

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • UDC Glide

Product Description • Blue liquid.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Water-based emulsion

1.3 Details of the supplier of the safety data sheet

Manufacturer • IKONICS Corporation
4832 Grand Ave.
Duluth, MN 55807
United States
www.ikonics.com
sds@ikonics.com

Telephone (General) • (218) 628-2217

Telephone (General) • (800) 328-4261 - Toll free

1.4 Emergency telephone number

Chemtrec • 1-800-424-9300 - Within USA and Canada
• +1 703-527-3887 - Outside USA and Canada (collect calls accepted)

Section 2: Hazards Identification

EU/EEC

According to EU Directive 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP • Skin Sensitization 1 - H317
Eye Irritation 2 - H319
Hazardous to the aquatic environment Chronic 3 - H412
EUH208

DSD/DPD • Irritant (Xi)
Sensitizer
R36, R43, R53

2.2 Label Elements

CLP

WARNING



Hazard statements • H316 - Causes mild skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

- Prevention**
- P261 - Avoid breathing dust, fume, gas, mist, vapors and/or spray.
 - P264 - Wash thoroughly after handling.
 - P272 - Contaminated work clothing should not be allowed out of the workplace.
 - P273 - Avoid release to the environment.
 - P280 - Wear protective gloves/protective clothing/eye protection/face protection.

- Response**
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337+P313 - If eye irritation persists: Get medical advice/attention.
 - P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 - P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 - P321 - Specific treatment, see supplemental first aid information.
 - P363 - Wash contaminated clothing before reuse.

- Storage/Disposal**
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



- Risk phrases**
- R36 - Irritating to eyes.
 - R43 - May cause sensitization by skin contact.
 - R53 - May cause long-term adverse effects in the aquatic environment.

- Safety phrases**
- S24 - Avoid contact with skin.
 - S37 - Wear suitable gloves.
 - S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other Hazards

CLP • No data available

DSD/DPD • No data available

UN GHS

According to Third Revised Edition

2.1 Classification of the substance or mixture

- UN GHS
- Skin Mild Irritation 3 - H316
 - Skin Sensitization 1 - H317
 - Eye Irritation 2 - H319
 - Hazardous to the aquatic environment Chronic 3 - H412

2.2 Label elements

UN GHS

WARNING



- Hazard statements**
- H316 - Causes mild skin irritation
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P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P321 - Specific treatment, see supplemental first aid information.
P363 - Wash contaminated clothing before reuse.

- Storage/Disposal** • P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

UN GHS

- No data available

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012
- Skin Sensitization 1 - H317
 - Eye Irritation 2 - H319

2.2 Label elements

OSHA HCS 2012

WARNING



- Hazard statements** • May cause an allergic skin reaction - H317
Causes serious eye irritation - H319

Precautionary statements

- Prevention** • Avoid breathing dust, fume, gas, mist, vapors and/or spray. - P261
Wash thoroughly after handling. - P264
Contaminated work clothing should not be allowed out of the workplace. - P272
Wear protective gloves/protective clothing/eye protection/face protection. - P280
- Response** • IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
If eye irritation persists: Get medical advice/attention. - P337+P313
IF ON SKIN: Wash with plenty of soap and water. - P302+P352
If skin irritation or rash occurs: Get medical advice/attention. - P333+P313
Specific treatment, see supplemental first aid information. - P321
Wash contaminated clothing before reuse. - P363

- Storage/Disposal** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

2.3 Other hazards

OSHA HCS 2012

- No data available

Canada

According to WHMIS

2.1 Classification of the substance or mixture

- WHMIS
- No data available

2.2 Label elements

WHMIS



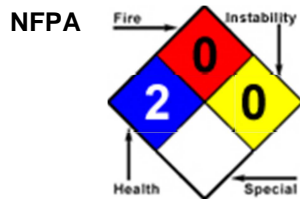
- Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- No data available

2.4 Other information



Key to abbreviations

= See Section 16 for full text of R and S phrases.

