



# Safety Data Sheet

## NEXUS PRECAT PRIMER



### 1. Identification

<b>Product identifier</b>	NEXUS PRECAT PRIMER		
<b>Product code</b>	NPRW-5000		
<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.gemini-coatings.com">www.gemini-coatings.com</a>	<b>Distributor</b>	Gemini Industries, Inc. 850 Flint Road Toronto, Ontario Canada M3J 2T7  Tel. 1-800-262-5710
<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>	Highly flammable liquid and vapour. 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 2)  
 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)

#### DANGER

H225: Highly flammable liquid and vapour  
 H350: May cause cancer  
 H340: May cause genetic defects  
 H360: May damage fertility or the unborn child  
 H319: Causes serious eye irritation  
 H315: Causes skin irritation  
 H335: May cause respiratory irritation  
 H336: May cause drowsiness or dizziness  
 H373: May cause damage to organs through prolonged or repeated exposure by inhalation

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.  
P233: Keep container tightly closed.  
P240: Ground or bond container and receiving equipment.  
P241: Use explosion-proof electrical equipment.  
P242: Use only non-sparking tools.  
P243: Take precautionary measures against static discharge.  
P261: Avoid breathing vapours and spray.  
P264: Wash face, hands and any exposed skin thoroughly after handling.  
P271: Use only outdoors or in a well-ventilated area.  
P273: Avoid release to the environment.  
P280: Wear protective gloves, protective clothing and eye protection.  
P308+313: IF exposed or concerned: Get medical attention.  
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.  
P332+313: If skin irritation occurs: Get medical advice or attention.  
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P312: Call a POISON CENTER or doctor/physician 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.  
P337+313: If eye irritation persists: Get medical advice or attention.  
P362+364: Take off contaminated clothing and wash before reuse.  
P370+378: In case of fire: Use ABC dry chemical to extinguish.  
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
Butyl acetate (normal)	123-86-4	17 - 19 %
Ethyl alcohol	64-17-5	14 - 16 %
Talc	14807-96-6	14 - 16 %
Titanium dioxide	13463-67-7	11 - 13 %
Urea, polymer with formaldehyde, isobutylated	68002-18-6	6 - 8 %
Toluene	108-88-3	4 - 6 %
Isobutyl alcohol	78-83-1	2.5 - 3.5 %
Xylene	1330-20-7	1.5 - 2.5 %
Nitrocellulose	9004-70-0	1.5 - 2.5 %
Isopropyl alcohol	67-63-0	1.5 - 2.5 %
Silica Gel	112926-00-8	1 - 2 %
Acetone	67-64-1	1 - 2 %
Ethylbenzene	100-41-4	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.

<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 if easy to do. 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 redness and irritation to eyes. May cause redness, dryness, rash and skin irritation. May cause respiratory tract irritation. Inhalation of vapours may cause central nervous system depression such as drowsiness, headache, dizziness, vertigo, nausea and fatigue.
<b>Notes to the physician</b>	Treat symptomatically. If gastric 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>	Dried powder, chemical foam, carbon dioxide (CO <sub>2</sub> ), ABC fire extinguishing. Do not use a heavy water jet.
<b>Specific hazards arising from the chemical</b>	Highly flammable liquid and vapour. 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.
<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 procedures</b>	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
<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.

## 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. Do not breathe vapours, mists or aerosols. 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. 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.
<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). Keep away from direct sunlight and heat.
<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>	Titanium dioxide: 5000 mg/m <sup>3</sup> . n-Butyl acetate: 1700 ppm. Ethyl alcohol: 3300 ppm. Talc: 1000 mg/m <sup>3</sup> . Toluene: 500 ppm Isobutyl alcohol: 1600 ppm. Xylenes: 900 ppm. Silica - Amorphous, gel: 3000 mg/m <sup>3</sup> . Isopropyl alcohol: 2000 ppm. Acetone: 2500 ppm. Ethylbenzene: 800 ppm.			
Butyl acetate (normal)	STEL		200 ppm	ACGIH , ON
			200 ppm	RSST
	TWA (8h)		20 ppm	BC
			150 ppm	ACGIH , ON
			150 ppm	RSST
			713 mg/m <sup>3</sup>	
Ethyl alcohol	STEL		1000 ppm	ACGIH , BC, ON
	TWA (8h)		1000 ppm	RSST
Talc	TWA (8h)	Respirable Dust	2 mg/m <sup>3</sup>	ACGIH , BC, ON
		Respirable Dust	3 mg/m <sup>3</sup>	RSST (Pr)
Titanium dioxide	TWA (8h)	Total Dust	10 mg/m <sup>3</sup>	ACGIH , BC, ON, RSST
Toluene	TWA (8h)		20 ppm	ACGIH , BC, ON
			50 ppm	RSST (Pc)
Isobutyl alcohol	TWA (8h)		50 ppm	ACGIH , BC, ON
			50 ppm	RSST
Isopropyl alcohol	STEL		400 ppm	ACGIH , BC, ON
			500 ppm	RSST
	TWA (8h)		1230 mg/m <sup>3</sup>	
			200 ppm	ACGIH , BC, ON
Xylene	STEL		400 ppm	RSST
			983 mg/m <sup>3</sup>	
	TWA (8h)		150 ppm	ACGIH , BC, ON
			150 ppm	RSST
Acetone	TWA (8h)		651 mg/m <sup>3</sup>	
			100 ppm	ACGIH , BC, ON
	STEL		100 ppm	RSST
			434 mg/m <sup>3</sup>	
			500 ppm	ACGIH , BC, ON
Silica Gel	TWA (8h)		1000 ppm	RSST
			2380 mg/m <sup>3</sup>	
			250 ppm	ACGIH , BC, ON
	TWA (8h)		500 ppm	RSST
			1190 mg/m <sup>3</sup>	
			500 ppm	RSST
	TWA (8h)	Respirable Dust	1.5 mg/m <sup>3</sup>	BC
		Total Dust	4 mg/m <sup>3</sup>	BC
		Respirable Dust	6 mg/m <sup>3</sup>	RSST
		Total Dust	10 mg/m <sup>3</sup>	ACGIH , ON

Ethylbenzene	STEL TWA (8h)	125 ppm 20 ppm 100 ppm	543 mg/m <sup>3</sup>  434 mg/m <sup>3</sup>	RSST ACGIH , BC, ON RSST
<b>Appropriate engineering controls</b>	Provide sufficient mechanical ventilation (general 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. Disposable nitrile gloves can also be used, but discard after single use. Before using, user should confirm impermeability. Discard gloves with tears, pinholes, or signs of wear. Gloves must only be worn on clean hands.			
<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. If necessary, wear an apron or long-sleeve protective coverall suit.			
<b>Respiratory</b>	Respiratory protection is not required for normal use. Where the conditions in the workplace require a respirator, it is necessary to follow a respiratory protection program. Moreover, respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations and standard 29 CFR 1910.134 (OSHA), ANSI Z88.2 or CSA Z 94.11 (Canada) 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

<b>Physical state</b>	Liquid	<b>Flammability</b>	Flammable
<b>Colour</b>	White or coloured	<b>Flammability limits</b>	N/Av.
<b>Odour</b>	Solvent odor	<b>Flash point</b>	0°C (32°F)
<b>Odour threshold</b>	N/Av.	<b>Auto-ignition temperature</b>	170°C (338°F)
<b>pH</b>	N/Av.	<b>Sensibility to electrostatic charges</b>	Yes
<b>Melting point</b>	N/Av.	<b>Sensibility to sparks and/or friction</b>	No
<b>Freezing point</b>	N/Av.	<b>Vapour density</b>	>1 (Air = 1)
<b>Boiling point</b>	78 to 126°C (172.4 to 258.8°F)	<b>Relative density</b>	1.16 to 1.17 kg/L (Water = 1)
<b>Solubility</b>	Partially soluble in water.	<b>Partition coefficient n-octanol/water</b>	N/Av.
<b>Evaporation rate</b>	> Butyl Acetate	<b>Decomposition temperature</b>	N/Av.
<b>Vapour pressure</b>	N/Av.	<b>Viscosity</b>	N/Av.
<b>Percent Volatile</b>	48.76%	<b>Molecular mass</b>	N/Av.
N/Av.: Not Available    N/Av.: Not Applicable    Und.: Undetermined    N/E: Not Established			

