of alcoholic beverages.
	Mutagenicity	Formaldehyde has positive data on somatic cell mutagenicity tests in vivo (SIDS). Ethyl Alcohol has showed positive results in dominant lethal tests by oral and intraperitoneal administration to mice and oral administration to rats (in vivo heritable germ cell mutagenicity tests) (SIDS (2009), IARC (1988)). There are also reports of negative Ames tests from in vitro mutagenicity tests SIDS (2009). 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.
	Reproductive toxicity	Toluene cross the placental barrier in humans and it is found in breast milk in animals. An epidemiological study (1992) has been done with women exposed only to toluene in a factory. The first group was exposed to ambient concentrations from 50 to 150 ppm and the second at concentrations from 0 to 25 ppm. Comparison with a control group demonstrated a higher spontaneous abortions rates significantly in women exposed to higher concentrations than those of little or no exposure group. A significant and prolonged consumption of ethyl alcohol during pregnancy can cause an increased risk of developmental abnormalities fetus humans. Xylene overexposure may affect fetal development in laboratory animals by inhalation during pregnancy.
	Specific target organ toxicity - single exposure	Central nervous system, respiratory system.
	Specific target organ toxicity - repeated exposure	Central nervous system, respiratory system, hearing organs.
Interactive effects	No information available for this product.	
Other information	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

Ecological toxicity	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 - 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)
	Aquatic Invertebrate - Daphnia magna	EC50 2 mg/L; 48 h (Formaldehyde)
	Fish - Pimephales promelas [flow-through]	LC50 13400-15100 mg/L; 96 h (ethyl alcohol)
	Aquatic Invertebrate - Daphnia magna	EC50 9268-14221 mg/L; 48 h (ethyl alcohol)

	Fish - Oncorhynchus mykiss - Rainbow trout	LC50 5.8 mg/L; 96 h (Toluene)
	Aquatic Invertebrate - Daphnia magna	EC50 5.46-9.83 mg/L; 48 h (Toluene)
	Fish - Oncorhynchus mykiss - Rainbow trout	LC50 4.2 mg/L; 96 h (Ethylbenzene)
	Aquatic invertebrate - Crangon franciscorum	EC50 0.49 mg/L; 48 h (Ethylbenzene)
	Fish - Pimephales promelas [static]	LC50 376 mg/L; 96h (n-Butyl Alcohol) OEDC 203
	Aquatic Invertebrate - Daphnia magna	EC50 1983 mg/L; 48 h (n-Butyl alcohol)
	Algea - Desmodesmus subspicatus	EC50 >500 mg/L; 72 h (n-Butyl alcohol)
	Fish - Pimephales promelas [static]	LC50 20800 mg/L; 96h (CAS no 107-98-2)
	Aquatic Invertebrate - Daphnia magna	EC50 23300 mg/L; 48h (CAS no 107-98-2)
	Algea, Selenastrum capricornutum	EC50 >1000 mg/L; 96h (CAS no 107-98-2)
	Fish - Pimephales promelas [flow-through]	LC50 1190-1290 mg/L; 96 h (methyl propyl ketone)
	Aquatic Invertebrate - Daphnia magna	EC50 >110 mg/L; 96 h (methyl propyl ketone) OECD 202
Persistence	Contains an or many ingredients that may be persistent in aquatic environment.	
Degradability	N-Butyl Alcohol is readily biodegradable. Degradation by Biochemical Oxygen Demand BOD (O2 consumption) was reported as 92% after 20 days. Ethanol is readily biodegradable under aerobic and anaerobic conditions (OECD Test Guideline 301D). Toluene in air is rapidly decomposed by photochemical processes, mainly through oxidation by hydroxyl free radicals as well as some decomposition by direct photolysis. The half-life time in air is estimated to be from 1 to 2 days. Toluene is Biodegradable (100% in 10 days, OECD 301C). Its Biochemical Oxygen Demand (BOD) is 2150 mg O2/L (IUCLID) and its Chemical Oxygen Demand (COD) is 2520 mg O2/g (IUCLID). Propylene glycol monomethyl ether is ready biodegradable, 73%-91% during 28 days (OECD TG 301F). 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 BOD5/COD ratio of 0.97 (IUCLID). Ethylbenzene is biodegraded fairly rapidly by sewage or activated sludge (TOXNET). Methyl propyl ketone (CAS no 107-87-9) has been shown to readily biodegrade at 70% under aerobic and conditions (OCDE TG 301D). n-Butyl acetate is readily biodegradable (96% in 28 days) OECD Guideline 301D. Formaldehyde is readily biodegradable, 90% in 28 days (OECD 301D).	
Bioaccumulative potential	Butyl Alcohol is soluble in water and has a low Bioconcentration Factor (BCF) of 3 and a log Kow of 0.88. BA would not be expected to accumulate in food chains. Ethanol has a Bioconcentration Factor (BCF) value of <10, and its Log Kow value is <0, indicating its potential to bioaccumulate is low. Toluene has Bioconcentration Factor (BCF) in two fish species of 13 and 90, and its partition factor Log Kow of 2,65. These values suggest a low to moderate potential of bioaccumulation. Propylene glycol monomethyl ether has a Bioconcentration Factor (BCF) of 2.2 and a partition factor Log Kow of -0.49, indicating no potential for bioconcentration in aquatic organisms (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). Methyl propyl ketone (CAS no 107-87-9) is soluble in water and has a low Bioconcentration Factor (BCF) of 3 and a log Kow of 0,93. Methyl propyl ketone is not be expected to accumulate in food chains. 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). Formaldehyde is not expected to bioaccumulate with an estimated bioconcentration factor (BCF) of 3 (TOXNET).	
Mobility in soil	N-Butyl alcohol is soluble in water. The estimated Koc value of 3.2 suggests that it is expected to have very high mobility in soil. 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%). Toluene will rapidly evaporate into the atmosphere because of its low soil absorption and its low solubility in water. Its Koc values range from 37 to 178 in a sandy soil suggest that toluene is expected to have high to moderate mobility in soil (TOXNET Data). Propylene glycol monomethyl ether is very soluble is water. Then, it is expected to have very high mobility in soil. 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). Methyl propyl ketone (CAS no 107-87-9) can be volatilized from moist soil surfaces (SRC). The estimated Koc value of 75 indicates that it is expected to have high mobility in soil. 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. Formaldehyde is expected to have high mobility in soil with an estimated Koc value of 8 (TOXNET).
Other adverse effects	This chemical does not deplete the ozone layer.

