

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cito Standard UV Resin

Revision date: 02.03.2021

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Cito Standard UV Resin

Further trade names

none

Product identifier UFI: GXR2-E0JS-D00Q-UJPK

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

Use of the substance/mixture

3D Printing
resin

Uses advised against

Not for intraoral area.

1.3. Details of the supplier of the safety data sheet

Company name: DistriForma BV
Street: Wasaweg 3
Place: NL-9723JD Groningen
Contact person: Rolf Meijer

Telephone: +31(0)50-5798312

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Dam. 1
Respiratory or skin sensitisation: Skin Sens. 1
Hazardous to the aquatic environment: Aquatic Acute 1
Hazardous to the aquatic environment: Aquatic Chronic 2
Hazard Statements:
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

hexamethylene diacrylate; hexane-1,6-diol diacrylate
Hexane, 1,6-diisocyanato-, polymers with 2-hydroxyethyl acrylate-blocked 1,6-diisocyanatohexane
homopolymer, 2-hydroxyethyl acrylate- and pentaerythritol triacrylate-blocked
pentaerythritol tetraacrylate
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Signal word: Danger

Pictograms:



Hazard statements

H315 Causes skin irritation.

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H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P501	Dispose of waste according to applicable legislation.

Special labelling of certain mixtures

EUH204	Contains isocyanates. May produce an allergic reaction.
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2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	GHS Classification			
13048-33-4	hexamethylene diacrylate; hexane-1,6-diol diacrylate			50 - 100 %
	235-921-9	607-109-00-8	01-2119484737-22	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 2; H315 H319 H317 H400 H411			
2123508-19-8	Hexane, 1,6-diisocyanato-, polymers with 2-hydroxyethyl acrylate-blocked 1,6-diisocyanatohexane homopolymer, 2-hydroxyethyl acrylate- and pentaerythritol triacrylate-blocked			25 - 50 %
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1; H315 H319 H317			
4986-89-4	pentaerythritol tetraacrylate			1 - 10 %
	225-644-1	607-122-00-9		
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H302 H315 H318 H317 H411			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			1 - < 3 %
	278-355-8	015-203-00-X		
	Repr. 2, Skin Sens. 1B, Aquatic Chronic 2; H361f H317 H411			

Full text of H and EUH statements: see section 16.

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
13048-33-4	235-921-9	hexamethylene diacrylate; hexane-1,6-diol diacrylate	50 - 100 %
		dermal: LD50 = 3650 mg/kg; oral: LD50 = 5000 mg/kg	
4986-89-4	225-644-1	pentaerythritol tetraacrylate	1 - 10 %
		oral: ATE = 500 mg/kg	
75980-60-8	278-355-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	1 - < 3 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg	

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Persons already sensitised to diisocyanates may develop allergic reactions when using this product.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Non-flammable. In case of fire may be liberated: Gases/vapours, toxic

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
 Personal protection equipment: see section 8
 Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Further information on handling

Persons already sensitised to diisocyanates may develop allergic reactions when using this product. People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Store in a dry place. Provide adequate ventilation as well as local exhaust at critical locations.

Hints on joint storage

No information available.

Further information on storage conditions

Protect against: UV-radiation/sunlight, Humidity.

7.3. Specific end use(s)

3D Printing
 resin

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			
Worker DNEL, long-term		inhalation	systemic	3,5 mg/m ³
Worker DNEL, long-term		dermal	systemic	1 mg/kg bw/day

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PNEC values

CAS No	Substance	
	Environmental compartment	Value
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	
	Freshwater	0,004 mg/l
	Freshwater (intermittent releases)	0,035 mg/l
	Freshwater sediment	0,029 mg/kg
	Marine sediment	0,029 mg/kg
	Soil	0,056 mg/kg

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

Persons already sensitised to diisocyanates may develop allergic reactions when using this product. People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.

Eye/face protection

Wear eye/face protection.

Hand protection

Wear protective gloves.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	various
Odour:	like: Acrylate

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pH-Value: 1 - 14

Changes in the physical state

Melting point: not determined

Boiling point or initial boiling point and boiling range: > 100 °C

Flash point: > 110 °C

Flammability

Solid: not applicable

Gas: not applicable

Explosive properties

The product is not: Explosive.