## 10. Stability and reactivity

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

## 11. Toxicological information

<b>Numerical measures of toxicity</b>	Butyl acetate (normal)	Ingestion	10768 mg/kg	Rat	LD50
		Inhalation	>32.5 mg/l/4h	Rat	LC50
		Skin	>17600 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
	Talc	Ingestion	>5000 mg/kg	Rat	LD50
		Skin	>2000 mg/kg	Rabbit	LD50
	Titanium dioxide	Ingestion	>10000 mg/kg	Rat	LD50
		Inhalation	>6.82 mg/l/4h	Rat	LC50
		Skin	>10000 mg/kg	Rabbit	LD50
	Urea, polymer with formaldehyde, isobutylated	Ingestion	>5000 mg/kg	Rat	LD50
		Skin	>5000 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
	Isobutyl alcohol	Ingestion	2460 mg/kg	Rat	LD50
		Inhalation	19.2 mg/l/4h	Rat	LC50
		Skin	3400 mg/kg	Rabbit	LD50
	Isopropyl alcohol	Ingestion	3600 mg/kg	Mouse	LD50
			5045 mg/kg	Rat	LD50
		Inhalation	66.1 mg/l/4h	Rat	LC50
		Skin	6280 mg/kg	Rat	LD50
	Nitrocellulose	Ingestion	>5000 mg/kg	Rat	LD50
	Xylene	Ingestion	3523 mg/kg	Rat	LD50
		Inhalation	27.6 mg/l/4h	Rat	LC50
		Skin	3200 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
	Silica Gel	Ingestion	3160 mg/kg	Rat	LD50
		Inhalation	>2.08 mg/l/4h	Rat	LC50
		Skin	>2000 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

Likely routes of exposure	Skin, eyes, inhalation, ingestion.	
Delayed, immediate and chronic effects	Eye contact	May cause irritation, redness, tearing and blurred vision. Eye Irritation/Corrosion, Rabbit (OECD TG 405): tests performed with each ingredient of this mixture gave not irritating to irritating results.
	Skin contact	May cause redness and irritation of the skin. 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.
	Inhalation	May cause respiratory tract irritation. Excessive inhalation is harmful. 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. Prolonged exposure may cause damage to damage to liver, kidneys, hearing organs, blood forming organs and central nervous system.
	Ingestion	Ingestion can cause abdominal pain, nausea, cramps, headache, dizziness, diarrhea and vomiting.
	Respiratory or skin sensitization	Ingredients present at levels greater than or equal to 0.1% of this product are not skin or respiratory sensitizers.
	IARC/NTP Classification	<b>Common name IARC NTP</b> Titanium dioxide 2B - Ethylbenzene 2B -  IARC : 1- Carcinogenic; 2A- Probably carcinogenic; 2B- Possibly carcinogenic. NTP : K- Known to be carcinogens; R- Reasonably anticipated to be carcinogens.
	Carcinogenicity	Contains substances that can cause cancer based on animal data. The risk of cancer depends on duration and level of exposure. Titanium dioxide in dust form can cause cancer based on animal data. Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint and caulk. There is sufficient evidence for the carcinogenicity of alcoholic (Ethanol) 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. There is sufficient evidence in humans for the carcinogenicity of occupational exposure as a painter (IARC Group 1). Occupational exposure as a painter causes mesothelioma, and cancers of the urinary bladder and lung (IARC Monographs, Volume 100F (2012)).
	Mutagenicity	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).
	Reproductive toxicity	Toluene cross the placental barrier in humans and it is found in breast milk in animals. Toluene has an embryotoxic and/or fetotoxic hazard in humans (US EPA, 2005). Studies in humans and especially in animals are indicative that ingestion of high doses of ethanol can affect male and female fertility. A significant and prolonged consumption of ethyl alcohol during pregnancy can cause an increased risk of developmental abnormalities fetus humans.
	Specific target organ toxicity - single exposure	Central nervous system, respiratory system.
	Specific target organ toxicity - repeated exposure	Central nervous system, respiratory system, hearing organs, liver, kidneys.
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

