

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

**1.1 Product identifier**

**Product Name** • **ChromaTech DEX 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 453/2010]

**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 – Contains sensitizing substance (Aromatic urethane acrylate; 2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester; Pentaerythritol tetraacrylate)

**2.2 Label Elements**

**CLP**

**WARNING**



**Hazard statements** • 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.

## 2.3 Other Hazards

- CLP
- No data available

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## UN GHS

According to Third Revised Edition

### 2.1 Classification of the substance or mixture

- UN GHS
- 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**
- 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.

### 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

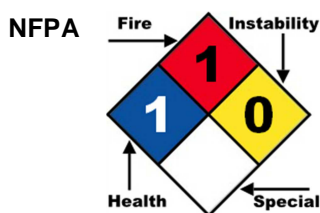
- Prevention**
- Avoid breathing dust, fume, gas, mist, vapors and/or spray. - P261
  - Wash thoroughly after handling. - P264
  - Contaminated work clothing should not be allowed out of the workplace. - P272
  - Wear protective gloves/protective clothing/eye protection/face protection. - P280
- Response**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

### 2.4 Other information



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
Ethoxylated pentaerythritol tetraacrylate	CAS:51728-26-8	10% TO 15%		WHMIS: UN GHS: EU CLP: OSHA HCS 2012: Eye Irrit. 2	NDA

aromatic urethane acrylate	NDA	3% TO 4%		<b>WHMIS:</b> Comb. Liq. - B3 <b>UN GHS:</b> Eye Irrit. 2B; Skin Irrit. 3; Skin Sens. 1 <b>EU CLP:</b> <b>OSHA HCS 2012:</b>	NDA
Benzophenone	<b>CAS:</b> 119-61-9 <b>EINECS:</b> 204-337-6	1% TO 2%	Ingestion/Oral-Rat LD50 • >10 g/kg Skin-Rabbit LD50 • 3535 mg/kg	<b>WHMIS:</b> Other Toxic Effects - D2B <b>UN GHS:</b> Aquatic Acute 1; Aquatic Chronic 1; Eye Irrit. 2A; Skin Irrit. 3 <b>EU CLP:</b> Aquatic Acute 1; Aquatic Chronic 1; Eye Irrit. 2; Skin Irrit. 2 <b>OSHA HCS 2012:</b>	NDA
1-hydroxycyclohexyl phenyl ketone	<b>CAS:</b> 947-19-3 <b>EC Number:</b> 213-426-9 <b>EINECS:</b> 213-426-9	1% TO 2%		<b>WHMIS:</b> <b>UN GHS:</b> Acute Tox. Oral 5; Eye Irrit. 2A; Skin Irrit. 2 <b>EU CLP:</b> Eye Irrit. 2; Skin Irrit. 2 <b>OSHA HCS 2012:</b>	NDA
2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	<b>CAS:</b> 3524-68-3 <b>EC Number:</b> 222-540-8 <b>EU Index:</b> 607-110-00-3 <b>EINECS:</b> 222-540-8	< 1%	Ingestion/Oral-Rat LD50 • 1830 mg/kg Skin-Rabbit LD50 • 4 mL/kg	<b>WHMIS:</b> <b>UN GHS:</b> Skin Irrit. 2; Skin Sens. 1 <b>EU CLP:</b> <b>OSHA HCS 2012:</b>	NDA
Pentaerythritol Tetraacrylate	<b>CAS:</b> 4986-89-4 <b>EC Number:</b> 225-644-1 <b>EU Index:</b> 607-122-00-9 <b>EINECS:</b> 225-644-1	< 1%		<b>WHMIS:</b> <b>UN GHS:</b> Eye Irrit. 2A; Skin Irrit. 2; Skin Sens. 1 <b>EU CLP:</b> <b>OSHA HCS 2012:</b>	NDA

## 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, CO<sub>2</sub>, water spray or regular foam.
  - LARGE FIRE: Water spray, fog or regular foam.
- Unsuitable**
- No data available

## Extinguishing Media

- 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**
- Material may burn, but does not 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. 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 Control Notations

**Germany DFG**

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

**8.2 Exposure controls****Engineering**

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

**Measures/Controls****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**

<b>Material Description</b>			
Physical Form	Liquid	Appearance/Description	Viscous liquid.
Color	Blue	Odor	Slight acrylic odor.
Odor Threshold	No data available		
<b>General Properties</b>			
Boiling Point	100 C(212 F)	Melting Point	Not relevant
Decomposition Temperature	Not relevant	pH	No data available
Specific Gravity/Relative Density	No data available	Density	8.9 lbs/gal
Water Solubility	Miscible	Viscosity	15000 Centipoise (cPs, cP) or mPas @ 25 C(77 F)
Explosive Properties	Not relevant	Oxidizing Properties:	Not relevant
<b>Volatility</b>			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant	VOC (Vol.)	Not relevant
Volatiles (Wt.)	55 to 60 %		
<b>Flammability</b>			
Flash Point	No data available	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not relevant		
<b>Environmental</b>			
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), nitrogen oxides (NOx).

