

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

1.1 Product identifier

Product name : KeyModel Ultra Grey
Product code : 4220010, 4240010
Product description :
Product type : Liquid.
Other means of identification : Not available.

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

Not applicable.

1.3 Details of the supplier of the safety data sheet

Keystone Industries GmbH
Stockholzstr. 11
78224 Singen, Germany
+49 77 31 91 21 01

Keystone Industries
52 West King Street
Myerstown, PA 17067
USA

e-mail address of person responsible for this SDS : customerservice@keystoneind.com

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : 1-352-323-3500

Supplier

Telephone number : (+31) 412 693100

Hours of operation : Monday through Friday 8:00 am to 5:00 pm (UTC +2)
Excluding National holidays

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Skin Irrit. 2, H315
Eye Irrit. 2, H319
Skin Sens. 1, H317
STOT SE 3, H335
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity : 60.9 percent of the mixture consists of component(s) of unknown acute oral toxicity
62.2 percent of the mixture consists of component(s) of unknown acute dermal toxicity
63.7 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

SECTION 2: Hazards identification

Ingredients of unknown ecotoxicity : Contains 60.9% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Read carefully and follow all instructions. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Wear eye or face protection. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. Wash thoroughly after handling.

Response : IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage : Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate
2-ethyl-2-[[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate
acrylic acid

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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SECTION 2: Hazards identification

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

| Product/ingredient name | Identifiers | % | Classification | Specific Conc. Limits, M-factors and ATEs | Type |
|---|--|-----------|--|--|---------|
| Aliphatic Urethane Acrylate Oligomer | - | ≥25 - ≤50 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 | - | [1] |
| phenyl bis (2,4,6-trimethylbenzoyl)-phosphine oxide | EC: 423-340-5 CAS: 162881-26-7 Index: 015-189-00-5 | ≤3 | Skin Sens. 1A, H317 Aquatic Chronic 4, H413 | - | [1] |
| Tripropylene glycol diacrylate | EC: 256-032-2 CAS: 42978-66-5 Index: 607-249-00-X | ≤3 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 2, H411 | STOT SE 3, H335: C ≥ 10% | [1] |
| titanium dioxide | EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2 | <1 | Carc. 2, H351 (inhalation) Aquatic Chronic 2, H411 | - | [1] [*] |
| Trimethylolpropane triacrylate | EC: 239-701-3 CAS: 15625-89-5 Index: 607-111-00-9 | <1 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M [Acute] = 1 M [Chronic] = 1 | [1] |
| acrylic acid | EC: 201-177-9 CAS: 79-10-7 Index: 607-061-00-8 | <0.1 | Flam. Liq. 3, H226 Acute Tox. 2, H300 Acute Tox. 3, H311 Acute Tox. 4, H332 Skin Corr. 1A, H314 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 See Section 16 for the full text of the H statements declared above. | ATE [Oral] = 33.5 mg/kg ATE [Dermal] = 640 mg/kg ATE [Inhalation (vapours)] = 11 mg/l STOT SE 3, H335: C ≥ 1% M [Acute] = 1 | [1] [2] |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter ≤ 10 µm not bound within a matrix.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
phosphorus oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

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SECTION 6: Accidental release measures

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|-------------------------|--|
| acrylic acid | EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values STEL: 20 ppm 15 minutes. STEL: 59 mg/m ³ 15 minutes. TWA: 10 ppm 8 hours. TWA: 29 mg/m ³ 8 hours. |

Biological exposure indices

No exposure indices known.

SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|--|------|-----------------------|------------------------|--------------------|----------|
| phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide | DNEL | Short term Oral | 1.67 ng/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 1.5 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 1.5 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 1.67 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Inhalation | 1.93 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 1.93 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 3 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Dermal | 3.33 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 7.84 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 7.84 mg/m ³ | Workers | Systemic |
| Tripropylene glycol diacrylate | DNEL | Long term Dermal | 1.7 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 2.35 mg/m ³ | Workers | Systemic |
| titanium dioxide | DNEL | Long term Inhalation | 28 µg/m ³ | General population | Local |
| | DNEL | Long term Inhalation | 170 µg/m ³ | Workers | Local |
| Trimethylolpropane triacrylate | DNEL | Long term Inhalation | 17.1 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 404 mg/kg bw/day | Workers | Systemic |
| acrylic acid | DNEL | Short term Inhalation | 3.6 mg/m ³ | General population | Systemic |
| | DNEL | Long term Oral | 0.4 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Oral | 1.2 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Inhalation | 3.6 mg/m ³ | General population | Local |
| | DNEL | Long term Inhalation | 3.6 mg/m ³ | General population | Local |
| | DNEL | Long term Inhalation | 3.6 mg/m ³ | General population | Systemic |
| | DNEL | Short term Inhalation | 30 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 30 mg/m ³ | Workers | Local |
| | DNEL | Short term Inhalation | 30 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 30 mg/m ³ | Workers | Systemic |

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SECTION 8: Exposure controls/personal protection

| | | | | | |
|--|------|----------------------|----------------------|---------|----------|
| | DNEL | Long term Inhalation | 30 mg/m ³ | Workers | Systemic |
|--|------|----------------------|----------------------|---------|----------|

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.
Color : Gray.
Odor : Acrylic [Slight]
Odor threshold : Not available.
Melting point/freezing point : Not available.

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SECTION 9: Physical and chemical properties

| | |
|--|----------------------------------|
| Initial boiling point and boiling range | : Not available. |
| Flammability | : Not available. |
| Lower and upper explosion limit | : Not available. |
| Flash point | : Closed cup: >93.3°C (>199.9°F) |
| Auto-ignition temperature | : Not applicable. |
| Decomposition temperature | : Not available. |
| pH | : Not available. |
| Viscosity | : Not available. |
| Solubility in water | : Not available. |
| Partition coefficient: n-octanol/ water | : Not applicable. |
| Vapor pressure | : Not applicable. |
| Relative density | : Not available. |
| Vapor density | : Not available. |
| Explosive properties | : Not available. |
| Oxidizing properties | : Not available. |
| <u>Particle characteristics</u> | |
| Median particle size | : Not applicable. |

SECTION 10: Stability and reactivity

| | |
|--|--|
| 10.1 Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| 10.2 Chemical stability | : The product is stable. |
| 10.3 Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| 10.4 Conditions to avoid | : No specific data. |
| 10.5 Incompatible materials | : No specific data. |
| 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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-------------|---------|-------------|----------|
| phenyl bis (2,4,6-trimethylbenzoyl)- phosphine oxide | LD50 Dermal | Rat | >2000 mg/kg | - |
| | LD50 Oral | Rat | >2000 mg/kg | - |
| Tripropylene glycol diacrylate | LD50 Oral | Rat | 6200 mg/kg | - |
| | LD50 Dermal | Rabbit | 5170 mg/kg | - |
| Trimethylolpropane triacrylate acrylic acid | LD50 Dermal | Rabbit | 640 mg/kg | - |
| | LD50 Oral | Rat | 33500 µg/kg | - |

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SECTION 11: Toxicological information

Conclusion/Summary : Not available.

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|--------------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| Tripropylene glycol diacrylate | 6200 | N/A | N/A | N/A | N/A |
| Trimethylolpropane triacrylate | N/A | 5170 | N/A | N/A | N/A |
| acrylic acid | 33.5 | 640 | N/A | 11 | N/A |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|--------------------------|---------|-------|-------------------|-------------|
| Tripropylene glycol diacrylate titanium dioxide | Skin - Moderate irritant | Rabbit | - | 500 mg | - |
| | Skin - Mild irritant | Human | - | 72 hours 300 ug l | - |
| Trimethylolpropane triacrylate acrylic acid | Eyes - Moderate irritant | Rabbit | - | 100 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 1 mg | - |
| | Skin - Severe irritant | Rabbit | - | 500 mg | - |

Conclusion/Summary : Not available.