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

3.2 Mixtures

Hazardous Components					
Chemical Name	Identifiers	%(weight)	LD50/LC50	Classifications According to Regulation/Directive	Comments
Isopropyl alcohol	CAS:67-63-0 EC Number:200-661-7 UN:UN1219 EINECS:200-661-7	5% TO 6%	Inhalation-Rat LC50 • 16000 ppm 8 Hour(s) Skin-Rabbit LD50 • 12800 mg/kg Ingestion/Oral-Rat LD50 • 5000 mg/kg	WHMIS: Flam. Liq. - B2; Other Toxic Effects - D2B UN GHS: Flam. Liq. 2; Eye Irrit. 2A EU DSD/DPD: Highly Flammable(F); Irritant(Xi); R11; R36; R67 EU CLP: Flam. Liq. 2; Eye Irrit. 2 OSHA HCS 2012:	
Pentaerythritol Tetraacrylate	CAS:4986-89-4 EC Number:225-644-1 EINECS:225-644-1	3% TO 5%		WHMIS: UN GHS: Eye Irrit. 2A; Skin Irrit. 2; Skin Sens. 1 EU DSD/DPD: Irritant(Xi); R36/38; R43 EU CLP: Annex VI: Eye Irrit. 2; Skin Irrit. 2; Skin Sens. 1; H319; H315; H317 OSHA HCS 2012:	
1-hydroxycyclohexyl phenyl ketone	CAS:947-19-3 EC Number:213-426-9 EINECS:213-426-9	1% TO 2%		WHMIS: UN GHS: Acute Tox. 5; Eye Irrit. 2A; Skin Irrit. 2 EU DSD/DPD: R36/37/38 EU CLP: Eye Irrit. 2; Skin Irrit. 2 OSHA HCS 2012:	
2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	CAS:3524-68-3 EC Number:222-540-8 EINECS:222-540-8	1% TO 2%	Ingestion/Oral-Rat LD50 • 1830 mg/kg Skin-Rabbit LD50 • 4 mL/kg	WHMIS: UN GHS: Skin Irrit. 2; Skin Sens. 1 EU DSD/DPD: Irritant(Xi); R36/38; R43 EU CLP: Annex VI: Eye Irrit. 2; Skin Irrit. 2; Skin Sens. 1; H319; H315; H317 OSHA HCS 2012:	

Benzophenone	CAS: 119-61-9 EINECS: 204-337-6	1% TO 2%	Ingestion/Oral-Rat LD50 • >10 g/kg Skin-Rabbit LD50 • 3535 mg/kg	WHMIS: Other Toxic Effects - D2B UN GHS: Aquatic Acute 1; Aquatic Chronic 1; Eye Irrit. 2A; Skin Irrit. 3 EU DSD/DPD: R36/38; R50/53 EU CLP: Aquatic Acute 1; Aquatic Chronic 1; Eye Irrit. 2; Skin Irrit. 2 OSHA HCS 2012:
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	CAS: 119313-12-1 EC Number: 404-360-3	< 1%	Ingestion/Oral-Rat LD50 • >2000 mg/kg Skin-Rat LD50 • >=2000 mg/kg	WHMIS: UN GHS: Aquatic Acute 1; Aquatic Chronic 1 EU DSD/DPD: Environment(N); R50; R53 EU CLP: Aquatic Acute 1; Aquatic Chronic 1 OSHA HCS 2012:

European Chemicals Agency – Candidate List of Substances of Very High Concern for Authorization

- Ethoxylated nonyl phenol acrylate, CAS #678991-31-6; (4-Nonylphenol, branched and linear, ethoxylated); listed 2013/06/20; 7-8%.

Section 4 - First Aid Measures

4.1 Description of first aid measures

- Inhalation**
- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration and call 911 or emergency medical service.
- Skin**
- IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
- Eye**
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Rinse mouth. Never give anything by mouth to an unconscious person. If large quantities are swallowed, call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.
 - LARGE FIRE: Water spray, fog or regular foam.
- Unsuitable Extinguishing Media**
- No data available
- Firefighting Procedures**
- LARGE FIRES: Use extinguishing agent suitable for type of surrounding fire. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep unauthorized personnel away. Ventilate closed spaces before entering.

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- Some of these materials may burn, but none ignite readily.
- Hazardous Combustion Products**
- Products of combustion include: carbon oxides (CO_x).

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions** • Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate enclosed areas.
- Emergency Procedures** • No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended. Use normal clean up procedures.

