

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

**1.1 Product identifier**

**Product Name** • Alpha E-50 Emulsion

**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: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

**2.1 Classification of the substance or mixture**

**CLP** • Skin Sensitization 1 - H317  
Hazardous to the aquatic environment Chronic 3 - H412  
EUH208 - Contains sensitizing substance (Acrylic acid, propylenebis(oxypropylene) ester; Poly(oxy(methyl-1,2-ethanediy)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)). May produce an allergic reaction.

**2.2 Label Elements**

**CLP**

**WARNING**



**Hazard statements** • H317 - May cause an allergic skin reaction  
H412 - Harmful to aquatic life with long lasting effects

**Prevention** • P261 - Avoid breathing dust, fume, gas, mist, vapors and/or spray.  
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** • P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

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.

P321 - Specific treatment, see supplemental first aid information.

P362+P364 - Take off contaminated clothing and wash it 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

CLP • No data available

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## UN GHS Revision 6

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Sixth Revised Edition

### 2.1 Classification of the substance or mixture

UN GHS • Skin Sensitization 1  
Hazardous to the aquatic environment Chronic 3

### 2.2 Label elements

UN GHS

#### WARNING



**Hazard statements** • May cause an allergic skin reaction  
Harmful to aquatic life with long lasting effects

#### Precautionary statements

**Prevention** • Avoid breathing dust, fume, gas, mist, vapors and/or spray.  
Contaminated work clothing should not be allowed out of the workplace.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.

**Response** • IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
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.  
Specific treatment, see supplemental first aid information.  
Take off contaminated clothing and wash it before reuse.

**Storage/Disposal** • 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

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## 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

### 2.2 Label elements

OSHA HCS 2012

#### WARNING



**Hazard statements** • May cause an allergic skin reaction

**Precautionary statements**

**Prevention** • Avoid breathing dust, fume, gas, mist, vapors and/or spray.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.

**Response** • IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
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.  
Specific treatment, see supplemental first aid information.  
Take off contaminated clothing and wash it before reuse.

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

**2.3 Other hazards**

OSHA HCS 2012 • No data available

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**Canada**

According to: WHMIS 2015

**2.1 Classification of the substance or mixture**

WHMIS 2015 • Skin Sensitization 1

**2.2 Label elements**

WHMIS 2015

**WARNING**



**Hazard statements** • May cause an allergic skin reaction

**Precautionary statements**

**Prevention** • Avoid breathing dust, fume, gas, mist, vapors and/or spray.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.

**Response** • IF ON SKIN: Wash with plenty of water.  
If skin irritation or rash occurs: Get medical advice/attention.  
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.  
Specific treatment, see supplemental first aid information.  
Take off contaminated clothing and wash it before reuse.

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

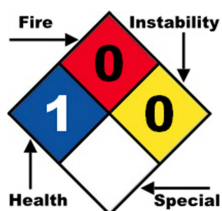
**2.3 Other hazards**

WHMIS 2015 • No data available

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**2.4 Other information**

NFPA



See Section 12 for Ecological Information.

## Section 3 - Composition/Information on Ingredients

### 3.1 Substances

### 3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Acrylic acid, propylenebis(oxypropylene) ester	CAS:42978-66-5 EC Number:256-032-2 EU Index:607-249-00-X EINECS:256-032-2	2% TO 3%	Ingestion/Oral-Rat LD50 • 6200 mg/kg Skin-Rabbit LD50 • >2 g/kg	EU CLP: Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1; Aquatic Chronic 2 UN GHS Revision 6: OSHA HCS 2012: WHMIS 2015:	NDA
Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	CAS:52408-84-1	2% TO 3%		EU CLP: Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1 UN GHS Revision 6: Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1 OSHA HCS 2012: WHMIS 2015:	NDA
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	EU CLP: Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 UN GHS Revision 6:	NDA
1-hydroxycyclohexyl phenyl ketone	CAS:947-19-3 EC Number:213-426-9 EINECS:213-426-9	1% TO 2%		EU CLP: Skin Irrit. 2, H315; Eye Irrit. 2, H319 UN GHS Revision 6:	NDA
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	CAS:119313-12-1 EC Number:404-360-3 EU Index:606-047-00-9	< 1%	Ingestion/Oral-Rat LD50 • >2000 mg/kg Skin-Rat LD50 • >=2000 mg/kg	EU CLP: Aquatic Acute 1, H400; Aquatic Chronic 1, H410 UN GHS Revision 6:	NDA

