

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

1.1. Product identifier

| | |
|-----------------|-------------------------------|
| Product form | : Mixture |
| Generic name | : UV DLP Hard Grey |
| UFI | : 7P00-X06S-G00N-PAN6 |
| Type of product | : Photocentric UV Resin |
| Synonyms | : UV Hard Grey, DLP Hard Grey |

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

1.2.1. Relevant identified uses

| | |
|------------------------------|-----------------------------------------------------|
| Main use category | : Industrial use, Professional use |
| Use of the substance/mixture | : For use in DLP Printers For use in UV Printers |

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Photocentric Ltd, UK
Cambridge House
Oxney Road
Peterborough, PE1 5YW - United Kingdom
T +44 (0)1733349937
info@photocentric.co.uk - <https://photocentricgroup.com/>

1.4. Emergency telephone number

| | |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Emergency number | : +44 (0) 1733 349937 (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: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

| | |
|-----------------------------------------------------------------------------------------------|------|
| Skin corrosion/irritation, Category 2 | H315 |
| Serious eye damage/eye irritation, Category 2 | H319 |
| Skin sensitisation, Category 1 | H317 |
| Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | H335 |
| Hazardous to the aquatic environment — Chronic Hazard, Category 2 | H411 |

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



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| | | |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| | GHS07 | GHS09 |
| Signal word (CLP) | : Warning | |
| Contains | : Proprietary (Photoinitiator); Proprietary (Diacylate); Proprietary (Dimethacrylate); Proprietary (Pigment); Proprietary (Crosslinking agent) | |
| Hazard statements (CLP) | : H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H411 - Toxic to aquatic life with long lasting effects. | |
| Precautionary statements (CLP) | : P273 - Avoid release to the environment. P280 - Wear eye protection, protective clothing, protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 - Call doctor if you feel unwell. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P501 - Dispose of contents and container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste, hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. | |

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|----------------------------------------|-------------|--------------------------------------------------------------------------------------------|
| Proprietary (Dimethacrylate) | ≥ 50 – < 70 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 |
| Proprietary (Diacylate) | ≥ 10 – < 15 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 |
| Proprietary (Diacylate) | ≥ 10 – < 15 | Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| Proprietary (Multifunctional acrylate) | ≥ 5 – < 10 | STOT RE 2, H373 Aquatic Chronic 2, H411 |
| Proprietary (Crosslinking agent) | ≥ 0.1 – < 1 | Eye Irrit. 2, H319 Skin Sens. 1, H317 |
| Proprietary (Photoinitiator) | ≥ 0.1 – < 1 | Skin Sens. 1, H317 Aquatic Chronic 4, H413 |
| Proprietary (Pigment) | ≥ 0.1 – < 1 | Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412 |

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| | | |
|----------------------------------|-----|----------------------------------------------------------------------------------------------------------------|
| Proprietary (Crosslinking agent) | < 1 | Acute Tox. 4 (Oral), H302 STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10) |
|----------------------------------|-----|----------------------------------------------------------------------------------------------------------------|

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

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures general | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a poison center or a doctor if you feel unwell. |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. Call a poison center or a doctor 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 | : 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. |
| First-aid measures after ingestion | : Provide rest, warmth and fresh air. Immediately rinse mouth and drink plenty of water (200-300 ml). . Call a poison center or a doctor if you feel unwell. |

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

| | |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Symptoms/effects | : May be harmful if inhaled. May cause respiratory irritation. May be harmful in contact with skin. |
| Symptoms/effects after inhalation | : Inhalation may cause irritation (cough, short breathing, difficulty in breathing). May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Irritation. May cause an allergic skin reaction. |
| Symptoms/effects after eye contact | : Causes serious eye damage. Eye irritation. |
| Symptoms/effects after ingestion | : Harmful if swallowed. May cause irritation to the digestive tract. |