Lower explosion limits: not determined

Upper explosion limits: not determined

Auto-ignition temperature: > 230 °C

Self-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Vapour pressure: < 1 hPa
(at 20 °C)

Density: not determined

Water solubility: poorly soluble

Solubility in other solvents

not determined

Partition coefficient n-octanol/water: not determined

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Relative vapour density: not determined

Evaporation rate: not determined

9.2. Other information

Odour threshold: not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Protect against: UV-radiation/sunlight, Humidity.

10.5. Incompatible materials

No information available.

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10.6. Hazardous decomposition products

In case of fire may be liberated: Gases/vapours, toxic

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
13048-33-4	hexamethylene diacrylate; hexane-1,6-diol diacrylate				
	oral	LD50 mg/kg	5000	Rat	Manufacturer
	dermal	LD50 mg/kg	3650	Rabbit	Manufacturer OECD 402
4986-89-4	pentaerythritol tetraacrylate				
	oral	ATE mg/kg	500		
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide				
	oral	LD50 mg/kg	> 5000	Rat	Manufacturer
	dermal	LD50 mg/kg	> 2000	Rat	Manufacturer

Irritation and corrosivity

Causes skin irritation.

Causes serious eye damage.

Sensitising effects

Contains isocyanates. May produce an allergic reaction. May cause an allergic skin reaction. (hexamethylene diacrylate; hexane-1,6-diol diacrylate; Hexane, 1,6-diisocyanato-, polymers with 2-hydroxyethyl acrylate-blocked 1,6-diisocyanatohexane homopolymer, 2-hydroxyethyl acrylate- and pentaerythritol triacrylate-blocked; pentaerythritol tetraacrylate; diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide)

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Further information

Persons already sensitised to diisocyanates may develop allergic reactions when using this product. People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
13048-33-4	hexamethylene diacrylate; hexane-1,6-diol diacrylate					
	Acute bacteria toxicity	(270 mg/l)	0,5 h	Activated sludge	Manufacturer	OECD 209
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide					
	Acute algae toxicity	ErC50 > 2,01 mg/l	72 h	Scenedesmus subspicatus	Manufacturer	
	Acute crustacea toxicity	EC50 3,53 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	
	Acute bacteria toxicity	(> 1000 mg/l)	3 h	Activated sludge	Manufacturer	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
13048-33-4	hexamethylene diacrylate; hexane-1,6-diol diacrylate			
	OECD 310	60 - 70 %	28	Manufacturer
	Readily biodegradable (according to OECD criteria).			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			
	Biodegradation, Water	0 - 10 %	28	Manufacturer
	Poorly biodegradable.			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
13048-33-4	hexamethylene diacrylate; hexane-1,6-diol diacrylate	2,81
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	3,1

BCF

CAS No	Chemical name	BCF	Species	Source
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	47 - 55	Cyprinus carpio (Common Carp) fish	Manufacturer

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

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Contaminated packaging


Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hexamethylene diacrylate; hexane-1,6-diol diacrylate; pentaerythritol tetraacrylate)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9 
Classification code:	M6
Special Provisions:	274 335 375 601
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	90
Tunnel restriction code:	-

Inland waterways transport (ADN)

14.1. UN number:	UN 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hexamethylene diacrylate; hexane-1,6-diol diacrylate; pentaerythritol tetraacrylate)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9 
Classification code:	M6
Special Provisions:	274 335 375 601
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number:	UN 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hexamethylene diacrylate; hexane-1,6-diol diacrylate; pentaerythritol tetraacrylate)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9

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Special Provisions: 274, 335, 969
 Limited quantity: 5 L
 Excepted quantity: E1
 EmS: F-A, S-F

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (hexamethylene diacrylate; hexane-1,6-diol diacrylate; pentaerythritol tetraacrylate)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
 Hazard label: 9



Special Provisions: A97 A158 A197
 Limited quantity Passenger: 30 kg G
 Passenger LQ: Y964
 Excepted quantity: E1
 IATA-packing instructions - Passenger: 964
 IATA-max. quantity - Passenger: 450 L
 IATA-packing instructions - Cargo: 964
 IATA-max. quantity - Cargo: 450 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



Danger releasing substance: hexamethylene diacrylate; hexane-1,6-diol diacrylate; pentaerythritol tetraacrylate

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to 2012/18/EU (SEVESO III): E1 Hazardous to the Aquatic Environment

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 3 - highly hazardous to water

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Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
 intérieures)
 IMDG: International Maritime Code for Dangerous Goods
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 VOC: Volatile Organic Compounds
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.

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H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
EUH204	Contains isocyanates. May produce an allergic reaction.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)