Franklin International

Material Safety Data Sheet

Product name : Unilock Concrete VOC Adhesive

1 . Product and company identification

CAS #	:	mixture
Address	:	Franklin International 2020 Bruck Street Columbus OH 43207
Contact person	:	Franklin Technical Services
Telephone	:	(800) 877-4583
Emergency phone:	:	Franklin Security (614) 445-1300
Reference number	:	3102
Product code	:	29521
Date of revision	:	10/19/2010.
Print date	:	12/23/2010.
Chemtrec (24 Hour)	:	(800) 424 - 9300
Chemtrec International	:	(703) 527 - 3887
Chemical family	:	Adhesive.
Product use	:	Construction adhesive
Product type	:	solvent based

2 . Hazards identification

Physical state	:	Liquid. [Paste.]
Odor	:	Solvent(s) [Strong]
OSHA/HCS status	:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview	:	DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF INHALED. CAUSES EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. Extremely flammable liquid. Harmful by inhalation. May be harmful if swallowed. Severely irritating to eyes. Irritating to skin. Moderately irritating to the respiratory system. Defatting to the skin. Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Routes of entry	:	Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation	:	Toxic by inhalation. Moderately irritating to the respiratory system.
Ingestion	:	Harmful if swallowed.
Skin	:	Irritating to skin.
Eyes	:	Severely irritating to eyes. Risk of serious damage to eyes.

Potential chronic health effects

2 . Hazards identification

Chronic effects : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Over-exposure signs/symptoms

Inhalation : High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness. Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Medical conditions aggravated by over-exposure : None known.

See toxicological information (section 11)

3 . Composition/information on ingredients

United States

Name	CAS number	%
Methyl acetate	79-20-9	10 - 25
Acetone	67-64-1	1 - 5
n-Hexane	110-54-3	1 - 5

Canada

Name	CAS number	%
Methyl acetate	79-20-9	10 - 25
Acetone	67-64-1	1 - 5
n-Hexane	110-54-3	1 - 5

Mexico

Name	CAS number	UN number	%	IDLH	Classification H	F	R	Special
Methyl acetate	79-20-9	UN1993	10 - 25	3100 ppm	0	3	0	
Acetone	67-64-1	UN1993	1 - 5	2500 ppm	0	3	0	
n-Hexane	110-54-3	UN1993	1 - 5	1100 ppm	0	3	0	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : Extremely flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

United States

Ingredient	Exposure limits
Methyl acetate	**ACGIH TLV (United States, 2/2010).** TWA: 200 ppm 8 hour(s). TWA: 606 mg/m³ 8 hour(s). STEL: 250 ppm 15 minute(s). STEL: 757 mg/m³ 15 minute(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 200 ppm 8 hour(s). TWA: 610 mg/m³ 8 hour(s). STEL: 250 ppm 15 minute(s). STEL: 760 mg/m³ 15 minute(s). **NIOSH REL (United States, 6/2009).** TWA: 200 ppm 10 hour(s). TWA: 610 mg/m³ 10 hour(s). STEL: 250 ppm 15 minute(s). STEL: 760 mg/m³ 15 minute(s). **OSHA PEL (United States, 6/2010).** TWA: 200 ppm 8 hour(s). TWA: 610 mg/m³ 8 hour(s).
Acetone	**ACGIH TLV (United States, 2/2010).** TWA: 500 ppm 8 hour(s). TWA: 1188 mg/m³ 8 hour(s). STEL: 750 ppm 15 minute(s). STEL: 1782 mg/m³ 15 minute(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 750 ppm 8 hour(s). TWA: 1800 mg/m³ 8 hour(s). STEL: 1000 ppm 15 minute(s). STEL: 2400 mg/m³ 15 minute(s). **NIOSH REL (United States, 6/2009).** TWA: 250 ppm 10 hour(s). TWA: 590 mg/m³ 10 hour(s). **OSHA PEL (United States, 6/2010).** TWA: 1000 ppm 8 hour(s). TWA: 2400 mg/m³ 8 hour(s).

