

SAFETY DATA SHEET

1. Identification

GHS product identifier	UVGEL 356C INK BLACK
Other means of identification	
Article Number	1070092847
Product code	1965C032AA
Recommended use of the chemical and restrictions on use	
Recommended use	Inkjet printing ink.
Recommended restrictions	Other uses not recommended.
Manufacturer/Importer/Supplier/Distributor information	
Company name	Not available.
Address	Not available.
Telephone	Not available.
E-mail	Not available.
Emergency phone number	Not available.

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
	Reproductive toxicity	Category 1B
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2

Label elements



Signal word Danger

Hazard statement

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection/face protection.

Response

P302 + P352	IF ON SKIN: Wash with plenty of 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.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Storage Not assigned.

Disposal Not assigned.

Other hazards which do not result in classification None known.

Supplemental information 33.11386 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment.

National/local information Not available

3. Composition/information on ingredients

Product code 1965C032AA

Mixtures

Chemical identity	Common name and synonyms	CAS number	%
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE		94108-97-1	25 - < 50
Neopentylglycol Hydroxypivalate Diacrylate		30145-51-8	10 - < 30
(4-tert-butylcyclohexyl) Prop-2-enoate		84100-23-2	5 - <10
Propylidynetrimethanol, Ethoxylated, Esters With Acrylic Acid, Reaction Products With Diethylamine		159034-91-0	5 - <10
Ethyl 4-dimethylaminobenzoate		10287-53-3	1 - < 5
Neopentyl Glycol Diacrylate		2223-82-7	1 - < 5
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE		84170-74-1	1 - < 5
Carbon Black		1333-86-4	1 - <3
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide		162881-26-7	< 1
Trimethylolpropane Triacrylate, Ethoxylated		28961-43-5	< 0.25

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
Methods and materials for containment and cleaning up	Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist/vapours. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Use appropriate container to avoid environmental contamination. Store away from incompatible materials (see Section 10 of the SDS). Store in tightly closed original container in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Provide adequate ventilation. See operator manual or safety data sheet of the printer.
Individual protection measures, such as personal protective equipment	
Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Glove material: Nitrile. Use gloves with breakthrough time of 10 minutes. Minimum glove thickness 0,12 mm. Glove material: Nitrile. Use gloves with breakthrough time of 480 minutes. Minimum glove thickness 0,4 mm. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. Ansell Microflex ® 93-260 (60 minutes)
Other	Not required during normal intended use of this product.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Not required during normal intended use of this product.
Thermal hazards	Not normally needed.
General hygiene considerations	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	Liquid.
Physical state	Liquid.
Form	Liquid.
Colour	Black.
Odour	Slightly.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	-68 °C (-90.4 °F) / -83.4 °C (-118.12 °F) estimated
Initial boiling point and boiling range	224.24 °C (435.63 °F) estimated
Flash point	145.0 °C (293.0 °F)
Evaporation rate	Not available.

Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
Vapour pressure	8.48 hPa estimated
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	361 °C (681.8 °F)
Decomposition temperature	Not available.
Viscosity	307 mPa·s (17 °C (62.6 °F))
Other information	
Density	1.07 g/cm ³ (25 °C (77 °F))
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
VOC	0.01 % estimated

10. Stability and reactivity

Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerisation does not occur.
Conditions to avoid	None under normal conditions.
Incompatible materials	Not applicable.
Hazardous decomposition products	No hazardous decomposition products are known.
Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Not applicable. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test Results
(4-tert-butylcyclohexyl) Prop-2-enoate (CAS 84100-23-2)		
<u>Acute</u>		
Oral		
LD50	Rat	> 2000 mg/kg bw/day, 14 days
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE (CAS 94108-97-1)		
<u>Acute</u>		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours

Components	Species	Test Results
Inhalation		
<i>Vapour</i>		
LC50	Rat	> 0.41 mg/l, 7 Hours Read across
Oral		
LD50	Rat	> 5000 mg/kg OECD401
Ethyl 4-dimethylaminobenzoate (CAS 10287-53-3)		
Acute		
Dermal		
<i>Solid</i>		
LD50	Rabbit	> 2000 mg/kg bw/day
Oral		
<i>Solid</i>		
LD50	Rat	> 2000 mg/kg bw/day
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide (CAS 162881-26-7)		
Acute		
Dermal		
LD50	Rat	> 2000 ml/kg
Oral		
LD50	Rat	> 2000 mg/kg
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE (CAS 84170-74-1)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Trimethylolpropane Triacrylate, Ethoxylated (CAS 28961-43-5)		
Acute		
Dermal		
LD50	Rabbit	> 13200 mg/kg
Oral		
LD50	Rat	> 500 mg/kg
Skin corrosion/irritation Causes skin irritation.		
Irritation Corrosion - Skin		
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE		OECD 404 Result: Not irritating
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE		OECD 404 Result: Not irritating Species: Rabbit
Ethyl 4-dimethylaminobenzoate		OECD 404 Result: Not irritating Species: Rabbit
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide		OECD 404 Result: Not irritating Species: Rabbit
Serious eye damage/eye irritation Causes serious eye irritation.		
Eye		
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE		OECD 405 Result: Not irritating
Ethyl 4-dimethylaminobenzoate		OECD 405 Result: Not irritating Species: Rabbit
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide		OECD 405 Result: Not irritating Species: Rabbit
Irritation Corrosion - Eye		
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide		OECD 405 Result: Not irritating
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE		OECD405 Result: irritating

Respiratory or skin sensitisation	May cause sensitisation by skin contact.	
Respiratory sensitisation	Not a respiratory sensitizer.	
Skin sensitisation	May cause an allergic skin reaction.	
Skin sensitisation		
Ethyl 4-dimethylaminobenzoate		OECD 406 Result: Not sensitizing Species: Guinea pig
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide		OECD 406 Result: sensitising Species: Guinea pig
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE		OECD 406 Result: sensitising Species: Guinea pig
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE		OECD 429 Result: positive Species: Mouse
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE		OECD 429 Result: sensitising Severity: EC3=4,6%
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Germ cell mutagenicity: Ames test		
Ethyl 4-dimethylaminobenzoate		OECD 471 Result: Negative.
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide		OECD 471 Result: Negative.
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE		OECD 471 Result: Negative.
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE		OECD 471 Result: positive
(4-tert-butylcyclohexyl) Prop-2-enoate		OECD471, (similar product) Result: Negative
Germ cell mutagenicity: Chromosome aberration		
Ethyl 4-dimethylaminobenzoate		OECD 471, without metabolic activation. Result: Negative.
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide		OECD 473 Result: Negative.
Ethyl 4-dimethylaminobenzoate		OECD 473, with metabolic activation Result: positive
(4-tert-butylcyclohexyl) Prop-2-enoate		OECD473, (similar product) Result: Negative
Germ cell mutagenicity: Micronucleus		
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE		OECD 474 Result: Negative.
Ethyl 4-dimethylaminobenzoate		OECD 474 Result: Negative. Species: Mouse
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE		OECD 474, (similar product) Result: Negative.
Mutagenicity		
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE		OECD 467 Result: Negative.
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide		OECD 476 Result: Negative.
Carcinogenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Philippines OELs: Carcinogen category		
	Not listed.	
Reproductive toxicity	May damage fertility or the unborn child.	
Developmental effects		
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide		OECD 414 Result: Negative. Species: Rat
Fertility effects - Males		
Ethyl 4-dimethylaminobenzoate		OECD 421 Result: Adverse effects for fertility Species: Rat Organ: Testes

Fertility effects - Males and femalesPROPOXYLATED NEOPENTYL GLYCOL
DIACRYLATEOECD 421
Result: Negative.**Reproductivity**PROPOXYLATED NEOPENTYL GLYCOL
DIACRYLATE
DI(TRIMETHYLOLPROPANE) TETRAACRYLATEOECD 421
Result: Negative.
OECD 422, (similar product)
Result: Negative.
Species: Rat
OECD414
Result: Negative.

Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide

OECD414
Result: Negative.**Specific target organ toxicity - single exposure** Not applicable.**Specific target organ toxicity - repeated exposure** Not classified.

PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE

OECD 407
Result: Negative.
Species: Rat
Result: Negative.
Species: Rat
Test Duration: 90 d

Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide

Result: Negative.
Species: Rat
Test Duration: 90 d**Aspiration hazard** Not an aspiration hazard.**Chronic effects** Not available.**12. Ecological information****Ecotoxicity** Toxic to aquatic life with long lasting effects.

