

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

1.1 Product identifier

Product Name • UDC-2, UDC HV, UDC HV Z-1, UDC HV Z-2
Product Description • Red, blue, purple or clear 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

1.4 Emergency telephone number

Chemtrec • 1-800-424-9300
• +1 703-527-3887

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 • Hazardous to the aquatic environment Chronic 3 - H412
DSD/DPD • R52/53

2.2 Label Elements

CLP

Hazard statements • H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

Prevention • 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.
P332+P313 - If skin irritation 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.

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

and/or international regulations.

DSD/DPD

- Risk phrases** • R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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 • Hazardous to the aquatic environment Chronic 3 - H412

2.2 Label elements

UN GHS

Hazard statements • H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

Prevention • 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.
P332+P313 - If skin irritation 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.

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 • Not classified

2.2 Label elements

OSHA HCS 2012

Precautionary statements

Prevention • Avoid release to the environment. - P273
Wear protective gloves/protective clothing/eye protection/face protection. - P280

Response • IF ON SKIN: Wash with plenty of soap and water. - P302+P352
If skin irritation occurs: Get medical advice/attention. - P332+P313
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

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 • Not classified

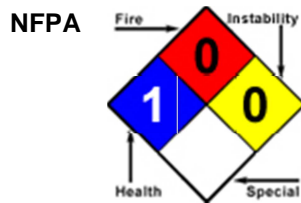
2.2 Label elements

WHMIS • No data available

2.3 Other hazards

WHMIS • No data available

2.4 Other 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
Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	CAS:52408-84-1	3% TO 4%		WHMIS: UN GHS: Eye Irrit. 2A; Skin Irrit. 2 EU DSD/DPD: Irritant(Xi); R36/37 EU CLP: Eye Irrit. 2; Skin Irrit. 2	
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-hydroxycyclohexyl phenyl ketone	CAS:947-19-3 EC Number:213-426-9 EINECS:213-426-9	0.5% TO 1.5%		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	
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	CAS:119313-12-1 EC Number:404-360-3	0.3% TO 0.6%	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	

Key to abbreviations

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

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, CO₂, 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

- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

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. Contact may irritate or burn skin and eyes.

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 Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Viscous liquid.
Color	Red, blue, purple or clear.	Odor	No data available.
Taste	Not relevant	Odor Threshold	No data available
Physical and Chemical Properties	Not relevant		
General Properties			
Boiling Point	100 C(212 F)	Melting Point	No data available
Decomposition Temperature	No data available	pH	No data available
Specific Gravity/Relative Density	Not relevant	Density	1.06 g/mL
Bulk Density	8.82 lbs/gal	Water Solubility	Dispersible
Solvent Solubility	Not relevant	Viscosity	No data available
Explosive Properties	Classification criteria not met.	Oxidizing Properties:	Classification criteria not met.
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available	VOC (Wt.)	Not relevant
VOC (Vol.)	Not relevant	Volatiles (Wt.)	60 to 70 %
Flammability			
Flash Point	> 200 F(> 93.3333 C)	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	Not relevant		
Environmental			
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

- Hazardous decomposition products formed under fire conditions - carbon oxides, nitrogen oxides. No decomposition is expected under normal storage and use conditions.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl) (0.3% TO 0.6%)	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 sensitization	EU/CLP• OSHA HCS 2012• UN GHS•	
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• OSHA HCS 2012• UN GHS•	

Medical Conditions Aggravated by Exposure • No data available.

Potential Health Effects

Inhalation

Acute (Immediate) • May cause irritation.

Chronic (Delayed) • No data available.

Skin

Acute (Immediate) • May cause irritation.

Chronic (Delayed) • 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)

- No specific information available.

Other

Acute (Immediate)

- May cause irritation.

Mutagenic Effects

- No data available.

Carcinogenic Effects

- No data available.

Reproductive Effects

- No data 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	

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

Packaging waste

- Dispose of content and/or 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 known.

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

- This product is provided only in non-bulk containers.

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 • No data available

Inventory						
Component	CAS	Australia AICS	Canada DSL	China	EU EINECS	EU ELNICS
Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Yes	Yes	Yes	No	No
Benzophenone	119-61-9	Yes	Yes	Yes	Yes	No
1-hydroxycyclohexyl phenyl ketone	947-19-3	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
Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Yes	Yes	Yes	Yes	No
Benzophenone	119-61-9	Yes	Yes	Yes	Yes	No
1-hydroxycyclohexyl phenyl ketone	947-19-3	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				
Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Yes				
Benzophenone	119-61-9	Yes				
1-hydroxycyclohexyl phenyl ketone	947-19-3	Yes				
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Yes				

Australia

Labor

Australia - List of Designated Hazardous Substances - Classification

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	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	0.3% TO 0.6%	N R50, R53

Denmark

Environment

Denmark - Advisory List for Self-Classification of Dangerous Substances

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	R52/53
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	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	0.3% TO 0.6%	Not Listed

Europe

Other

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

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	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	0.3% TO 0.6%	N; R50-53

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

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	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	0.3% TO 0.6%	N R:50/53 S:60-61

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

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	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	0.3% TO 0.6%	S:60-61

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

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	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	0.3% TO 0.6%	Not Listed

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

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	Not Listed

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

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	NLP No. 500-114-5 (>1<6.5 mol propoxylated units)
•Benzophenone	119-61-9	1% TO 2%	Not Listed

•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)

119313-12-1 0.3% TO 0.6% Not Listed

Germany

Environment

Germany - Water Classification (VwVwS) - Annex 3

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	ID Number 2124, not considered hazardous to water
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	Not Listed
•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	0.3% TO 0.6%	ID Number 2102, hazard class 2 - hazard to waters

Japan

Environment

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

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	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	0.3% TO 0.6%	Not Listed

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

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	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	3% TO 4%	10-2655
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	8-(7)-927

Other

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

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	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	0.3% TO 0.6%	Not Listed

Korea

Labor

Korea - MOE - Harmful Substances

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	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	0.3% TO 0.6%	92-23

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

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha,alpha',alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	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	0.3% TO 0.6%	94-20

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 No. 119-61-9	1%
Formaldehyde	CAS No. 50-00-0	<0.001%
1,4-Dioxane	CAS No. 123.91-1	<0.0001%

Section 16 - Other Information

Relevant Phrases (code & full text)

- H412 - Harmful to aquatic life with long lasting effects
- 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.
- P332+P313 - If skin irritation occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- R36 - Irritating to eyes.
- R37 - Irritating to respiratory system.
- R38 - Irritating to skin.
- R50 - Very toxic to aquatic organisms.
- R52 - Harmful to aquatic organisms.
- R53 - May cause long-term adverse effects in the aquatic environment.
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H412 - Harmful to aquatic life with long lasting effects
- P264 - Wash thoroughly after handling.
- 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.
- P332+P313 - If skin irritation occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P410 - Protect from sunlight.
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Classification method for mixtures

- Calculation method. On basis of test data.

Last Revision Date

- 29 August 2012

Preparation Date

- 01 February 2013

Other Information

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

Disclaimer/Statement of Liability

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