8 . Exposure controls/personal protection

n-Hexane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 50 ppm 8 hour(s). TWA: 180 mg/m³ 8 hour(s). **NIOSH REL (United States, 6/2009).** TWA: 50 ppm 10 hour(s). TWA: 180 mg/m³ 10 hour(s). **ACGIH TLV (United States, 2/2010). Absorbed through skin.** TWA: 50 ppm 8 hour(s). **OSHA PEL (United States, 6/2010).** TWA: 500 ppm 8 hour(s). TWA: 1800 mg/m³ 8 hour(s).

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
Acetone	US ACGIH 2/2010	500	1188	-	750	1782	-	-	-	-	
	AB 4/2009	500	1200	-	750	1800	-	-	-	-	
	BC 10/2009	250	-	-	500	-	-	-	-	-	
	ON 7/2010	500	1188	-	750	1782	-	-	-	-	
	QC 6/2008	500	1190	-	1000	2380	-	-	-	-	
Methyl acetate	US ACGIH 2/2010	200	606	-	250	757	-	-	-	-	
	AB 4/2009	200	606	-	250	757	-	-	-	-	
	BC 10/2009	200	-	-	250	-	-	-	-	-	
	ON 7/2010	200	606	-	250	757	-	-	-	-	
	QC 6/2008	200	606	-	250	757	-	-	-	-	
n-Hexane	US ACGIH 2/2010	50	-	-	-	-	-	-	-	-	[1]
	AB 4/2009	50	176	-	-	-	-	-	-	-	[1]
	BC 10/2009	20	-	-	-	-	-	-	-	-	[1]
	ON 7/2010	50	-	-	-	-	-	-	-	-	[1]
	QC 6/2008	50	176	-	-	-	-	-	-	-	[1]

[1]Absorbed through skin.

Mexico

Ingredient	Exposure limits
Methyl acetate	**NOM-010-STPS (Mexico, 9/2000).** LMPE-PPT: 200 ppm 8 hour(s). LMPE-PPT: 610 mg/m³ 8 hour(s). LMPE-CT: 760 mg/m³ 15 minute(s). LMPE-CT: 250 ppm 15 minute(s).
Acetone	**NOM-010-STPS (Mexico, 9/2000).** LMPE-PPT: 1000 ppm 8 hour(s). LMPE-PPT: 2400 mg/m³ 8 hour(s). LMPE-CT: 3000 mg/m³ 15 minute(s). LMPE-CT: 1260 ppm 15 minute(s).
n-Hexane	**NOM-010-STPS (Mexico, 9/2000).** LMPE-PPT: 50 ppm 8 hour(s). LMPE-PPT: 176 mg/m³ 8 hour(s).

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8 . Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9 . Physical and chemical properties

Physical state : Liquid. [Paste.]

Flash point : Closed cup: <-17.778°C (<-0.0004°F) [Setaflash.]

Flammable limits : Lower: 1%
Upper: 16%

Color : Beige.

Odor : Solvent(s) [Strong]

Boiling/condensation point : 13.395 to 67.778°C (56.1 to 154°F)

Relative density : 1.25

Volatility : 24% (w/w)

VOC (less water, less exempt solvents) : 47 g/l

Solubility : Insoluble in the following materials: cold water and hot water.

10 . Stability and reactivity

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid : Highly reactive or incompatible with the following materials:
oxidizing materials

Incompatibility : Reactive or incompatible with the following materials: acids and alkalis.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Conditions of reactivity : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.

11 . Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Intravenous	Rat	5500 mg/kg	-
	LD50 Oral	Rat	5800 mg/kg	-
	LDLo Intraperitoneal	Rat	500 mg/kg	-
	LDLo Dermal	Rabbit	20 mL/kg	-
	TDLo Oral	Rat	5 mL/kg	-
	LC50 Inhalation Vapor	Rat	50100 mg/m3	8 hours
Methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
	LDLo Subcutaneous	Rat	8 g/kg	-
n-Hexane	LD50 Oral	Rat	29700 mg/kg	-
	LD50 Oral	Rat	15840 mg/kg	-
	LDLo Intraperitoneal	Rat	9100 mg/kg	-
	TDLo Oral	Rat	20000 mg/kg	-
	LC50 Inhalation Vapor	Rat	627000 mg/m3	3 minutes
	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Conclusion/Summary

Skin : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes : Severely irritating to eyes.