6.2 Environmental precautions

- LARGE SPILLS: Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

- Containment/Clean-up Measures** • Use appropriate Personal Protective Equipment (PPE)
Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

- Handling** • Use good safety and industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

- Storage** • Keep container closed when not in use. Store away from extreme heat. Do not freeze.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Argentina	Australia	Belgium	Brazil
Isopropyl alcohol (67-63-0)	STELs	400 ppm STEL	500 ppm STEL [CMP-CPT]	500 ppm STEL; 1230 mg/m ³ STEL	400 ppm STEL; 1000 mg/m ³ STEL	Not established
	TWAs	200 ppm TWA	400 ppm TWA [CMP]	400 ppm TWA; 983 mg/m ³ TWA	200 ppm TWA; 500 mg/m ³ TWA	310 ppm TWA LT; 765 mg/m ³ TWA LT
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Alberta	Canada British Columbia	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories
Isopropyl alcohol (67-63-0)	STELs	400 ppm STEL; 984 mg/m ³ STEL	400 ppm STEL	400 ppm STEL	500 ppm STEL; 1230 mg/m ³ STEL	500 ppm STEL; 1228 mg/m ³ STEL
	TWAs	200 ppm TWA; 492 mg/m ³ TWA	200 ppm TWA	200 ppm TWA	400 ppm TWA; 983 mg/m ³ TWA	400 ppm TWA; 983 mg/m ³ TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec	Canada Saskatchewan

Isopropyl alcohol (67-63-0)	STELs	400 ppm STEL	500 ppm STEL; 1228 mg/m3 STEL	400 ppm STEL	500 ppm STEV; 1230 mg/m3 STEV	400 ppm STEL
	TWAs	200 ppm TWA	400 ppm TWA; 983 mg/m3 TWA	200 ppm TWA	400 ppm TWA EV; 985 mg/m3 TWA EV	200 ppm TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Yukon	Chile	China	Denmark	Egypt
Isopropyl alcohol (67-63-0)	STELs	500 ppm STEL; 1225 mg/m3 STEL	500 ppm STEL LPT; 1230 mg/m3 STEL LPT	700 mg/m3 STEL	Not established	500 ppm STEL; 1230 mg/m3 STEL
	TWAs	400 ppm TWA; 980 mg/m3 TWA	320 ppm TWA LPP; 786 mg/m3 TWA LPP	350 mg/m3 TWA	200 ppm TWA; 490 mg/m3 TWA	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Finland	France	Germany DFG	Germany TRGS	Hong Kong
Isopropyl alcohol (67-63-0)	STELs	250 ppm STEL; 620 mg/m3 STEL	400 ppm STEL [VLCT]; 980 mg/m3 STEL [VLCT]	Not established	Not established	500 ppm STEL; 1230 mg/m3 STEL
	TWAs	200 ppm TWA; 500 mg/m3 TWA	Not established	Not established	200 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 500 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)	Not established
	Ceilings	Not established	Not established	400 ppm Peak; 1000 mg/m3 Peak	Not established	Not established
	MAKs	Not established	Not established	200 ppm TWA MAK; 500 mg/m3 TWA MAK	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Indonesia	Ireland	Japan	Korea	Mexico
Isopropyl alcohol (67-63-0)	Ceilings	Not established	Not established	400 ppm Ceiling; 980 mg/m3 Ceiling	Not established	Not established
	STELs	Not established	400 ppm STEL	Not established	400 ppm STEL; 980 mg/m3 STEL	500 ppm STEL [LMPE-CT]; 1225 mg/m3 STEL [LMPE-CT]
	TWAs	400 ppm TWA; 983 mg/m3 TWA	200 ppm TWA	Not established	200 ppm TWA; 480 mg/m3 TWA	400 ppm TWA LMPE-PPT; 980 mg/m3 TWA LMPE- PPT
Exposure Limits/Guidelines (Con't.)						
	Result	New Zealand	NIOSH	Norway	OSHA	Philippines
Isopropyl alcohol (67-63-0)	TWAs	400 ppm TWA; 983 mg/m3 TWA	400 ppm TWA; 980 mg/m3 TWA	100 ppm TWA; 245 mg/m3 TWA	400 ppm TWA; 980 mg/m3 TWA	400 ppm TWA; 980 mg/m3 TWA
	STELs	500 ppm STEL; 1230 mg/m3 STEL	500 ppm STEL; 1225 mg/m3 STEL	Not established	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Poland	Portugal	Russia	Singapore	South Africa
Isopropyl alcohol (67-63-0)	STELs	1200 mg/m3 STEL [NDSch]	400 ppm STEL [VLE-CD]	50 mg/m3 STEL (vapor)	500 ppm STEL; 1230 mg/m3 STEL	500 ppm STEL; 1225 mg/m3 STEL
	TWAs	900 mg/m3 TWA [NDS]	200 ppm TWA [VLE- MP]	10 mg/m3 TWA (vapor)	400 ppm PEL; 983 mg/m3 PEL	400 ppm TWA; 960 mg/m3 TWA; 980 mg/m3 TWA