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Component Name	CAS	Data
Benzophenone (1% TO 2%)	119-61-9	<b>Acute Toxicity:</b> orl-rat LD50:>10 gm/kg; Skin-Rabbit LD50 • 3535 mg/kg
2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester (<= 1%)	3524-68-3	<b>Acute Toxicity:</b> orl-rat LD50:1830 mg/kg; skn-rbt LD50:4 mL/kg; <b>Irritation:</b> eye-rbt 1 mg SEV; skn-rbt 500 mg MOD
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 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

**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	<b>Crustacea:</b> 24 Hour(s) EC50 Crustacea .28 mg/L ; <b>Fish:</b> 96 Hour(s) LC50 Fish 14.2 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

Inventory						
Component	CAS	Australia AICS	Canada DSL	Canada NDSL	China	EU EINECS
1-hydroxycyclohexyl phenyl ketone	947-19-3	Yes	Yes	No	Yes	Yes
2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Yes	Yes	No	Yes	Yes
Benzophenone	119-61-9	Yes	Yes	No	Yes	Yes
Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Yes	No	Yes	Yes	No
Pentaerythritol Tetraacrylate	4986-89-4	Yes	Yes	No	Yes	Yes
Inventory (Con't.)						
Component	CAS	Japan ENCS	Korea KECL	New Zealand	Philippines PICCS	TSCA
1-hydroxycyclohexyl phenyl ketone	947-19-3	Yes	Yes	Yes	Yes	Yes
2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Yes	Yes	Yes	Yes	Yes
Benzophenone	119-61-9	Yes	Yes	Yes	Yes	Yes
Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Yes	Yes	Yes	No	Yes
Pentaerythritol Tetraacrylate	4986-89-4	Yes	Yes	Yes	Yes	Yes

## Australia

### Labor

#### Australia - List of Designated Hazardous Substances - Classification

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Xi R36/38, R43
•Pentaerythritol Tetraacrylate	4986-89-4	Xi R36/38, R43
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	Not Listed
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

## Denmark

### Environment

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	R52/53
•Benzophenone	119-61-9	Not Listed
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

## Europe

### Other

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Xi; R36/38 R43
•Pentaerythritol Tetraacrylate	4986-89-4	Xi; R36/38 R43
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	Not Listed
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Xi R:36/38-43 S:(2)-39
•Pentaerythritol Tetraacrylate	4986-89-4	Xi R:36/38-43 S:(2)-26-39
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	Not Listed
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	D
•Pentaerythritol Tetraacrylate	4986-89-4	D
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	Not Listed
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	S:(2)-39
•Pentaerythritol Tetraacrylate	4986-89-4	S:(2)-26-39
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	Not Listed
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	Group III Chemical
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

#### EU - No-Longer Polymers List (67/548/EEC)

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	Not Listed
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	NLP No. 500-111-9 (>1<8.5

## Germany

### Environment

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	ID Number 2124, not considered hazardous to water
•Benzophenone	119-61-9	ID Number 2024, hazard class 2 - hazard to waters
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

## Japan

### Environment

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	403 >=1 %
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	7-(4)-697
•Benzophenone	119-61-9	Not Listed
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

### Other

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Non-biodegradable/Low bioconcentration
•Pentaerythritol Tetraacrylate	4986-89-4	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	Non-biodegradable/Low bioconcentration
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Group 4 - Flammable liquids III (listed under 3rd Class petroleum - insoluble)
•Pentaerythritol Tetraacrylate	4986-89-4	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	Not Listed
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	Not Listed

## Korea

### Labor

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	Not Listed
•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	Not Listed
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	

## United States - California

### Environment

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

•2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester	3524-68-3	Not Listed
•Pentaerythritol Tetraacrylate	4986-89-4	Not Listed

•1-hydroxycyclohexyl phenyl ketone	947-19-3	Not Listed
•Benzophenone	119-61-9	carcinogen, initial date 6/22/12
•Ethoxylated pentaerythritol tetraacrylate	51728-26-8	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 <0.0004%

## Section 16 - Other Information

### Relevant Phrases (code & full text)

- 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.
- EUH208 – Contains sensitizing substance

<b>Classification method for mixtures</b>	• Calculation method.
<b>Last Revision Date</b>	• N/A
<b>Preparation Date</b>	• 29 September 2016
<b>Other Information</b>	• Approved by: Troy Bergstedt, Director of Chemical Research, (218) 628-2217 ext.142.
<b>Disclaimer/Statement of Liability</b>	• The information contained herein is based on data available to us and is believed to be correct. Since this information may have been obtained in part from independent laboratories or other sources not under direct supervision, no representation is made that the information is accurate, reliable, complete, or representative and Buyer may rely thereon only at the Buyer's risk. We make no guarantee that the health and safety precautions we have suggested will be adequate for all individuals and / or situations involving its handling and uses. No warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet.