

Monomer DPGDA

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: DPGDA
Product Description: Dipropylene Glycol Diacrylate
Intended/Recommended Use: Radiation curable coating ingredient, Coatings & Inks
Manufacturer/Supplier Identification
Manufacturer/Supplier: Formula Chemicals Co., Ltd.
Emergency telephone number: +886-922582639; +886-2-26685339

2. HAZARDS IDENTIFICATION

GHS Classification

Skin Corrosion / Irritation Hazard Category 2
 Serious Eye Damage / Eye Irritation Hazard Category 1
 Skin Sensitizer Hazard Category 1B

LABEL ELEMENTS



Signal Word

DANGER

Hazard Statements

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

Precautionary Statements

Wash face, hands and any exposed skin thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Avoid breathing dust/fume/gas/mist/vapors/spray.
 Contaminated work clothing should not be allowed out of the workplace.
 IF ON SKIN: Wash with plenty of soap and water.
 Specific treatment (see supplemental first aid instructions on this label).
 Take off contaminated clothing and wash it before reuse.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
 Continue rinsing.
 Immediately call a POISON CENTER or doctor/physician.
 Dispose of contents/container in accordance with local and national regulations.

Hazards Not Otherwise Classified (HNOC), Other Hazards

Polymerization may occur from excessive heat, contamination or exposure to direct sunlight.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification
Dipropylene Glycol Diacrylate DPGDA 57472-68-1	> 99	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1B (H317)

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA. See Section 16 for full text of H phrases.

4. FIRST AID MEASURES

First-aid Measures

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

Skin Contact:

Wash immediately with plenty of water and soap. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering. Destroy or thoroughly clean shoes before reuse.

Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical attention immediately.

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Most Important Symptoms and Effects, Acute and Delayed

None known

Immediate Medical Attention and Special Treatment

Not applicable

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use water spray or fog, carbon dioxide or dry chemical.

Unsuitable Extinguishing Media:

full water jet, high pressure water jet.

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See SDS Section 8 (Exposure Controls/Personal Protection).

Special Hazards:

Keep containers cool by spraying with water if exposed to fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

Methods For Cleaning Up:

Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

Environmental Precautions:

None known. Avoid release to the environment.

References to other sections:

See Sections 7, 8 and 13 for additional information.

7. HANDLING AND STORAGE

HANDLING

Precautions: Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves and eye/face protection.

Special Handling Statements: Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid excessive heat, contamination or exposure to direct sunlight to prevent polymerization.

STORAGE

Store at 4 - 40 °C. Keep container in a cool, well-ventilated area. Keep away from heat sources and direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

Utilize a closed system process where feasible. Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure when spraying or curing at elevated temperatures.

Respiratory Protection:

For operations where inhalation exposure can occur use an approved respirator. Recommendations are listed below. Other protective respiratory equipment may be used based on user's own risk assessment. Recommended respirators include those certified by NIOSH.

Recommended:

Full Face Mask with organic vapor cartridge, Type A filter (BP >65°C)

Eye Protection:

Prevent eye and skin contact. Provide eye wash fountain and safety shower in close proximity to points of potential exposure. Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:

Prevent contamination of skin or clothing when removing protective equipment. Barrier creams may be used in conjunction with the gloves to provide additional skin protection. Wear impermeable gloves and suitable protective clothing.

Hand Protection:

Wear protective gloves. Recommendations are listed below. Other protective materials may be used based on user's own risk assessment. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred. Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility etc.) is noticed.

Gloves for short term exposure/splash protection - non exhaustive list:

Laminated multilayer gloves, break through time: > 60 min

Nitrile rubber (NBR), thickness: > 0.56 mm, break through time: < 60 min

The chemical resistance depends on the type of product and amount of product on the glove. Therefore gloves need to be changed when in contact with chemicals.

Not suitable gloves - non exhaustive list:

Latex gloves

Due to many conditions (e.g. temperature, abrasion) the practical usage of a chemical protective glove in practice may be much shorter than the permeation time determined through testing. Use PE gloves as under gloves for difficult situations like for instance: high exposure, unknown composition or unknown properties of the chemicals.