						(regulated under Propane-2-ol)
Exposure Limits/Guidelines (Con't.)						
	Result	Spain	Sweden	Switzerland	Taiwan	Venezuela
Isopropyl alcohol (67-63-0)	MAKs	Not established	Not established	200 ppm TWA [MAK]; 500 mg/m ³ TWA [MAK]	Not established	Not established
	STELs	400 ppm STEL [VLA-EC]; 1000 mg/m ³ STEL [VLA-EC]	250 ppm STV; 600 mg/m ³ STV	400 ppm STEL [KZW]; 1000 mg/m ³ STEL [KZW]	Not established	500 ppm STEL [LEB]
	TWAs	200 ppm TWA [VLA-ED] (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary o biocide compound); 500 mg/m ³ TWA [VLA-ED] (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary o biocide compound)	150 ppm LLV; 350 mg/m ³ LLV	Not established	400 ppm TWA; 983 mg/m ³ TWA	400 ppm TWA [CAP]
	Biological Limit Values (BLV)	40 mg/L urine end of workweek Acetone (1,F,I)	Not established	Not established	Not established	Not established

Exposure Control Notations

Switzerland

•Isopropyl alcohol (67-63-0): **Developmental Risk Groups:** (Developmental Risk Group C)

Portugal

•Isopropyl alcohol (67-63-0): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Singapore

•Isopropyl alcohol (67-63-0): **Odour Threshold - High:** (490 mg/m³) | **Odour Threshold - Low:** (8 mg/m³) | **Irritation:** (490 mg/m³)

South Africa

•Isopropyl alcohol (67-63-0): **Skin:** (Skin Notation)

Brazil

•Isopropyl alcohol (67-63-0): **Skin:** (skin designation)

Ireland

•Isopropyl alcohol (67-63-0): **Skin:** (Potential for cutaneous absorption)

ACGIH

•Isopropyl alcohol (67-63-0): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Germany DFG

•Isopropyl alcohol (67-63-0): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester (3524-68-3): **Sensitizers:** (skin sensitizer)

Exposure Limits Supplemental

Switzerland

•Isopropyl alcohol (67-63-0): **Biological Limit Values:** (25 mg/L Medium: urine Time: end of shift Parameter: Acetone; 25 mg/L Medium: whole blood Time: end of shift Parameter: Acetone)

Argentina

•Isopropyl alcohol (67-63-0): **BEIs:** (2 mg/g Creatinine urine Acetone)

ACGIH

•Isopropyl alcohol (67-63-0): **BEIs:** (40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)) | **TLV Basis - Critical Effects:** (CNS impairment; eye and upper respiratory tract irritation)

Germany TRGS

•Isopropyl alcohol (67-63-0): **BELs:** (50 mg/L Medium: whole blood Time: end of shift Parameter: Acetone; 50 mg/L Medium: urine Time: end of shift Parameter: Acetone)

8.2 Exposure controls

Engineering Measures/Controls

- Local exhaust is recommended but not required. Provide adequate ventilation as necessary.

Personal Protective Equipment**Pictograms****Respiratory**

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear protective eyewear (goggles, face shield, or safety glasses).

Hands

- Wear protective gloves - rubber or neoprene.

Skin/Body

- Wear protective clothing - apron or other impervious body coverings.

General Industrial Hygiene Considerations

- Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls

- No data available

Section 9 - Physical and Chemical Properties**9.1 Information on Physical and Chemical Properties**

Material Description			
Physical Form	Liquid	Appearance/Description	Viscous liquid.
Color	Blue	Odor	Slight acrylic odor.
Odor Threshold	No data available	Physical and Chemical Properties	Not relevant
General Properties			
Boiling Point	100 C(212 F)	Melting Point	Not relevant
Decomposition Temperature	Not relevant	pH	No data available
Density	8.74 lbs/gal	Water Solubility	Miscible
Solvent Solubility	No data available	Explosive Properties	Not relevant
Oxidizing Properties:	Not relevant		
Volatility			
Vapor Pressure	No data available	Vapor Density	Not relevant
Evaporation Rate	No data available	VOC (Vol.)	56 g/L
Volatiles (Wt.)	55 to 60 %		
Flammability			
Flash Point	No data available	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not relevant		
Environmental			
Half-Life	No data available	Octanol/Water Partition coefficient	No data available
Bioaccumulation Factor	No data available	Bioconcentration Factor	No data available
Biochemical Oxygen Demand BOD/BOD5	No data available	Chemical Oxygen Demand	No data available
Persistence	No data available	Degradation	No data available

9.2 Other Information

- Polymerizes to solid/semisolid form upon exposure to UV radiation.

Section 10: Stability and Reactivity**10.1 Reactivity**

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- UV reactive.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Avoid freezing. Excess heat.

10.5 Incompatible materials

- No data available

10.6 Hazardous decomposition products

- No decomposition is expected under normal storage and use conditions. Hazardous decomposition products formed under fire conditions - carbon oxides (COx).

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
Isopropyl alcohol (5% TO 6%)	67-63-0	Acute Toxicity: orl-rat LD50:5000 mg/kg; ihl-rat LC50:16000 ppm/8H; skn-rbt LD50:12800 mg/kg; Irritation: eye-rbt 100 mg/24H MOD
2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester (1% TO 2%)	3524-68-3	Acute Toxicity: orl-rat LD50:1830 mg/kg; skn-rbt LD50:4 mL/kg; Irritation: eye-rbt 1 mg SEV; skn-rbt 500 mg open MLD
Benzophenone (1% TO 2%)	119-61-9	Acute Toxicity: orl-rat LD50:>10 gm/kg; Skin-Rabbit LD50 • 3535 mg/kg
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl) (< 1%)	119313-12-1	Acute Toxicity: Ingestion/Oral-Rat LD50 • >2000 mg/kg; Skin-Rat LD50 • >=2000 mg/kg
GHS Properties	Classification	
Acute toxicity	EU/CLP• OSHA HCS 2012• UN GHS•	
Aspiration Hazard	EU/CLP• OSHA HCS 2012• UN GHS•	
Carcinogenicity	EU/CLP• OSHA HCS 2012• UN GHS•	
Germ Cell Mutagenicity	EU/CLP• OSHA HCS 2012• UN GHS•	
Skin corrosion/Irritation	EU/CLP• OSHA HCS 2012• UN GHS•Skin Mild Irritation 3	
Skin sensitization	EU/CLP•Skin Sensitizer 1 OSHA HCS 2012•Skin Sensitizer 1 UN GHS•Skin Sensitizer 1	
STOT-RE	EU/CLP• OSHA HCS 2012• UN GHS•	
STOT-SE	EU/CLP• OSHA HCS 2012• UN GHS•	
Toxicity for Reproduction	EU/CLP• OSHA HCS 2012• UN GHS•	
Respiratory sensitization	EU/CLP• OSHA HCS 2012• UN GHS•	

Serious eye damage/Irritation	EU/CLP•Eye Irritation 2 OSHA HCS 2012•Eye Irritation 2 UN GHS•Eye Irritation 2A
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Route(s) of entry/exposure • Skin, Eye

Potential Health Effects

Inhalation

Acute (Immediate) • May cause irritation.

Chronic (Delayed) • Repeated and prolonged exposure may cause irritation.

Skin

Acute (Immediate) • May cause mild irritation. May cause an allergic skin reaction.

Chronic (Delayed) • Repeated and prolonged exposure may cause sensitization.

Eye

Acute (Immediate) • Causes eye irritation.

Chronic (Delayed) • Repeated and prolonged exposure may be harmful.

Ingestion

Acute (Immediate) • May cause irritation.

Chronic (Delayed) • No specific information available.