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

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.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

| | |
|--------------------------------------------------|-----------------------------------------|
| Fire hazard | : Not flammable. |
| Explosion hazard | : No direct explosion hazard. |
| Reactivity in case of fire | : Product is not explosive. |
| Hazardous decomposition products in case of fire | : Carbon oxides (CO, CO ₂). |

5.3. Advice for firefighters

| | |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautionary measures fire | : Keep cool. Protect from sunlight. Store in tightly closed, properly ventilated containers away from heat, sparks, open flame. |
| Firefighting instructions | : Evacuate area. Do not enter fire area without proper protective equipment, including respiratory protection. Contain the extinguishing fluids by bunding. Eliminate all ignition sources if safe to do so. Prevent fire fighting water from entering the 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. |

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Clean up any spills as soon as possible, using an absorbent material to collect it. May be harmful to aquatic organisms, to flora, to soil organisms. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

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. See section 8 of the SDS for more information on personal protective equipment. Avoid breathing mist, spray, vapours.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Protective gloves. Safety glasses. 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.

6.2. Environmental precautions

Avoid release to the environment. Prevent liquid from entering sewers, watercourses, underground or low areas.

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.
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 : Avoid contact with skin, eyes and clothing. Use only outdoors or in a well-ventilated area. Avoid breathing mist, spray, vapours. Avoid contact with skin and eyes. Wear personal protective equipment.
Handling temperature : 10 – 50 °C
Hygiene measures : Wear personal protective equipment. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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 : Comply with applicable regulations. Ensure adequate ventilation, especially in confined areas. Keep in a cool, well-ventilated place away from heat. Store in a well-ventilated place. Keep container tightly closed.
Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Incompatible materials : Direct sunlight.
Storage temperature : < 25 °C
Storage area : Store away from heat. Store in a well-ventilated place.
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.

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7.3. Specific end use(s)

The identified uses for this product are detailed in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Safety glasses. Wear recommended personal protective equipment. Gloves.

Materials for protective clothing:

Wear suitable protective clothing and gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation wear respiratory protection.

Personal protective equipment symbol(s):



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--------------------------------------------|---------------------|
| Physical state | : Liquid |
| Appearance | : Liquid. |
| Colour | : Grey. |
| Odour | : characteristic. |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Not applicable |
| Vapour pressure | : No data available |

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| | |
|-------------------------------------------------|--------------------------------|
| Relative vapour 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 |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : ≈ 210 (80 – 350) mPa·s @25°C |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 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

None under recommended storage and handling conditions (see section 7).

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.

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 (Photoinitiator)

| | |
|-----------------|---------------------------------------------------------------------------------------|
| LD50 oral rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.1 (Acute Toxicity (Oral)) |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: other:92/69/EEC |

Proprietary (Diacylate)

| | |
|--------------------|---------------------------------------------------------------------------------------------|
| LD50 oral rat | > 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity) |
| LD50 dermal rabbit | 3650 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |

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| Proprietary (Diacrylate) | |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LD50 oral rat | > 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method) |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)) |

| Proprietary (Dimethacrylate) | |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LD50 oral rat | > 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method) |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)) |

| Proprietary (Multifunctional acrylate) | |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LD50 oral rat | > 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity), Guideline: other:Japanese Ministry of Agriculture, Forestry and Fisheries (JMAFF), 12 Nohsan, Notification No 8147, April 2011, including the most recent partial revisions. |
| LD50 dermal rabbit | > 2000 mg/kg bodyweight Animal: other:Albino rabbits, Guideline: other:40 CFR Part 163.81-2 (Environmental Protection Agency, Pesticides Programs, Proposed Guidelines for Registering Pesticides in the U.S.; Hazard Evaluation: Humans and Domestic Animals. Acute Dermal Toxicity) |

| Proprietary (Crosslinking agent) | |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| LD50 oral rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral)) |
| LD50 dermal rabbit | > 13200 mg/kg bodyweight Animal: rabbit |