<b>Ecological toxicity</b>	<p>Fish - Oncorhynchus mykiss - Rainbow trout LC50 4740 mg/L; 96 h (acetone)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 12600-12700 mg/L; 48 h (acetone)</p> <p>Fish - Fathead minnow, Pimephales promelas - fresh water LC50 9640 mg/L; 96 h (Isopropyl alcohol)</p> <p>Aquatic Invertebrate - Crustaceans, Daphnia Magna EC50 3644 mg/L; 48 h (Isopropyl alcohol)</p> <p>Plant - Lettuce seed germination, Lactuca Sativa EC50 2100 mg/L; 72 h (Isopropyl alcohol)</p> <p>Fish - Pimephales promelas [flow-through] LC50 18 mg/L; 96h (Butyl acetate)</p> <p>Algae, Desmodesmus subspicatus EC50 675 mg/L; 72h (Butyl acetate)</p> <p>Algae, Pseudokirchneriella subcapitata EC50 579 mg/L; 96h (Nitrocellulose)</p> <p>Fish - Pimephales promelas - Fresh water LC50 1370-1670 mg/L; 96 h (Isobutyl alcohol)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 1300 mg/L; 48 h (Isobutyl alcohol)</p> <p>Fish - Oncorhynchus mykiss - Rainbow trout LC50 13.5-17.3 mg/L; 96 h (Xylene)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 3.82 mg/L; 48 h (Xylene)</p> <p>Fish - Pimephales promelas - Fresh water LC50 &gt;500 mg/L; 96 h (Titanium dioxide)</p> <p>Aquatic Invertebrates - Daphnia pulex EC50 9.2 mg/L; 48 h (Titanium dioxide)</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 5.8 mg/L; 96 h (Toluene)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 5.46-9.83 mg/L; 48 h (Toluene)</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>
<b>Persistence</b>	Contains an or many ingredients that may be persistent in aquatic environment. Inorganic compounds persist in the environment indefinitely or incorporate into biological systems.
<b>Degradability</b>	<p>N-Butyl acetate is readily biodegradable (96% in 28 days) OECD Guideline 301D. Ethanol is readily biodegradable under aerobic and anaerobic conditions (OECD Test Guideline 301D). The term biodegradability, as such, is not applicable to inorganic compounds like Titanium dioxide. 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 O<sub>2</sub>/L (IUCLID) and its Chemical Oxygen Demand (COD) is 2520 mg O<sub>2</sub>/g (IUCLID). 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 (IUCLID). 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). Acetone is readily biodegradable at 91% in 28 days (OECD 301B). Isopropyl alcohol is biodegradable, 49% in 5 days and 70% in 20 days (TOXNET). It does not undergo photolysis. Its atmospheric degradation (OH radical attack) in air has a half-time T<sub>1/2</sub> of 18 to 25 hours.</p>
<b>Bioaccumulative potential</b>	<p>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). Ethanol has a Bioconcentration Factor (BCF) value of &lt;10, and its Log Kow value is &lt;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. Isobutyl alcohol has a low potential to bioaccumulate with a bioconcentration factor (BCF) of 3 (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). Acetone has a Bioconcentration Factor (BCF) of 0.65 and a partition factor Log Kow of -0.24, indicating no bioaccumulation. 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). The Log Kow value &lt;0.4 and bioconcentration factor (BCF) value &lt;1 for isopropyl alcohol show no potential to bioaccumulate (IUCLID).</p>
<b>Mobility in soil</b>	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