Section 12 - Ecological Information

12.1 Toxicity

Component	CAS	Data	Comments
Benzophenone (1% TO 2%)	119-61-9	Crustacea: 24 Hour(s) EC50 Crustacea .28 mg/L ; Fish: 96 Hour(s) LC50 Fish 14.2 mg/L	
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl) (< 1%)	119313-12-1	Crustacea: 24 Hour(s) EC50 Water Flea .8 mg/L ; Fish: 96 Hour(s) LC50 Fish .46 mg/L	

12.2 Persistence and degradability

- No data available

12.3 Bioaccumulative potential

- No data available

12.4 Mobility in Soil

- No data available

12.5 Results of PBT and vPvB assessment

- No data available

12.6 Other adverse effects

Potential Environmental Effects

- May cause long lasting harmful effects to aquatic life.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of container in accordance with local, regional, national, and/or international regulations.

13.2 Other Information

- Avoid release to the environment. Dispose of wastes in an approved waste disposal facility.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	NDA	NDA	NDA	NDA
IMO/IMDG	NDA	NDA	NDA	NDA	NDA
IATA/ICAO	NDA	NDA	NDA	NDA	NDA

14.6 Special precautions for user

- None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Not relevant.

14.8 Other information

DOT • Not regulated.

IMO/IMDG • Not regulated.

IATA/ICAO • Not regulated.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute

State Right To Know				
Component	CAS	MA	NJ	PA
Isopropyl alcohol	67-63-0	Yes	Yes	Yes
Pentaerythritol Tetraacrylate	4986-89-4	No	No	No
1-hydroxycyclohexyl phenyl ketone	947-19-3	No	No	No
2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	No	No	No
Benzophenone	119-61-9	No	No	No
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	No	No	No

Inventory						
Component	CAS	Australia AICS	Canada DSL	China	EU EINECS	EU ELNICS
Isopropyl alcohol	67-63-0	Yes	Yes	Yes	Yes	No
Pentaerythritol Tetraacrylate	4986-89-4	Yes	Yes	Yes	Yes	No
1-hydroxycyclohexyl phenyl ketone	947-19-3	Yes	Yes	Yes	Yes	No
2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Yes	Yes	Yes	Yes	No

Benzophenone	119-61-9	Yes	Yes	Yes	Yes	No
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Yes	Yes	Yes	No	Yes
Inventory (Con't.)						
Component	CAS	Japan ENCS	Korea KECL	New Zealand	Philippines PICCS	Switzerland SWISS
Isopropyl alcohol	67-63-0	Yes	Yes	Yes	Yes	No
Pentaerythritol Tetraacrylate	4986-89-4	Yes	Yes	Yes	Yes	No
1-hydroxycyclohexyl phenyl ketone	947-19-3	Yes	Yes	Yes	Yes	No
2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Yes	Yes	Yes	Yes	No
Benzophenone	119-61-9	Yes	Yes	Yes	Yes	No
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Yes	Yes	Yes	Yes	Yes
Inventory (Con't.)						
Component		CAS		TSCA		
Isopropyl alcohol		67-63-0		Yes		
Pentaerythritol Tetraacrylate		4986-89-4		Yes		
1-hydroxycyclohexyl phenyl ketone		947-19-3		Yes		
2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester		3524-68-3		Yes		
Benzophenone		119-61-9		Yes		
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)		119313-12-1		Yes		

Australia

Labor

Australia - High Volume Industrial Chemicals List

•Isopropyl alcohol	67-63-0	5% TO 6%
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2% Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3% Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5% Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2% Not Listed
•Benzophenone	119-61-9	1% TO 2% Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1% Not Listed

Australia - List of Designated Hazardous Substances - Classification

•Isopropyl alcohol	67-63-0	5% TO 6%	F, Xi R11, R36, R67
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Xi R36/38, R43
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Xi R36/38, R43
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	N R50, R53

Environment

Australia - Priority Existing Chemical Program

•Isopropyl alcohol	67-63-0	5% TO 6%	Candidate chemical
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed

•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Canada

Labor

Canada - WHMIS - Classifications of Substances

•Isopropyl alcohol	67-63-0	5% TO 6%	B2, D2B (including 70%)
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Canada - WHMIS - Ingredient Disclosure List

•Isopropyl alcohol	67-63-0	5% TO 6%	1 %
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Canada Alberta

Environment

Canada - Alberta - Ambient Air Quality Objectives

•Isopropyl alcohol	67-63-0	5% TO 6%	3190 ppbv 1 hour average; 7850 µg/m3 1 hour average
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

China

Other

China - Dangerous Goods List

•Isopropyl alcohol	67-63-0	5% TO 6%	UN1219 PG = II
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Denmark

Environment

Denmark - Advisory List for Self-Classification of Dangerous Substances

•Isopropyl alcohol	67-63-0	5% TO 6%	Not Listed
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Carc.Cat.3; R40 N; R50 Xi; R38
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	R52/53
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

•Isopropyl alcohol	67-63-0	5% TO 6%	F; R11 Xi; R36 R67
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Xi; R36/38 R43
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Xi; R36/38 R43
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	N; R50-53

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

•Isopropyl alcohol	67-63-0	5% TO 6%	F Xi R:11-36-67 S:(2)-7-16-24/25-26
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Xi R:36/38-43 S:(2)-39
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Xi R:36/38-43 S:(2)-26-39
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	N R:50/53 S:60-61

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

•Isopropyl alcohol	67-63-0	5% TO 6%	Not Listed
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	D
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	D
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

•Isopropyl alcohol	67-63-0	5% TO 6%	S:(2)-7-16-24/25-26
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	S:(2)-39
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	S:(2)-26-39
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	S:60-61

EU - Endocrine Disruptors (COM (2001)262) - Candidate List of Substances

•Isopropyl alcohol	67-63-0	5% TO 6%	Not Listed
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Group III Chemical
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

EU - Existing Substance Regulation (793/93/EEC) - Evaluation of Existing HPV Chemicals (REPEALED)

•Isopropyl alcohol	67-63-0	5% TO 6%	
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Germany

Environment

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

•Isopropyl alcohol	67-63-0	5% TO 6%	ID Number 135, hazard class 1 - low hazard to waters
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed

•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Germany - Water Classification (VwVwS) - Annex 3

•Isopropyl alcohol	67-63-0	5% TO 6%	Not Listed
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	ID Number 7288, hazard class 2 - hazard to waters
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	ID Number 2124, not considered hazardous to water
•Benzophenone	119-61-9	1% TO 2%	ID Number 2024, hazard class 2 - hazard to waters
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	ID Number 2102, hazard class 2 - hazard to waters

Hong Kong

Labor

Hong Kong - Dangerous Substances Regulations - Classification

•Isopropyl alcohol	67-63-0	5% TO 6%	Flammable
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Hong Kong - Dangerous Substances Regulations - Particular Risks

•Isopropyl alcohol	67-63-0	5% TO 6%	R-11
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Hong Kong - Dangerous Substances Regulations - Safety Precautions

•Isopropyl alcohol	67-63-0	5% TO 6%	S-6/8, S-13
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Other

Hong Kong - Dangerous Goods - Category 5 - Substances Giving Off Flammable Vapour

•Isopropyl alcohol	67-63-0	5% TO 6%	Class 1, Division 2
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

India

Environment

India - Hazardous Chemical Rules - List of Hazardous and Toxic Chemicals

•Isopropyl alcohol	67-63-0	5% TO 6%	
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed

•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Japan

Labor

Japan - ISHL Dangerous Substances

•Isopropyl alcohol	67-63-0	5% TO 6%	Flammable substance
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Japan - ISHL Harmful Substances Requiring Workers to Subject to Medical Exams

•Isopropyl alcohol	67-63-0	5% TO 6%	(when produced and handled indoors)
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Japan - ISHL Harmful Substances Whose Names Are to be Indicated on the Label

•Isopropyl alcohol	67-63-0	5% TO 6%	>1 % weight
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Japan - ISHL Notifiable Substances

•Isopropyl alcohol	67-63-0	5% TO 6%	>0.1 % weight [Table 9, 494] (listed under Propyl alcohol)
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Japan - ISHL Prevention of Organic Solvent Poisoning

•Isopropyl alcohol	67-63-0	5% TO 6%	Class 2
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Environment

Japan - Pollutant Release Transfer Register (PRTR) - Class 1 Substances

•Isopropyl alcohol	67-63-0	5% TO 6%	Not Listed
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	403 >=1 %
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Inventory - Japan - Industrial Safety and Health Law Substances (ISHL)

•Isopropyl alcohol	67-63-0	5% TO 6%	2-(8)-319
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed

•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	7-(4)-697
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	8-(7)-927