| Proprietary (Crosslinking agent) | |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LD50 oral rat | 1000 – 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method) |
| LC50 Inhalation - Rat | > 3.363 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation)), Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity) |

| | |
|-----------------------------------|----------------------------------------|
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye irritation. |
| Respiratory or skin sensitisation | : May cause an allergic skin reaction. |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : May cause respiratory irritation. |
| STOT-repeated exposure | : Not classified |

| Proprietary (Photoinitiator) | |
|------------------------------|-----------------------------------------------------------------|
| NOAEL (oral, rat, 90 days) | > 1000 mg/kg bodyweight Animal: rat, Guideline: other:92/69/eec |

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| Proprietary (Diacrylate) | |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOAEL (oral, rat, 90 days) | 250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |

| Proprietary (Diacrylate) | |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOAEL (oral, rat, 90 days) | 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents), Guideline: EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral)) |

| Proprietary (Dimethacrylate) | |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOAEL (oral, rat, 90 days) | 300 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents), Guideline: EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral)) |

| Proprietary (Multifunctional acrylate) | |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOAEL (oral, rat, 90 days) | 75 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:EPA OPPTS 870.3650 |

| Proprietary (Crosslinking agent) | |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOAEL (oral, rat, 90 days) | 250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |

| Proprietary (Crosslinking agent) | |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOAEL (oral, rat, 90 days) | ≥ 100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |

| | |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Aspiration hazard | : Not classified |
| Potential adverse human health effects and symptoms | : Harmful if swallowed. Irritation: severely irritant to eyes. Irritation: may cause irritation to the respiratory system. |
| Other information | : Likely routes of exposure: skin and eye. |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-----------------------------------------------------------|----------------------------------------------------|
| Ecology - general | : Toxic to aquatic life with long lasting effects. |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified |
| Hazardous to the aquatic environment, long-term (chronic) | : Toxic to aquatic life with long lasting effects. |
| Not rapidly degradable | |

| Proprietary (Photoinitiator) | |
|------------------------------|--------------------------------------------------------------------------------------------------------|
| LC50 fish 1 | > 0.09 mg/l Test organisms (species): other:Zebra Fish Brachydanio rerio |
| EC50 Daphnia 1 | > 1.175 mg/l Test organisms (species): other aquatic crustacea:Daphnia Magna |
| EC50 72h algae (1) | > 0.26 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |

| Proprietary (Diacrylate) | |
|--------------------------|--------------------------------------------------------|
| LC50 fish 1 | 4.6 – 10 mg/l Test organisms (species): Leuciscus idus |

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| | |
|--------------------|-----------------------------------------------------------------------------------------------------|
| EC50 Daphnia 1 | 2.6 mg/l Test organisms (species): Daphnia magna |
| EC50 72h algae (1) | 1.5 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |

Proprietary (Diacylate)

| | |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| EC50 Daphnia 1 | 2.36 mg/l Test organisms (species): Daphnia magna |
| EC50 72h algae (1) | 1.6 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| EC50 72h algae (2) | 0.71 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

Proprietary (Dimethacrylate)

| | |
|--------------------|------------------------------------------------------------------------------------|
| LC50 fish 1 | > 100 mg/l LL ₅₀ , 96 hours: > 100 mg/l, Brachydanio rerio (Zebra Fish) |
| EC50 Daphnia 1 | > 100 mg/l EC ₅₀ , 48 hours: > 100 mg/l, Daphnia magna |
| EC50 72h algae (1) | EL ₅₀ , 72 hours: > 100 mg/l, Pseudokirchneriella subcapitata |

Proprietary (Multifunctional acrylate)

| | |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| LC50 fish 1 | 8.9 mg/l Test organisms (species): Cyprinus carpio |
| EC50 Daphnia 1 | 18 mg/l Test organisms (species): Daphnia magna |
| EC50 72h algae (1) | > 36 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| EC50 72h algae (2) | 21 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

