

Safety Data Sheet

Report Date 10/20/2023

Last Edit 10/19/2023

Section 1 - Product Information

3D Resin Solutions
1610 Shanahan Drive
South Elgin, IL 60177

Phone (800) 254-0171

Product Id # DLPCG45-6 3D 3DRS
Trade Name Standard 8k
Product Class Liquid Plastic
Product Description 3D Photopolymer

HMIS Rating

Health 2
Flammability 0
Reactivity 0
Personal Protection B

Section 2 - Hazardous Identification



Signal Word Danger

Eye Damage/Irritation - Category 1
Skin Corrosion/Irritation - Category 2
Skin Sensitization - Category 1
STOT-SE - Category 3

Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.

IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing. And wash it before reuse. Store in a well-ventilated place. Keep container tightly closed. Avoid breathing fumes and vapours. Wash effected areas thoroughly after handling. Use in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves and eye protection. Immediately Call a Doctor. Call a Doctor if you feel unwell. See section (4) of the SDS for first aid instruction. Store in a closed container. Store locked up. Dispose of contents/container in accordance with local regulations.

Section 3 - Composition/Information on Ingredients

Chemical Name	CAS #	%
Acrylated Epoxy, Methacrylates, and/or acrylated Oligomers	Trade Secret	25-55 %
Diacrylate Monomers	Trade Secret	50-70%
Photo Initiators	Trade Secret	.5 - 7%

Section 4 - First aid measures

4.1: Description of first aid measures

Immediately remove any clothing soiled by the product. Involve doctor immediately

4.2: After Inhalation

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stable in side position for transportation.

In the case of accidental inhalation of monomers, provide fresh air, rest and warmth.

4.3: After Skin Contact

Immediately wash with water and soap and rinse thoroughly.

Avoid contact with UV – and sunlight.

4.4: After eye Contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

4.5: After Swallowing

Call a doctor immediately. Rinse out mouth and then drink plenty of water

Section 5 - Fire Fighting Measures

5.1: Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire fighting measures that suit the environment.

5.2: For safety reasons unsuitable extinguishing agents:

Water with full jet: Special hazards arising from the substance or mixture

5.3 Advice for fire fighters Protective equipment.

Wear self-contained respiratory protective device. Wear fully protective suit.

Section 6 - Accidental Release Measures

6.1: Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Keep people at a distance and stay upwind

6.2: Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

6.3: Methods and material for containment and cleaning up

Absorb with liquid-binding material (Sand, diatomite, acid binders, universal binders, sawdust)

Section 7 - Handling and storage

7.1: Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care

7.2: Information about protection against explosions and fires

Keep ignition sources away – Do not smoke.

Protect from heat.

7.3: Conditions for safe storage

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Store receptacle in a well ventilated area.

Store under lock and key or with access restricted to technical experts or their assistants only. Do not expose to temperatures above 40 degrees Celsius

Section 8 - Personal Protection**8.1: Personal Protective and Hygienic measures**

The usual precautionary measure for handling chemicals should be followed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work

8.2: Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Use suitable respiratory protective device only when aerosol or mist is formed

8.3: Protection of Hands:

Wear protective gloves suitable for skin protection.

8.4: Eye protection

tightly sealed goggles are recommended

8.5: Body protection:

Impervious protective clothing

Section 9 - Physical and chemical properties.**9.1 General Properties**

Boiling Point: > 200°C

Vapor Pressure: (MM HG at 25°C) < 1

Appearance: Viscous solution

Odor: Mild acrylate odor.

Solubility in water: Insoluble.

WPG: 9.00

Evaporation Rate (n-Butyl Acetate = 1) < 1

Vapor Density (air = 1) > 1

Section 10 - Stability and Reactivity**10.1: Stability and Reactivity**

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

Polymerization occurs when exposed to white light, ultraviolet light or heat.

Mixtures may separate over time, mixture maintenance may be required.

10.2 Incompatible materials

Avoid contact with radical forming initiators, peroxides, strong alkalis or reactive metals to prevent exothermic polymerization.