13. Disposal considerations

Container 	Important! Prevent waste generation. Use in full. DO NOT dispose of residue in sewers, streams or drinking water supply. DO NOT puncture, cut, heat or burn container, even after use. 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.

14. Transport information

UN Number	UN 1263
UN Proper Shipping Name	PAINT
Environmental hazards	This material does not contain marine pollutant.
Special precautions for user	Permit required for transportation with proper placards displayed on vehicle.
TDG - Transportation of Dangerous Goods (Canada)	
Transport hazard class(es)	 Class 3
Packing group	II
IMO/IMDG - International Maritime Transport	
Classification	UN 1263. PAINT. Class 3, PG II. Emergency schedules (EmS-No) F-E, S-E
IATA - International Air Transport Association	
Classification	UN 1263. PAINT. Class 3, PG II.

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.

15. Regulatory information

CANADA

Common name	CAS	CEPA	DSL	NDSL	NPRI
n-Butyl Alcohol	71-36-3	X	X		X
Ethyl Alcohol	64-17-5	X	X		X
Toluene	108-88-3	X	X		X
Propylene glycol monomethyl ether	107-98-2		X		
Xylene	1330-20-7	X	X		X
Cellulose acetate butyrate	9004-36-8		X		
Silica - Amorphous, gel	112926-00-8		X		

Ethylbenzene	100-41-4	X	X		X
Butyl acetate (normal)	123-86-4	X	X		X
Methyl Propyl Ketone	107-87-9		X		
Formaldehyde	50-00-0	X	X		X
Solvent naphtha (petroleum), light aromatic (C8 to C10)	64742-95-6	X	X		X
1,2,4-Trimethylbenzene	95-63-6	X	X		X

- 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
n-Butyl Alcohol	71-36-3	X	X	X					X	
Ethyl Alcohol	64-17-5	X								
Toluene	108-88-3	X	X	X		X	X		X	X
Propylene glycol monomethyl ether	107-98-2	X				X				
Xylene	1330-20-7	X	X	X		X	X		X	
Cellulose acetate butyrate	9004-36-8	X								
Silica - Amorphous, gel	112926-00-8	X								
Ethylbenzene	100-41-4	X	X	X		X	X		X	X
Butyl acetate (normal)	123-86-4	X	X						X	
Methyl Propyl Ketone	107-87-9	X								
Formaldehyde	50-00-0	X	X	X	X	X	X	X	X	
Solvent naphtha (petroleum), light aromatic (C8 to C10)	64742-95-6	X								
1,2,4-Trimethylbenzene	95-63-6	X		X	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	X
Toluene	108-88-3		X
Ethylbenzene	100-41-4	X	
Formaldehyde	50-00-0	X	

Other regulations	

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

Date (YYYY-MM-DD)	GEMINI INDUSTRIES, INC. 2016-03-07
Version	01
Other information	- This SDS and the GHS hazards classification is a French translation of the original English version (SDS) from the manufacturer. REFERENCES: - Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, http://hazmap.nlm.nih.gov/index.php - TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, http://toxnet.nlm.nih.gov/ - Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), http://www.reptox.csst.qc.ca - NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, http://www.cdc.gov/niosh/npg/npg.html - IPCS INCHEM, Chemical Safety Information from Intergovernmental Organizations, Canadian Centre for Occupational Health and Safety (CCOHS), Copyright International Programme on Chemical Safety (IPCS), http://www.inchem.org - OECD Existing Chemicals Database, Chemicals Screening Information DataSet (SIDS) for High Volume Chemicals, UNEP publications, http://webnet.oecd.org/HPV/UI/Search.aspx 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 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.