Sensitization

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|--------------------------------------|------------|-------------------|------------------------------|
| Aliphatic Urethane Acrylate Oligomer | Category 3 | - | Respiratory tract irritation |
| Tripropylene glycol diacrylate | Category 3 | - | Respiratory tract irritation |
| acrylic acid | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

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SECTION 11: Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- Conclusion/Summary** : Not available.
- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|---------------------------------------|---|----------|
| titanium dioxide | Acute LC50 3 mg/l Fresh water | Crustaceans - <i>Ceriodaphnia dubia</i> - Neonate | 48 hours |
| | Acute LC50 6.5 mg/l Fresh water | Daphnia - <i>Daphnia pulex</i> - Neonate | 48 hours |
| | Acute LC50 >1000000 µg/l Marine water | Fish - <i>Fundulus heteroclitus</i> | 96 hours |
| acrylic acid | Chronic NOEC 3.8 mg/l Fresh water | Daphnia - <i>Daphnia magna</i> - Neonate | 21 days |

- Conclusion/Summary** : Not available.

12.2 Persistence and degradability

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SECTION 12: Ecological information

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|-------|-----------|
| phenyl bis (2,4,6-trimethylbenzoyl)-phosphine oxide | 5.77 | <5 | Low |
| Tripropylene glycol diacrylate | 2 | - | Low |
| Trimethylolpropane triacrylate | 0.67 | - | Low |
| acrylic acid | 0.38 | 3.162 | Low |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|---------------------------------|----------------|----------------|----------------|----------------|
| 14.1 UN number or ID number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name | - | - | - | - |
| 14.3 Transport hazard class(es) | - | - | - | - |
| 14.4 Packing group | - | - | - | - |
| 14.5 Environmental hazards | No. | No. | No. | No. |

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

SECTION 15: Regulatory information

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

| | | |
|--------------------------------|---|--|
| Australia | : | Not determined. |
| Canada | : | Not determined. |
| China | : | Not determined. |
| Eurasian Economic Union | : | Russian Federation inventory: Not determined. |
| Japan | : | Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined. |
| New Zealand | : | Not determined. |
| Philippines | : | Not determined. |
| Republic of Korea | : | Not determined. |
| Taiwan | : | Not determined. |
| Thailand | : | Not determined. |
| Turkey | : | Not determined. |
| United States | : | Not determined. |
| Viet Nam | : | Not determined. |

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

📌 Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

KeyModel Ultra Grey

SECTION 16: Other information

| Classification | Justification |
|---|--|
| Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412 | Calculation method Calculation method Calculation method Calculation method Calculation method |

Full text of abbreviated H statements

| | |
|------|---|
| H226 | Flammable liquid and vapor. |
| H300 | Fatal if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H351 | Suspected of causing cancer. |
| 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. |

Full text of classifications [CLP/GHS]

| | |
|-------------------|---|
| Acute Tox. 2 | ACUTE TOXICITY - Category 2 |
| Acute Tox. 3 | ACUTE TOXICITY - Category 3 |
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Aquatic Acute 1 | AQUATIC HAZARD (ACUTE) - Category 1 |
| Aquatic Chronic 1 | AQUATIC HAZARD (LONG-TERM) - Category 1 |
| Aquatic Chronic 2 | AQUATIC HAZARD (LONG-TERM) - Category 2 |
| Aquatic Chronic 3 | AQUATIC HAZARD (LONG-TERM) - Category 3 |
| Aquatic Chronic 4 | AQUATIC HAZARD (LONG-TERM) - Category 4 |
| Carc. 2 | CARCINOGENICITY - Category 2 |
| Eye Irrit. 2 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 |
| Flam. Liq. 3 | FLAMMABLE LIQUIDS - Category 3 |
| Skin Corr. 1A | SKIN CORROSION/IRRITATION - Category 1A |
| Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1 | SKIN SENSITIZATION - Category 1 |
| Skin Sens. 1A | SKIN SENSITIZATION - Category 1A |
| STOT SE 3 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3 |

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