Respiratory : High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Acetone	A4	-	-	-	-	-

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure

11 . Toxicological information

Acetone	LD50 Intravenous	Rat	5500 mg/kg	-
	LD50 Oral	Rat	5800 mg/kg	-
	LDLo Dermal	Rabbit	20 mL/kg	-
	LDLo Intraperitoneal	Rat	500 mg/kg	-
	TDLo Oral	Rat	5 mL/kg	-
	LC50 Inhalation Vapor	Rat	50100 mg/m3	8 hours
Methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
	LDLo Subcutaneous	Rat	8 g/kg	-
n-Hexane	LD50 Oral	Rat	29700 mg/kg	-
	LD50 Oral	Rat	15840 mg/kg	-
	LDLo Intraperitoneal	Rat	9100 mg/kg	-
	TDLo Oral	Rat	20000 mg/kg	-
	LC50 Inhalation Vapor	Rat	627000 mg/m3	3 minutes
	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Conclusion/Summary

Skin : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes : Severely irritating to eyes.

Respiratory : High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Acetone	A4	-	-	-	-	-

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
	LDLo Subcutaneous	Rat	8 g/kg	-
Acetone	LD50 Intravenous	Rat	5500 mg/kg	-
	LD50 Oral	Rat	5800 mg/kg	-
	LDLo Dermal	Rabbit	20 mL/kg	-
	LDLo	Rat	500 mg/kg	-

11 . Toxicological information

	Intraperitoneal			
	TDLo Oral	Rat	5 mL/kg	-
	LC50 Inhalation Vapor	Rat	50100 mg/m3	8 hours
n-Hexane	LD50 Oral	Rat	29700 mg/kg	-
	LD50 Oral	Rat	15840 mg/kg	-
	LDLo Intraperitoneal	Rat	9100 mg/kg	-
	TDLo Oral	Rat	20000 mg/kg	-
	LC50 Inhalation Vapor	Rat	627000 mg/m3	3 minutes
	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Conclusion/Summary

Skin : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes : Severely irritating to eyes.

Respiratory : High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Acetone	A4	-	-	-	-	-

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Acetone	-	Acute LC50 6900 mg/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 5.54 to 6.33 ml/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 1 g	96 hours
	-	Acute LC50 12100000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute LC50 11000000 to 11300000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 cm	96 hours
	-	Acute LC50 10700000	Fish - Fathead minnow -	96 hours

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		ug/L Fresh water	Pimephales promelas - 25 mm	
	-	Acute LC50 9218000 to 14400000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate - <12 hours	48 hours
	-	Acute LC50 9100000 to 9482000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 2 to 3 months - 19 mm - 0.06 g	96 hours
	-	Acute LC50 8800000 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex - <24 hours	48 hours
	-	Acute LC50 8300000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 5.3 to 7.2 cm - 3.5 to 3.9 g	96 hours
	-	Acute LC50 8120000 to 8760000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 33 days - 22.6 mm - 0.159 g	96 hours
	-	Acute LC50 8098000 to 8640000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate - <12 hours	48 hours
	-	Acute LC50 7810000 ug/L Fresh water	Daphnia - Water flea - Daphnia cucullata - 11 days	48 hours
	-	Acute LC50 7550000 ug/L Fresh water	Crustaceans - Aquatic sowbug - Asellus aquaticus	48 hours
	-	Acute LC50 7460000 ug/L Fresh water	Daphnia - Water flea - Daphnia cucullata - 11 days	48 hours
	-	Acute LC50 7280000 to 7880000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 28 days - 19.2 mm - 0.076 g	96 hours
	-	Acute LC50 6210000 to 7030000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 32 days - 18 mm - 0.087 g	96 hours
	-	Acute LC50 >100000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 0.2 to 0.5 g	96 hours
	-	Acute LC50 10000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 13300000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute LC50 12600000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
Methyl acetate	-	Acute LC50 408000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 26 to 34 days	96 hours
	-	Acute LC50 399000 to 422000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 32 days - 18.6 mm - 0.103 g	96 hours
	-	Acute LC50 320000 to 348000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 28 to 32 days - 17.5 mm - 0.087 g	96 hours
n-Hexane	-	Acute LC50 113000 ug/L Fresh water	Fish - Mozambique tilapia - Tilapia mossambica - 99	96 hours