Section 11 - Toxicological Information

The toxicological information below is listed from the individual raw ingredients in this mixture. They are not representative of the mixture as a whole. This mixture has not been tested for toxicological effects.

CAS# 42978-66-5

Acute Toxicity:

Oral: LD50: >5000 mg/kg (rat)

Dermal LD50: >3000 mg/kg (rabbit) Literature

Irritation of skin: Skin Irr OECD 404: 1.8 PII 0-8 (rabbit)

Potential health effects

May cause sensitization by skin contact.

Acute Toxicity Data

Oral

LD50 >2,000mg/kg, Rat

Dermal

LD50 >2,000mg/l, Rat

Inhalation

No data

Skin Corrosion / Irritation

Not irritating

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Serious Eye Damage / Irritation

Not irritating

Respiratory Sensitization

No data

Skin Sensitization

Sensitization

Carcinogenicity

No data

Germ cell mutagenicity

Negative

Reproductive toxicity

Screening – NOAEL >900mg/kg/day, Oral, Rat

Embryotoxicity – NOAEL 1,000mg/kg/day, Oral, Rat

Specific target organ toxicity

No data

Aspiration hazard

No data

CAS# 57472-68-1

Acute Toxicity:

Oral: LD50: >5000 mg/kg (rat)

Irritation of Skin: Skin Irr OECD 404: 3.4 PII 0-8 (rabbit)

On the Skin: Irritant to skin and mucous membranes.

On the Eye: Strong irritant with the danger of severe eye injury.

Sensitization possible through skin contact.

Information on toxicological effects

Available data are listed below; for endpoints not addressed in section 11, no data are available

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

84434-11-7 Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate

Oral LD50 > 2000 mg/kg (rat)

literature

· Primary irritant effect:

· on the skin: No irritant effect.

· on the eye: No irritating effect.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The substance is not subject to classification.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer) Substance is not listed.

NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

Mutagenicity studies

CAS: 84434-11-7 Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate

OECD 471 AMES negative Neg/Pos (bacteria)

OECD 476 Mammalian Cell Gene Mutation Test (ML) negative Neg/Pos (in vitro cells)

· Information on toxicological effects

Available data are listed below; for endpoints not addressed in section 11, no data are available.

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

CAS: 162881-26-7 phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Oral LD50 > 2000 mg/kg (rat)

literature

Dermal LD50 > 2000 mg/kg (rat)

literature

· Primary irritant effect:

· on the skin: No irritant effect.

· on the eye: No irritating effect.

· Sensitization: Sensitization possible through skin contact.

· Additional toxicological information:

· Carcinogenic categories

· IARC (International Agency for Research on Cancer) Substance is not listed.

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- NTP (National Toxicology Program)
Substance is not listed.
- OSHA-Ca (Occupational Safety & Health Administration)
Substance is not listed.
- Mutagenicity studies
CAS: 162881-26-7 phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide
OECD 471 AMES negative Neg/Pos (bacteria)

Carcinogenicity – Titanium dioxide – dry(respirable)
In lifetime inhalation studies rats were exposed for 2 years to respectively 10, 50 and 250 mg/m³ of respirable TiO₂. Slight lung fibrosis was observed at 50 and 250 mg/m³ levels. Microscopic lung tumors were also observed in 13 percent of the rats exposed to 250 mg/m³, an exposure level that caused lung overloading and impairment of rat lungs clearance mechanisms. In further studies, these tumors were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. The pulmonary inflammatory response to TiO₂ particles exposure was also found to be much more severe in rats than in other rodent species. In February 2006, IARC has re-evaluated Titanium dioxide as pertaining to Group 2B: "possibly carcinogenic to humans", based upon inadequate evidence in humans and sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide. IARC evaluation guidelines consider the generation of tumors, in 2 different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence. The conclusions of several epidemiology studies on more than 20000 TiO₂ industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO₂ dust on the human lung. Mortality from other chronic diseases, including other respiratory diseases, was also not associated with exposure to TiO₂ dust. Based upon all available study results, our titanium manufacturer's scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace

Information on likely routes of exposure
Skin contact Skin Absorption Inhalation Eyes Ingestion

Acute toxicity

Product:

Acute oral toxicity

:

Remarks: No data available

Acute dermal toxicity

:

Acute toxicity estimate : > 5,000 mg/kg

Method: Calculation method

Skin corrosion/irritation

Product:

Remarks: No data available

Serious eye damage/eye irritation

Product:

Remarks: No data available

Respiratory or skin sensitisation

Product:

Remarks: No data available

Germ cell mutagenicity

Product:

Genotoxicity in vitro

:

Remarks: No data available

Genotoxicity in vivo

:

Remarks: No data available

Carcinogenicity

Product:

Remarks: No data available

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

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No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Product:

Effects on fertility

:

Remarks: No data available

Effects on foetal development

:

Remarks: No data available

STOT - single exposure

Product:

Remarks: No data available

STOT - repeated exposure

Product:

Remarks: No data available

Repeated dose toxicity

Product:

Remarks: No known chronic health effects.

Aspiration toxicity

Product:

No data available

Experience with human exposure

Product:

Inhalation:

Symptoms:

None expected.

Skin contact:

Symptoms:

Contact may cause irritation.

Eye contact:

Symptoms:

Contact may cause irritation.

Ingestion:

Symptoms:

Ingestion may irritate the digestive tract.

Further information

Product:

Remarks: No data available

Acute toxicity

C. I. Pigment Black 7 LD50 Dermal Rabbit >3 g/kg -

LD50 Oral Rat >15400 mg/kg -

trimethylolpropane triacrylate LD50 Dermal Rabbit 5170 mg/kg -

Product/ingredient name Result Species Dose Exposure

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Irritation/Corrosion

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Eyes : No known significant effects or critical hazards.

Respiratory : No known significant effects or critical hazards.

Sensitization

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Respiratory : No known significant effects or critical hazards.

Section 12 - Ecological Information

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12.1: Ecological Information

Water hazard class 2 (Self-assessment): Hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic to aquatic organisms

Section 13 - Disposal

13.1: Disposal

Can be incinerated, when in compliance with local regulations.
Disposal must be made according to official regulations.

Section 14 - Transportation Information

14.1: Transportation Information

ADR/RID Class - Not registered
ADNR Class - Not registered
IMDG Class - Not registered
IATA Class - Not registered

Section 15 - Regulatory Substances

R100 - Section 355 (Extremely hazardous Substances):

To the best of our knowledge, this product does not contain any products listed in reportable Levels.

R101 - Section 313 (Specific toxic chemical listings)

To the best of our knowledge, this product does not contain any products listed in reportable Levels.

R102 - TSCA (Toxic Substances Control Act)

4-Methoxyphenol; heptane; Acrylated Oligomer

Substance is Listed: CAS# 42978-66-5

Substance is Listed: CAS# 57472-68-1

R103 - Proposition 65: Chemicals Known to cause Cancer

Cumene, Styrene, Ethyl benzene

trimethylolpropane tricrylate less than .003%

R104 - Proposition 65: Chemicals known to cause reproductive harm

All substances listed

R105 - REACH: (SVHC) Substances of Very High Concern:

Benzene-1,2,4-tricarboxylic acid 1,2-anhydride, CAS# 552-30-7, less than 0.1%

Section 16 - Other Information

16.2 Other Information

The data are based on the current state of our knowledge, and are intended to describe the product with regard to the requirements of safety. The data should not be taken to imply any guarantee of a particular or general specification. It is the responsibility of the user of the product to ensure to his satisfaction that the product is suitable for the intended purpose and method to use. We do not accept responsibility for any harm caused by the use of this information. Furthermore nothing contained herein shall be construed as recommendation to use any product in conflict with existing patents covering any material or its use. In all cases, our general conditions of sale apply.

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