Proprietary (Crosslinking agent)

| | |
|--------------------|-----------------------------------------------------------------------------------------------------|
| LC50 fish 1 | 1.95 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) |
| EC50 Daphnia 1 | 70.7 mg/l Test organisms (species): Daphnia magna |
| EC50 72h algae (1) | 2.2 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |

Proprietary (Crosslinking agent)

| | |
|--------------------|--------------------------------------------------------------------------------------------------------|
| LC50 fish 1 | 0.034 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) |
| EC50 Daphnia 1 | > 0.35 mg/l Test organisms (species): Daphnia magna |
| EC50 72h algae (1) | > 0.12 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |

12.2. Persistence and degradability

Proprietary (Dimethacrylate)

| | |
|-------------------------------|------------------------------------------------------------------------------|
| Persistence and degradability | The substance is readily biodegradable. Degradation (85%) 29 days OCED 301B. |
|-------------------------------|------------------------------------------------------------------------------|

12.3. Bioaccumulative potential

Proprietary (Dimethacrylate)

| | |
|-------------------------------------------------|-------------------------------|
| Partition coefficient n-octanol/water (Log Kow) | 5.3 – 5.62 log Kow: 5.30~5.62 |
|-------------------------------------------------|-------------------------------|

12.4. Mobility in soil

No additional information available

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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available






SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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. |
| Additional information | : Clean up even minor leaks or spills if possible without unnecessary risk. Consult an expert on waste disposal or treatment. |
| Ecology - waste materials | : Avoid release to the environment. |

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IMDG | IATA | ADN | RID |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 14.1. UN number | | | | |
| UN 3082 | UN 3082 | UN 3082 | UN 3082 | UN 3082 |
| 14.2. UN proper shipping name | | | | |
| ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (UV DLP Hard Grey) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (UV DLP Hard Grey) | Environmentally hazardous substance, liquid, n.o.s. (UV DLP Hard Grey) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (UV DLP Hard Grey) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (UV DLP Hard Grey) |
| Transport document description | | | | |
| UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (UV DLP Hard Grey), 9, III, (-) | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (UV DLP Hard Grey), 9, III, MARINE POLLUTANT | UN 3082 Environmentally hazardous substance, liquid, n.o.s. (UV DLP Hard Grey), 9, III | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (UV DLP Hard Grey), 9, III | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (UV DLP Hard Grey), 9, III |
| 14.3. Transport hazard class(es) | | | | |
| 9 | 9 | 9 | 9 | 9 |
|  |  |  |  |  |
| 14.4. Packing group | | | | |
| III | III | III | III | III |
| 14.5. Environmental hazards | | | | |
| Dangerous for the environment : Yes | Dangerous for the environment : Yes Marine pollutant : Yes | Dangerous for the environment : Yes | Dangerous for the environment : Yes | Dangerous for the environment : Yes |
| No supplementary information available | | | | |

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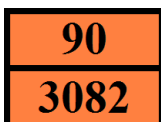
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14.6. Special precautions for user

Overland transport

| | |
|-------------------------------------------------------------------------|---------------------------|
| Classification code (ADR) | : M6 |
| Special provisions (ADR) | : 274, 335, 375, 601 |
| Limited quantities (ADR) | : 5I |
| Excepted quantities (ADR) | : E1 |
| Packing instructions (ADR) | : P001, IBC03, LP01, R001 |
| Special packing provisions (ADR) | : PP1 |
| Mixed packing provisions (ADR) | : MP19 |
| Portable tank and bulk container instructions (ADR) | : T4 |
| Portable tank and bulk container special provisions (ADR) | : TP1, TP29 |
| Tank code (ADR) | : LGBV |
| Vehicle for tank carriage | : AT |
| Transport category (ADR) | : 3 |
| Special provisions for carriage - Packages (ADR) | : V12 |
| Special provisions for carriage - Loading, unloading and handling (ADR) | : CV13 |
| Hazard identification number (Kemler No.) | : 90 |
| Orange plates | : |



| | |
|-------------------------------|-------|
| Tunnel restriction code (ADR) | : - |
| EAC code | : •3Z |