12 . Ecological information

			mm - 10 g	
	-	Acute LC50 2500 to 2980 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 31 days - 20.4 mm - 0.123 g	96 hours

Biodegradability

No known significant effects or critical hazards.

Canada

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Acetone	-	Acute LC50 6900 mg/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 5.54 to 6.33 ml/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 1 g	96 hours
	-	Acute LC50 12100000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute LC50 11000000 to 11300000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 cm	96 hours
	-	Acute LC50 10700000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 25 mm	96 hours
	-	Acute LC50 9218000 to 14400000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate - <12 hours	48 hours
	-	Acute LC50 9100000 to 9482000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 2 to 3 months - 19 mm - 0.06 g	96 hours
	-	Acute LC50 8800000 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex - <24 hours	48 hours
	-	Acute LC50 8300000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 5.3 to 7.2 cm - 3.5 to 3.9 g	96 hours
	-	Acute LC50 8120000 to 8760000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 33 days - 22.6 mm - 0.159 g	96 hours
	-	Acute LC50 8098000 to 8640000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate - <12 hours	48 hours
	-	Acute LC50 7810000 ug/L Fresh water	Daphnia - Water flea - Daphnia cucullata - 11 days	48 hours
	-	Acute LC50 7550000 ug/L Fresh water	Crustaceans - Aquatic sowbug - Asellus aquaticus	48 hours
	-	Acute LC50 7460000 ug/L Fresh water	Daphnia - Water flea - Daphnia cucullata - 11 days	48 hours
	-	Acute LC50 7280000 to 7880000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 28 days - 19.2 mm - 0.076 g	96 hours
	-	Acute LC50 6210000 to 7030000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 32 days - 18 mm - 0.087 g	96 hours
	-	Acute LC50 >100000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling,	96 hours

12 . Ecological information

			Hatchling, Weanling) - 0.2 to 0.5 g	
	-	Acute LC50 10000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 13300000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute LC50 12600000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
Methyl acetate	-	Acute LC50 408000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 26 to 34 days	96 hours
	-	Acute LC50 399000 to 422000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 32 days - 18.6 mm - 0.103 g	96 hours
	-	Acute LC50 320000 to 348000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 28 to 32 days - 17.5 mm - 0.087 g	96 hours
n-Hexane	-	Acute LC50 113000 ug/L Fresh water	Fish - Mozambique tilapia - Tilapia mossambica - 99 mm - 10 g	96 hours
	-	Acute LC50 2500 to 2980 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 31 days - 20.4 mm - 0.123 g	96 hours

Biodegradability

No known significant effects or critical hazards.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Methyl acetate	-	Acute LC50 408000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 26 to 34 days	96 hours
	-	Acute LC50 399000 to 422000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 32 days - 18.6 mm - 0.103 g	96 hours
	-	Acute LC50 320000 to 348000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 28 to 32 days - 17.5 mm - 0.087 g	96 hours
Acetone	-	Acute LC50 6900 mg/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 5.54 to 6.33 ml/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 1 g	96 hours
	-	Acute LC50 12100000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute LC50 11000000 to 11300000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 cm	96 hours
	-	Acute LC50 10700000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 25 mm	96 hours

12 . Ecological information

	-	Acute LC50 9218000 to 14400000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate - <12 hours	48 hours
	-	Acute LC50 9100000 to 9482000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 2 to 3 months - 19 mm - 0.06 g	96 hours
	-	Acute LC50 8800000 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex - <24 hours	48 hours
	-	Acute LC50 8300000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 5.3 to 7.2 cm - 3.5 to 3.9 g	96 hours
	-	Acute LC50 8120000 to 8760000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 33 days - 22.6 mm - 0.159 g	96 hours
	-	Acute LC50 8098000 to 8640000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate - <12 hours	48 hours
	-	Acute LC50 7810000 ug/L Fresh water	Daphnia - Water flea - Daphnia cucullata - 11 days	48 hours
	-	Acute LC50 7550000 ug/L Fresh water	Crustaceans - Aquatic sowbug - Asellus aquaticus	48 hours
	-	Acute LC50 7460000 ug/L Fresh water	Daphnia - Water flea - Daphnia cucullata - 11 days	48 hours
	-	Acute LC50 7280000 to 7880000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 28 days - 19.2 mm - 0.076 g	96 hours
	-	Acute LC50 6210000 to 7030000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 32 days - 18 mm - 0.087 g	96 hours
	-	Acute LC50 >100000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 0.2 to 0.5 g	96 hours
	-	Acute LC50 10000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 13300000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute LC50 12600000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
n-Hexane	-	Acute LC50 113000 ug/L Fresh water	Fish - Mozambique tilapia - Tilapia mossambica - 99 mm - 10 g	96 hours
	-	Acute LC50 2500 to 2980 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 31 days - 20.4 mm - 0.123 g	96 hours

Biodegradability

No known significant effects or critical hazards.

Other adverse effects : No known significant effects or critical hazards.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

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

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	1133	Consumer commodity	ORM-D	III		-
TDG Classification	1133	ADHESIVES, containing flammable liquid	3	III		**Remarks** Limited quantity
Mexico Classification	1133	ADHESIVES, containing flammable liquid	3	III		-
ADR/RID Class	1133	ADHESIVES, containing flammable liquid	3	III		-
IMDG Class	1133	ADHESIVES, containing flammable liquid	3	III		**Remarks** Limited quantity
IATA-DGR Class	ID8000	Consumer commodity	9	III		-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Flammable liquid
Toxic material
Irritating material

U.S. Federal regulations : TSCA 4(a) final test rules: Methyl acetate
TSCA 8(a) PAIR: Methyl acetate
United States inventory (TSCA 8b): All components are listed or exempted.
TSCA 12(b) one-time export: Methyl acetate

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: n-Hexane; Methyl acetate; Acetone
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Unilock Concrete VOC Adhesive: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

15 . Regulatory information

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 313

Form R - Reporting requirements :

Product name	CAS number	Concentration
Acetone	67-64-1	1 - 5
n-Hexane	110-54-3	1 - 5

Supplier notification :

n-Hexane	110-54-3	1 - 5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : **Massachusetts Spill:** None of the components are listed.
Massachusetts Substances: The following components are listed: ACETONE; METHYL ACETATE; HEXANE

New Jersey Hazardous Substances: The following components are listed: ACETONE; 2-PROPANONE; METHYL ACETATE; ACETIC ACID, METHYL ESTER; n-HEXANE; HEXANE
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.

Pennsylvania RTK Hazardous Substances: The following components are listed: 2-PROPANONE; ACETIC ACID, METHYL ESTER; HEXANE

Canada

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

Canadian lists : **CEPA Toxic substances:** The following components are listed: Volatile organic compounds
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Volatile organic compounds; n-Hexane
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :

International regulations

International lists : **Australia inventory (AICS):** Not determined.
China inventory (IECSC): Not determined.
Japan inventory: Not determined.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

15 . Regulatory information

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16 . Other information

Label requirements : EXTREMELY FLAMMABLE LIQUID AND VAPOR. FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF INHALED. CAUSES EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION.

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	3
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

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Version : 1

Indicates information that has changed from previously issued version.

Notice to reader

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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.