See Section 11 for Toxicological Information.

## 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. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.
- 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

##### Notes to Physician

- No data available.

##### Antidotes

- No data available.

#### 4.4 Other information

- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

### Section 5 - Firefighting Measures

#### 5.1 Extinguishing media

**Suitable Extinguishing Media** • SMALL FIRES: Dry chemical, CO<sub>2</sub>, water spray or regular foam.  
LARGE FIRE: Water spray, fog or regular foam.

**Unsuitable Extinguishing Media** • No data available.

**Firefighting Procedures** • Fire fighters should wear complete protective clothing including self-contained breathing apparatus.  
Keep unauthorized personnel away.  
Ventilate closed spaces before entering.  
LARGE FIRES: Use extinguishing agent suitable for type of surrounding fire.

#### 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<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>).

#### 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. Do not touch or walk through spilled material.

**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. Do not expose to sunlight or white room light. Handle under yellow room lights to prevent polymerization due to UV exposure.

### 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.

**Special Packaging Materials** • Package in opaque containers and/or use additional light-blocking materials.

### 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** • No data available.

### 8.2 Exposure controls

**Engineering Measures/Controls** • Local exhaust is recommended but not required. Provide adequate ventilation as necessary.

### Personal Protective Equipment

#### Pictograms



**Respiratory** • In case of insufficient ventilation, wear suitable respiratory equipment.

**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. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

**Environmental Exposure Controls** • No data available

## Section 9 - Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Viscous liquid.
Color	Blue	Odor	Mild
Odor Threshold	No data available	Physical and Chemical Properties	UV reactive.
General Properties			
Boiling Point	100 °C(212 °F)	Melting Point/Freezing Point	0 °C(32 °F)
Decomposition Temperature	No data available	pH	
Specific Gravity/Relative Density	> 1 Water=1	Density	8.9 lbs/gal
Water Solubility	Miscible	Viscosity	6500 to 9500 Centipoise (cPs, cP) or mPas
Explosive Properties	None.	Oxidizing Properties:	None.
Volatility			
Vapor Pressure	No data available	Vapor Density	> 1 Air=1
Evaporation Rate	< 1 Water = 1	VOC (Wt.)	0 %
Volatiles (Wt.)	55 to 60 %		
Flammability			

Flash Point	> 100 °C(> 212 °F)	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	Non-flammable in liquid form. When dry, product will burn as an ordinary combustible material.		
<b>Environmental</b>			
Half-Life	No data available	Octanol/Water Partition coefficient	No data available
Coefficient of water/oil distribution	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

- Excess heat. Direct sunlight. Avoid freezing.

### 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), nitrogen oxides (NOx).

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Components		
Acrylic acid, propylenebis(oxypropylene) ester (2% TO 3%)	42978-66-5	<b>Acute Toxicity:</b> Skin-Rabbit LD50 • >2 g/kg; <b>Irritation:</b> Eye-Rabbit • 100 µL 24 Hour(s) • Severe irritation; Skin-Rabbit • 500 mg • Moderate irritation
Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy) (2% TO 3%)	52408-84-1	<b>Multi-dose Toxicity:</b> Skin-Rat TDLo • 4 mL/kg 2 Week(s)-Intermittent; <i>Skin and Appendages:After systemic exposure: Dermatitis, other; Nutritional and Gross Metabolic:Gross Metabolite Changes:Weight loss or decreased weight gain</i>
Benzophenone (1% TO 2%)	119-61-9	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • >10 g/kg; Skin-Rabbit LD50 • 3535 mg/kg
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl) (< 1%)	119313-12-1	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 2000 mg/kg; Skin-Rat LD50 • 2000 mg/kg; <b>Multi-dose Toxicity:</b> Ingestion/Oral-Rat TDLo • 42 g/kg 14 Day(s)-Continuous; <b>Behavioral:Tremor; Behavioral:Ataxia</b>

