

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Trade name : Rigid UVFR - Black
 Other means of identification : DLPFRBK01

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For use in Photocentric UV LCD Printers

1.3. Supplier

Supplier

Photocentric Ltd
 Titan House
 20 Titan Drive
 Peterborough, PE1 5XN - United Kingdom
 T +44 (0) 1733 349937 (UK Office hours only)
info@photocentric.co.uk - <https://photocentricgroup.com/>

Distributor

Photocentric Inc
 855 N. 107th Ave
 Suite A110
 Avondale, Arizona 85323 - United States
 T 006235813220 x1009 (USA Office hours only)
customerservice@photocentricusa.com - <https://photocentricgroup.com/>

1.4. Emergency telephone number

Emergency number : +44 (0) 1733 349937 (UK Office hours only)
 006235813220 x1009 (USA Office hours only)

Transport Emergencies for US & CANADA: For Hazardous Materials [or Dangerous Goods]
 Incident Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC 1-800-424-9300 / +1 703-527-3887 CCN 992854

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Hazardous to the aquatic environment – Acute Hazard Category 2	H401	Toxic to aquatic life
Hazardous to the aquatic environment – Chronic Hazard Category 2	H411	Toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H401 - Toxic to aquatic life
 H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) :

P261 - Avoid breathing fume, mist, spray, vapors.
 P272 - Contaminated work clothing must not be allowed out of the workplace.
 P273 - Avoid release to the environment.
 P280 - Wear protective clothing, eye protection, face protection.
 P302+P352 - If on skin: Wash with plenty of Gently 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.

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P310 - Immediately call a poison center or doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Conc. (% w/w)	GHS US classification
Proprietary (Triacrylate)	≥ 25 – < 70	Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Proprietary (Aliphatic urethane methacrylate)	≥ 5 – < 10	Aquatic Acute 1, H400 Aquatic Chronic 3, H412

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell. Never give anything by mouth to an unconscious person.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell. Rinse mouth out with water. If swallowed, seek medical advice immediately and show this container or label. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Irritation: severely irritant to eyes. Harmful in contact with skin. Harmful if swallowed.

Symptoms/effects after inhalation : Inhalation may cause irritation (cough, short breathing, difficulty in breathing). May cause respiratory irritation.

Symptoms/effects after skin contact : May cause an allergic skin reaction.

Symptoms/effects after eye contact : Risk of serious damage to eyes. Serious damage to eyes.

Symptoms/effects after ingestion : Harmful if swallowed. May cause irritation to the digestive tract.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically. In all cases of doubt, or when symptoms persist, seek medical attention. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Fire hazard : No fire hazard.
- Explosion hazard : No direct explosion hazard.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Keep cool. Protect from sunlight.
- Firefighting instructions : Do not enter fire area without proper protective equipment, including respiratory protection. Fight fire from safe distance and protected location. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
- Other information : High temperature decomposition products are harmful by inhalation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

6.1.1. For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment.
- Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. For further information refer to section 8: "Exposure controls/personal protection". Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. Protective gloves. Safety glasses. Self-contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Prevent liquid from entering sewers, watercourses, underground or low areas. Very toxic to aquatic life with long lasting effects.

6.3. Methods and material for containment and cleaning up

- For containment : For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Collect spillage. Stop leak, if possible without risk.
- Methods for cleaning up : Take up liquid spill into absorbent material. This material and its container must be disposed of in a safe way, and as per local legislation.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Wear personal protective equipment. Ensure that there is a suitable ventilation system. Do not handle in a confined space. Avoid contact with skin, eyes and clothing. Protective clothing (with elasticated cuffs and closed neck). Do not breathe vapors. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Handling temperature : < 50 °C

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Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ensure adequate ventilation, especially in confined areas. Store in a well-ventilated place. Keep container tightly closed. Store in tightly closed, leak-proof containers.

Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight.

Incompatible products : Strong acids. Strong bases.

Incompatible materials : Direct sunlight.

Storage temperature : < 50 °C

Storage area : Store in a well-ventilated place. Store away from heat.

Special rules on packaging : Store in a closed container.

Packaging materials : Do not store in corrodable metal. Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Rigid UVFR - Black
No additional information available
Proprietary (Aliphatic urethane methacrylate) (72869-86-4)
No additional information available
Proprietary (Triacrylate) (40220-08-4)
No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment. Gloves. Safety glasses.

Materials for protective clothing:

Wear suitable protective clothing and gloves. Nitrile rubber. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

Hand protection:

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Nitrile-rubber protective gloves

Eye protection:

Safety glasses. Safety glasses (EN 166). Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing. Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact. Wear suitable protective clothing. Protective clothing (EN 14605 or EN 13034)

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. In case of inadequate ventilation wear respiratory protection. Wear suitable respiratory protection (conforming to EN140 with Type A filter or better) and gloves (type EN374) if regular skin contact likely.