Additional Advice:

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

Exposure Limit(s)

No values have been established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	clear pale yellow
Appearance:	clear liquid
Odor:	ester-like
Boiling Point:	256.3 °C 493.3 °F
Melting Point:	- 34.3 °C -29.7 °F
Vapor Pressure:	< 1.33 hPa @ 20 °C
Specific Gravity/Density:	1.06 g/cm ³
Vapor Density:	Not available
Percent Volatile (% by wt.):	< 0.5 %
pH:	Not available
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	Not available
Solubility In Water:	> 3 - <4 g/L @ room temperature
Volatile Organic Content:	Not available
Flash Point:	146 °C 295 °F Cleveland Open Cup
Flammable Limits (% By Vol):	Not applicable
Autoignition Temperature:	240 °C 464 °F
Decomposition Temperature:	Not available
Partition coefficient (n-octanol/water):	2.28 @ 30 °C Method EC A8, HPLC
Odor Threshold:	Not available
Viscosity (Kinematic):	Not available
Viscosity (Dynamic):	5 - 15 mPa.s @ 25 °C Non viscous liquid

10. STABILITY AND REACTIVITY

Reactivity: No information available

Stability: Stable

Conditions To Avoid: The explosive and oxidizing properties of this product have been predicted negative based on chemical structure, following the guidance outlined in Method A14 (Explosive Properties) and Method A21 (Oxidative Properties (liquids)) of Commission Regulation (EC) No 440/2008. Avoid exposure to strong UV sources. Avoid friction with temperature increase as result. Avoid temperature higher than

40°C. Avoid direct contact with heat sources. Protect from direct sunlight.

Polymerization: May occur

Conditions To Avoid: Material should not be heated above 100°C due to polymerization.

Materials To Avoid: Avoid free radical producing initiators. Avoid contact with peroxides. Avoid contact with reactive metals. Avoid contact with strong alkali's. Unintentional contact with them should be avoided. They give an exothermic reaction with the product.

Hazardous Decomposition Products:

Carbon monoxide (CO) Carbon dioxide hydrocarbons

Toxic gases/vapours

Hazardous polymerization can occur when exposed to direct sunlight.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Skin, Eyes, Oral.

Acute toxicity - oral: Not Classified

Acute toxicity - dermal: Not Classified

Acute toxicity - inhalation: Not Classified

Skin corrosion / irritation: Causes skin irritation

Serious eye damage / eye irritation: Causes serious eye damage

Respiratory sensitization: Not Classified

Skin sensitization: May cause an allergic skin reaction

Carcinogenicity: Not Classified

Germ cell mutagenicity: Not Classified

Reproductive toxicity: Not Classified

Specific target organ toxicity (STOT) - single exposure: Not Classified.

Specific target organ toxicity (STOT) - repeated exposure: Not Classified.

Aspiration hazard: Not Classified

12. ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

This material is not classified as dangerous for the environment.

ECOTOXICITY	No data
PERSISTENCE AND DEGRADABILITY	No data
BIOACCUMULATIVE POTENTIAL	No data
MOBILITY	No data
OTHER ADVERSE EFFECTS	No data

13. DISPOSAL CONSIDERATIONS

Dispose of contents / container in accordance with local and national regulations.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

Dangerous Goods? Not applicable/Not regulated

TRANSPORT CANADA

Dangerous Goods? Not applicable/Not regulated

ICAO / IATA

Dangerous Goods? Not applicable/Not regulated

IMO

Dangerous Goods? Not applicable/Not regulated

SPECIAL PRECAUTIONS FOR USER

Protect against external heat sources above +40°C/104°F.

15. REGULATORY INFORMATION

Inventory Information

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

European Economic Area (including EU): When purchased from an Allnex legal entity based in the EEA (EU or Norway), this product is compliant with the registration of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, pre-registered and/or registered.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

Philippines: One or more components of this product are NOT included on the Philippine (PICCS) inventory.

Taiwan: All components of this product are included in the Taiwan chemical substance inventory or are not required to be listed on the Taiwan chemical substance inventory (TCSI).

Switzerland: All components of this product are exempt from the new substance notification requirements for Switzerland (SR 813.11 art. 24-26).

16. OTHER INFORMATION

This data sheet was prepared in accordance with Directive 91/155/EEC. MSDS Prepared by: Formula Chemicals Documentation Department. MSDS Version / Prepared or Revised on: Version 1.0 2019/10/30
The information presented has been compiled from sources considered to be dependable and is accurate to the best of Formula Chemicals' knowledge; however, Formula Chemicals makes no warranty regarding the accuracy of such data or the results to be obtained from use.

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