Components	Species	Test Results
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE (CAS 94108-97-1)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fish 1.2 mg/l, 96 h
Ethyl 4-dimethylaminobenzoate (CAS 10287-53-3)		
Aquatic		
<i>Acute</i>		
Algae	EC50	Algae 2.8 mg/l, 72 h
Crustacea	LC50	Daphnia 31.8 mg/l, 48 h
Fish	LC50	Fish 1.9 mg/l, 96 h
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide (CAS 162881-26-7)		
Aquatic		
<i>Acute</i>		
Algae	EC50	Algae 0.26 mg/l, 72 h Supersaturated suspension
Crustacea	LC50	Daphnia 1.1 mg/l, 48 h Supersaturated suspension
Fish	LC50	Fish > 90 µg/l, 96 h Supersaturated suspension
<i>Chronic</i>		
Crustacea	NOEC	Crustacea 8.1 µg/l, 21 d
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE (CAS 84170-74-1)		
Aquatic		
<i>Acute</i>		
Algae	EC50	Algae 3.4 mg/l, 72 h
Crustacea	LC50	Daphnia 37 mg/l, 48 h
Fish	LC50	Fish 2.7 mg/l, 96 h

Persistence and degradability**Biodegradability****Percent Degradation (Aerobic Biodegradation)**

Ethyl 4-dimethylaminobenzoate

OECD 301B, Not readily biodegradable
Result: 40

PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE

Result: Inherently biodegradable

Bioaccumulative potential

Octanol/water partition coefficient log Kow

Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	5.8
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	2.41 - 3.87, Log Kow

Bioconcentration factor

DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	388 % v/w
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	< 5

Mobility in soil No data available.

Adsorption

Soil/Sediment Sorption - Log Koc

Ethyl 4-dimethylaminobenzoate	Result: 2,8
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	3.85

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

ADR

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DI(TRIMETHYLOLPROPANE) TETRAACRYLATE, (4-tert-butylcyclohexyl) Prop-2-enoate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Hazard No. (ADR)	90
Tunnel restriction code	E
Packing group	III
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DI(TRIMETHYLOLPROPANE) TETRAACRYLATE, (4-tert-butylcyclohexyl) Prop-2-enoate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (DI(TRIMETHYLOLPROPANE) TETRAACRYLATE, (4-tert-butylcyclohexyl) Prop-2-enoate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(DI(TRIMETHYLOLPROPANE) TETRAACRYLATE, (4-tert-butylcyclohexyl) Prop-2-enoate),
MARINE POLLUTANT

Transport hazard class(es)

Class 9
Subsidiary risk -

Packing group III

Environmental hazards

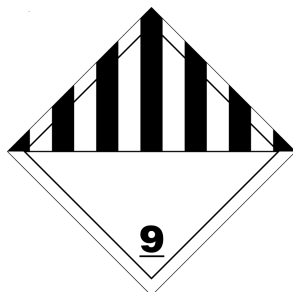
Marine pollutant Yes

EmS F-A, S-F

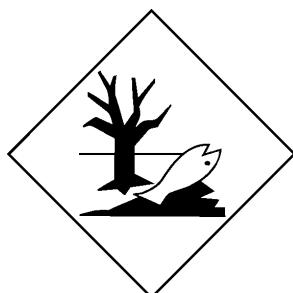
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

ADR; IATA; IMDG; RID



Marine pollutant



General information IMDG Regulated Marine Pollutant.

15. Regulatory information

Safety, health and environmental regulations specific for the product in question

CCO Chemical List

Not regulated.

Controlled Precursors & Essential Chemicals (Comprehensive Dangerous Drugs Act of 2002 (Republic Act 9165), as amended thru Dangerous Drugs Board Regulations)

Not listed.

Ozone Depleting Substances (ODS) (Chemical Control Order, DENR Admin. Order No. 2013-25)

Not regulated.

Priority Chemical List (PCL) (DENR Administrative Order No. 98-58)

Not regulated.

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto Protocol

Not applicable.

Basel Convention

Not applicable.

16. Other information

Issue date	11-October-2019
Revision date	10-June-2020
Version No.	2.0
Disclaimer	The information in this Safety Data Sheet is based on the present state of knowledge and current legislation and is believed to be accurate. It provides guidance on health, safety and environmental aspects of the product and should neither be construed as any guarantee of specific properties nor of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1. This document was prepared to the requirements of the jurisdiction in Section 1 and may not meet regulatory requirements in other countries or territories. The information contained in this safety data sheet does not replace the user's own assessment of workplace risks, as required by applicable health and safety legislation.
Revision information	Product and Company Identification: Product and Company Identification Hazard(s) identification: Disposal Hazard(s) identification: Storage Composition / Information on Ingredients: Ingredients Handling and storage: Precautions for safe handling Physical & Chemical Properties: Multiple Properties Material Attributes & Uses; Experimental Data: Product Uses HazReg Data: Pacific Rim