Personal protective equipment symbol(s):

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Thermal hazard protection:

Typical measures to maintain workplace concentrations of airborne VOCs and particulates below respective OELs: e.g. thermal wet scrubber – gas removal and/or air filtration – particle removal and/or thermal oxidation and/or vapour recovery – adsorption.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid	
Appearance	: Liquid.	
Color	: Black	
Odor	: characteristic	
Odor threshold	: No data available	
pH	: No data available	
Melting point	: Not applicable	
Freezing point	: No data available	
Boiling point	: No data available	
Flash point	: No data available	
Relative evaporation rate (butyl acetate=1)	: No data available	
Flammability	: No data available	
Vapor pressure	: No data available	
Relative vapor density at 20°C	: No data available	
Relative density	: No data available	
Solubility	: No data available	
Partition coefficient n-octanol/water (Log Pow)	: No data available	
Auto-ignition temperature	: No data available	
Decomposition temperature	: No data available	
No data available	Viscosity, kinematic	: No data available
Viscosity, dynamic	: 760 (500 – 900) mPa·s @25°C	
Explosion limits	: No data available	
Explosive properties	: No data available	
Oxidizing properties	: No data available	

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Proprietary (Aliphatic urethane methacrylate) (72869-86-4)

LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 2000 mg/kg bw/day

Proprietary (Triacrylate) (40220-08-4)

LD50 oral rat	No mortality/Rat: 2.000 mg/kg (Method: OECD Test Guideline 423)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

Proprietary (Triacrylate) (40220-08-4)

NOAEL (animal/male, F0/P)	50 mg/kg body weight NOAEL (Parental toxicity) (Method: OECD Test Guideline 422, Rat, By oral route)
NOAEL (animal/female, F0/P)	> 200 mg/kg body weight NOAEL (fertility) (Method: OECD Test Guideline 422, Rat, By oral route)
NOAEL (animal/male, F1)	> 200 mg/kg body weight NOAEL (developmental toxicity) (Method: OECD Test Guideline 422, Rat, By oral route)
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

Proprietary (Triacrylate) (40220-08-4)

LOAEL (oral,rat,90 days)	100 mg/kg bodyweight/day Local Irritation (Method: OECD Test Guideline 422, Rat, 28 d)
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: Irritation: severely irritant to eyes. Harmful in contact with skin. Harmful if swallowed.
Symptoms/effects after inhalation	: Inhalation may cause irritation (cough, short breathing, difficulty in breathing). May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Risk of serious damage to eyes. Serious damage to eyes.
Symptoms/effects after ingestion	: Harmful if swallowed. May cause irritation to the digestive tract.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
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Proprietary (Aliphatic urethane methacrylate) (72869-86-4)

LC50 - Fish [1]	≥ 10.1 mg/l Zebra Fish (Brachydanio rerio)
EC50 - Crustacea [1]	> 1200 µg/l Test organisms (species): Daphnia magna
NOEC chronic algae	0.21 mg/l Green Algae (Desmodesmus subspicatus)

Proprietary (Triacrylate) (40220-08-4)

ErC50 algae	25.7 mg/l 72 h (Pseudokirchneriella subcapitata (green algae)) :(Method: OECD Test Guideline 201)
NOEC (chronic)	≥ 100 mg/l NOEC, 14 d (Activated sludge)(Respiration inhibition)

12.2. Persistence and degradability

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Proprietary (Aliphatic urethane methacrylate) (72869-86-4)

Persistence and degradability	Not established.
Biodegradation	22 % CO2 Evolution: Modified Sturm (OECD 301B)

Proprietary (Triacrylate) (40220-08-4)

Biodegradation	14.5 – 19.7 % after 28 d (Method: OECD Test Guideline 301 F)
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12.3. Bioaccumulative potential

Proprietary (Aliphatic urethane methacrylate) (72869-86-4)

Partition coefficient n-octanol/water (Log Pow)	3.39
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

Proprietary (Triacrylate) (40220-08-4)

Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.79 (Method: calculated) Absorption / desorption:
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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Avoid release to the environment. Comply with applicable regulations for solid waste disposal. Dispose in a safe manner in accordance with local/national regulations. Disposal must be done according to official regulations.
Additional information	: Clean up even minor leaks or spills if possible without unnecessary risk. Do not re-use empty containers.
Ecological waste information	: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Transport document description (IMDG)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Dipropylene Glycol Diacrylate ; Tris(2-hydroxyethyl) Isocyanurate Triacrylate), 9, III, MARINE POLLUTANT
UN-No. (IMDG)	: 3082
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class (IMDG)	: 9 - Miscellaneous dangerous substances and articles
Packing group (IMDG)	: III - substances presenting low danger
Limited quantities (IMDG)	: 5 L
Marine pollutant	: Yes



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Air transport

Transport document description (IATA)	: UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Dipropylene Glycol Diacrylate ; Tris(2-hydroxyethyl) Isocyanurate Triacrylate), 9, III
UN-No. (IATA)	: 3082
Proper Shipping Name (IATA)	: Environmentally hazardous substance, liquid, n.o.s.
Class (IATA)	: 9 - Miscellaneous Dangerous Substances and Articles
Packing group (IATA)	: III - Low danger

SECTION 15: Regulatory information

15.1. US Federal regulations

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All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Proprietary (Aliphatic urethane methacrylate)	CAS-No. 72869-86-4	≥ 5 – < 10%
Proprietary (Triacrylate)	CAS-No. 40220-08-4	≥ 25 – < 70%

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Proprietary (Triacrylate) (40220-08-4)

EPA TSCA Regulatory Flag	PMN - PMN - indicates a commenced PMN substance.
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15.2. International regulations

CANADA

Proprietary (Aliphatic urethane methacrylate) (72869-86-4)

Listed on the Canadian NDSL (Non-Domestic Substances List)

Proprietary (Triacrylate) (40220-08-4)

Listed on the Canadian NDSL (Non-Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Proprietary (Aliphatic urethane methacrylate) (72869-86-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Proprietary (Triacrylate) (40220-08-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of hazard classes and H-statements:

H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

SDS US (GHS HazCom 2012) No CAS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.