Other

Japan - Chemical Substance Control Law (CSCL) - Examined Existing Chemical Substances

•Isopropyl alcohol	67-63-0	5% TO 6%	Decomposable
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Non-decomposable/Low-concentrate
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Low-decomposable (see also 4-125); Non-decomposable/Low-concentrate (see also 4-125)
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Japan - Fire Service Law - Hazardous Materials

•Isopropyl alcohol	67-63-0	5% TO 6%	Group 4 - Flammable liquids II (listed under Alcohols)
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Group 4 - Flammable liquids III (listed under 3rd Class petroleum - insoluble)
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Group 4 - Flammable liquids III (listed under 3rd Class petroleum - insoluble)
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Japan - Japanese Pharmacopoeia Listing - Synthetics

•Isopropyl alcohol	67-63-0	5% TO 6%	
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Japan - ISHL Working Environment Evaluation Standards - Administrative Control Levels

•Isopropyl alcohol	67-63-0	5% TO 6%	200 ppm ACL
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Korea

Labor

Korea - MOE - Harmful Substances

•Isopropyl alcohol	67-63-0	5% TO 6%	Not Listed
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	92-23

Korea - ISHA - Name, Toxicity and Protective Measures of New Chemical Substances

•Isopropyl alcohol	67-63-0	5% TO 6%	Not Listed
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	94-20

Mexico

Other

Mexico - Hazard Classifications

•Isopropyl alcohol	67-63-0	5% TO 6%	Hazard Class = 3 PG = II UN1219
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Mexico - Regulated Substances

•Isopropyl alcohol	67-63-0	5% TO 6%	UN1219
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Singapore

Environment

Singapore - Petroleum and Flammable Materials - Hazard Classes

•Isopropyl alcohol	67-63-0	5% TO 6%	Hazard Class = 3
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

Singapore - Petroleum and Flammable Materials - Regulated Products

•Isopropyl alcohol	67-63-0	5% TO 6%	SCDIPA1219L2
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

United States

Environment

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

•Isopropyl alcohol	67-63-0	5% TO 6%	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

U.S. - EPA - Designated Generic Categories - Certain Glycol Ethers

•Isopropyl alcohol	67-63-0	5% TO 6%	Not Listed
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2%	Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3%	
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5%	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1%	Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

•Isopropyl alcohol	67-63-0	5% TO 6%
•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	1% TO 2% Not Listed
•Ethanol, 2-phenoxy-, acrylate	48145-04-6	< 0.3% Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	3% TO 5% Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	1% TO 2% Not Listed
•Benzophenone	119-61-9	1% TO 2% Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	< 1% Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

15.3 Other Information

- California Proposition 65: This product contains or may contain a substance(s) known to the State of California to cause cancer and/or reproductive toxicity:
Benzophenone CAS #119-61-9 1-2%
Formaldehyde CAS #50-00-0 <0.001%
1,4-Dioxane CAS #123-91-1 <0.0001%
Heavy metals (typical ppm): Pb (0.0034), Cd (0.0034), Hg (0.0068), Cr (0.0034), As (0.0068), Ni (0.0068)

Section 16 - Other Information

Relevant Phrases (code & full text)

- H315 - Causes skin irritation
- H316 - Causes mild skin irritation
- H317 - May cause an allergic skin reaction
- H319 - Causes serious eye irritation
- H412 - Harmful to aquatic life with long lasting effects
- P261 - Avoid breathing dust, fume, gas, mist, vapors and/or spray.
- P264 - Wash thoroughly after handling.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 - Specific treatment, see supplemental first aid information.
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P363 - Wash contaminated clothing before reuse.
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- R11 - Highly flammable.
- R36 - Irritating to eyes.
- R36/37/38 - Irritating to eyes, respiratory system and skin.
- R36/38 - Irritating to eyes and skin.
- R43 - May cause sensitization by skin contact.
- R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R53 - May cause long-term adverse effects in the aquatic environment.
- R67 - Vapors may cause drowsiness and dizziness.
- S24 - Avoid contact with skin.
- S37 - Wear suitable gloves.
- S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Classification method for mixtures

- Calculation method.

- Last Revision Date** • 13 February 2013
- Preparation Date** • 12 March 2014
- Other Information** • Approved by: Troy Bergstedt, Director of Chemical Research, (218) 628-2217 ext.142.
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