Transport by sea

| | |
|-----------------------------------|-----------------|
| Special provisions (IMDG) | : 274, 335, 969 |
| Limited quantities (IMDG) | : 5 L |
| Excepted quantities (IMDG) | : E1 |
| Packing instructions (IMDG) | : LP01, P001 |
| Special packing provisions (IMDG) | : PP1 |
| IBC packing instructions (IMDG) | : IBC03 |
| Tank instructions (IMDG) | : T4 |
| Tank special provisions (IMDG) | : TP1, TP29 |
| EmS-No. (Fire) | : F-A |
| EmS-No. (Spillage) | : S-F |
| Stowage category (IMDG) | : A |

Air transport

| | |
|----------------------------------------------|-------------------------|
| PCA Excepted quantities (IATA) | : E1 |
| PCA Limited quantities (IATA) | : Y964 |
| PCA limited quantity max net quantity (IATA) | : 30kgG |
| PCA packing instructions (IATA) | : 964 |
| PCA max net quantity (IATA) | : 450L |
| CAO packing instructions (IATA) | : 964 |
| CAO max net quantity (IATA) | : 450L |
| Special provisions (IATA) | : A97, A158, A197, A215 |
| ERG code (IATA) | : 9L |

Inland waterway transport

| | |
|-----------------------------------|----------------------|
| Classification code (ADN) | : M6 |
| Special provisions (ADN) | : 274, 335, 375, 601 |
| Limited quantities (ADN) | : 5 L |
| Excepted quantities (ADN) | : E1 |
| Equipment required (ADN) | : PP |
| Number of blue cones/lights (ADN) | : 0 |

Rail transport

| | |
|----------------------------------|---------------------------|
| Classification code (RID) | : M6 |
| Special provisions (RID) | : 274, 335, 375, 601 |
| Limited quantities (RID) | : 5L |
| Excepted quantities (RID) | : E1 |
| Packing instructions (RID) | : P001, IBC03, LP01, R001 |
| Special packing provisions (RID) | : PP1 |

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| | |
|-------------------------------------------------------------------------|--------------|
| Mixed packing provisions (RID) | : MP19 |
| Portable tank and bulk container instructions (RID) | : T4 |
| Portable tank and bulk container special provisions (RID) | : TP1, TP29 |
| Tank codes for RID tanks (RID) | : LGBV |
| Transport category (RID) | : 3 |
| Special provisions for carriage – Packages (RID) | : W12 |
| Special provisions for carriage - Loading, unloading and handling (RID) | : CW13, CW31 |
| Colis express (express parcels) (RID) | : CE8 |
| Hazard identification number (RID) | : 90 |

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

| | |
|-----|-------------------------------------------------------------------------------------------------|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |

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| | |
|---------|---------------------------------------------------------------------------------------------------|
| BLV | Biological limit value |
| CAS-No. | Chemical Abstract Service number |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC50 | Median effective concentration |
| EC-No. | European Community number |
| EN | European Standard |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OEL | Occupational Exposure Limit |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| vPvB | Very Persistent and Very Bioaccumulative |
| WGK | Water Hazard Class |

Full text of H- and EUH-statements:

| | |
|---------------------|--------------------------------------------------------------------------------------------|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment — Chronic Hazard, Category 2 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment — Chronic Hazard, Category 3 |
| Aquatic Chronic 4 | Hazardous to the aquatic environment — Chronic Hazard, Category 4 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| STOT RE 2 | Specific target organ toxicity — Repeated exposure, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| 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. |
| H335 | May cause respiratory irritation. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |
| H413 | May cause long lasting harmful effects to aquatic life. |

SDS EU (REACH Annex II) Photocentric edited.

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.