GHS Properties	Classification
Acute toxicity	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Skin corrosion/Irritation	EU/CLP•

	UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Serious eye damage/Irritation	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Skin sensitization	EU/CLP•Skin Sensitizer 1 UN GHS 6•Skin Sensitizer 1 OSHA HCS 2012•Skin Sensitizer 1 WHMIS 2015•Skin Sensitizer 1
Respiratory sensitization	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Aspiration Hazard	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Carcinogenicity	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Germ Cell Mutagenicity	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Toxicity for Reproduction	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
STOT-SE	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
STOT-RE	EU/CLP• UN GHS• OSHA HCS 2012• WHMIS 2015•

**Medical Conditions Aggravated by Exposure** • No data available.

**Potential Health Effects**

**Inhalation**

**Acute (Immediate)**

- May cause irritation.

**Chronic (Delayed)**

- Repeated and prolonged exposure may cause irritation.

**Skin**

**Acute (Immediate)**

- May cause an allergic skin reaction. May cause irritation.

**Chronic (Delayed)**

- Repeated and prolonged exposure may cause sensitization. Repeated and prolonged exposure may cause irritation.

**Eye**

**Acute (Immediate)**

- May cause irritation.

**Chronic (Delayed)**

- Repeated and prolonged exposure may cause irritation.

**Ingestion**

**Acute (Immediate)**

- May cause irritation.



- Chronic (Delayed)** • Repeated and prolonged exposure may cause irritation.  
**Mutagenic Effects** • No data available.

Carcinogenic Effects			
	CAS	IARC	NTP
Benzophenone	119-61-9	Group 2B-Possible Carcinogen	Evidence of Carcinogenicity

- Reproductive Effects** • No data available.

## Section 12 - Ecological Information

### 12.1 Toxicity

Components		
Benzophenone (1% TO 2%)	119-61-9	<b>Aquatic Toxicity-Fish:</b> 96 Hour(s) LC50 <i>fathead minnow</i> 14.2 mg/L <b>Aquatic Toxicity-Crustacea:</b> 24 Hour(s) EC50 <i>Daphnia magna</i> 0.28 mg/L
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl) (< 1%)	119313-12-1	<b>Aquatic Toxicity-Fish:</b> 96 Hour(s) LC50 <i>Brachydanio rerio</i> 0.46 mg/L <b>Aquatic Toxicity-Crustacea:</b> 24 Hour(s) EC50 Water Flea <i>Daphnia magna</i> >0.8 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

#### Ecological Fate

- No data available.

#### 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

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

## 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

- Not relevant.