	<p>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). 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). 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. Ethylbenzene is expected to have a moderate mobility in soil with an estimated Koc value of 520 (TOXNET). Isopropyl alcohol is soluble in water and will quickly evaporate into the air. There is no partition in the ground.</p>
<b>Other adverse effects</b>	This chemical does not deplete the ozone layer.

### 13. Disposal considerations

<b>Container</b> 	<p>Important! Prevent waste generation. Use in full. DO NOT dispose residue in sewers, streams or drinking water supply. Paint residues including lacquer, thinner, stain, shellac, varnish, polish can be reprocessed everywhere there is a recycling 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>
--	--

### 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 DANGER 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
Butyl acetate (normal)	123-86-4	X	X		X
Ethyl alcohol	64-17-5	X	X		X
Talc	14807-96-6		X		
Titanium dioxide	13463-67-7		X		
Urea, polymer with formaldehyde, isobutylated	68002-18-6		X		
Toluene	108-88-3	X	X		X
Isobutyl alcohol	78-83-1	X	X		X
Xylene	1330-20-7	X	X		X
Nitrocellulose	9004-70-0		X		
Isopropyl alcohol	67-63-0	X	X		X
Silica Gel	112926-00-8		X		
Acetone	67-64-1		X		
Ethylbenzene	100-41-4	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	CER CLA	EPCRA 313	EPCRA 302/304	CAA 112(b) HON	CAA 112(b) HAP	CAA 112(r)	CWA 311	CWA Prio.
Butyl acetate (normal)	123-86-4	X	X						X	
Ethyl alcohol	64-17-5	X								
Talc	14807-96-6	X								
Titanium dioxide	13463-67-7	X								
Urea, polymer with formaldehyde, isobutylated	68002-18-6	X								
Toluene	108-88-3	X	X	X		X	X		X	X
Isobutyl alcohol	78-83-1	X	X							
Xylene	1330-20-7	X	X	X		X	X		X	
Nitrocellulose	9004-70-0	X								
Isopropyl alcohol	67-63-0	X		X					X	
Silica Gel	112926-00-8	X								
Acetone	67-64-1	X	X			X				
Ethylbenzene	100-41-4	X	X	X		X	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
Titanium dioxide	13463-67-7	X	
Toluene	108-88-3		X
Ethylbenzene	100-41-4	X	

Other regulations	
	<div>WHMIS 1988</div> <div><div><div></div><div></div></div><div>B2   D2A   D2B</div><div>Class B2 : Flammable Liquid</div><div>Class D2A : Very toxic material causing other toxic effects</div><div>Class D2B : Toxic material causing other toxic effects</div></div> <div><div><div>HMIS</div><div><div><div>3</div>Heath</div><div><div>3</div>Flamability</div><div><div>3</div>Reactivity</div><div><div>X</div>Protective Equipment</div></div></div></div> <div><div>NFPA</div><div><div><div>3</div><div>3</div><div>2</div><div></div></div></div></div>

## 16. Other information

Date (YYYY-MM-DD)	GEMINI INDUSTRIES, INC. 2017-03-20
Version	01
Other information	<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> <li>- The National Center for Biotechnology Information, National Institutes of Health (NIH), U.S. National Library of Medicine, <a href="http://www.ncbi.nlm.nih.gov">www.ncbi.nlm.nih.gov</a></li> </ul> <p style="margin-top: 20px;"> 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 </p>

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 Pri<sub>2</sub>ventis 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.