**Marpol and the IBC Code**

**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**

Inventory						
Component	CAS	Australia AICS	Canada DSL	China	EU EINECS	EU ELNICS
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Yes	Yes	Yes	No	Yes
1-hydroxycyclohexyl phenyl ketone	947-19-3	Yes	Yes	Yes	Yes	No
Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Yes	Yes	Yes	Yes	No
Benzophenone	119-61-9	Yes	Yes	Yes	Yes	No
Poly(oxy(methyl-1,2-ethanediy)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Yes	Yes	Yes	No	No
Inventory (Con't.)						
Component	CAS	Japan ENCS	Korea KECL	New Zealand	Philippines PICCS	Switzerland SWISS
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Yes	No	Yes	Yes	Yes
1-hydroxycyclohexyl phenyl ketone	947-19-3	Yes	Yes	Yes	Yes	No
Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Yes	Yes	Yes	Yes	No
Benzophenone	119-61-9	Yes	Yes	Yes	Yes	No
Poly(oxy(methyl-1,2-ethanediy)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Yes	Yes	Yes	Yes	Yes
Inventory (Con't.)						
Component	CAS	TSCA				
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Yes				
1-hydroxycyclohexyl phenyl ketone	947-19-3	Yes				
Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Yes				
Benzophenone	119-61-9	Yes				
Poly(oxy(methyl-1,2-ethanediy)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Yes				

**Australia**

**Labor**

Australia - High Volume Industrial Chemicals List

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Not Listed
<b>Australia - List of Designated Hazardous Substances - Classification</b>		
•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Xi, N R36/37/38, R43, R51, R53
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	N R50, R53

## Denmark

### Environment

#### Denmark - Advisory List for Self-Classification of Dangerous Substances

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	R52/53
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Not Listed

## Europe

### Other

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

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Xi; R36/37/38 R43 N; R51-53
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	N; R50-53

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	10%≤C: Xi; R:36/37/38
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Not Listed

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

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Xi N R:36/37/38-43-51/53 S:(2)-24-37-61
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	N R:50/53 S:60-61

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

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	S:(2)-24-37-61
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	S:60-61

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

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Group III Chemical
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Not Listed

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

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	
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•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Not Listed
<b>EU - No-Longer Polymers List (67/548/EEC)</b>		
•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	NLP No. 500-114-5 (>1<6.5 mol propoxylated units)
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Not Listed

## Germany

### Environment

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

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	ID Number 1868, hazard class 2 - hazard to waters
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Not Listed

#### Germany - Water Classification (VwVwS) - Annex 3

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	ID Number 8453, hazard class 1 - low hazard to waters (1-6.5 PO)
•Benzophenone	119-61-9	ID Number 2024, hazard class 2 - hazard to waters
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	ID Number 2102, hazard class 2 - hazard to waters

## Japan

### Environment

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

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	403 >=1 %
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Not Listed

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

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	9-768, 9-2531
•1-hydroxycyclohexyl phenyl ketone	947-19-3	7-(4)-697
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	10-2655
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	8-(7)-927

### Other

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

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Non-biodegradable/Low bioconcentration
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Not Listed

#### Japan - Fire Service Law - Hazardous Materials

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Group 4 Flammable liquids; 3rd Class Petroleum - insoluble; Hazard rank III
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed

•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Not Listed

## Korea

### Labor

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

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	94-20 (0055)

## United States - California

### Environment

#### U.S. - California - Proposition 65 - Carcinogens List

•Acrylic acid, propylenebis(oxypropylene) ester	42978-66-5	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Not Listed
•Benzophenone	119-61-9	carcinogen, 6/22/2012
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	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:

Formaldehyde	CAS No. 50-00-0	<0.001%
Benzophenone	CAS No. 119-61-9	1-2%
1,4-Dioxane	CAS No. 123-91-1	<0.0001%
Acetaldehyde	CAS No. 75-07-0	<0.003%

## Section 16 - Other Information

### Relevant Phrases (code & full text)

- H317 - May cause an allergic skin reaction
- H412 - Harmful to aquatic life with long lasting effects
- P261 - Avoid breathing dust, fume, gas, mist, vapors and/or spray.
- 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.
- P362 - Take off contaminated clothing and wash before reuse.
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- EUH208 - Contains sensitizing substance. May produce an allergic reaction.

### Classification method for mixtures

- Calculation method.

### Revision Date

- 15 July 2016

### Last Revision Date

- 03 February 2014

### Other Information

- Approved by: Troy Bergstedt, Director of Chemical Research, (218) 628-2217 ext.142.

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