

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Trade name : UV LCD Dental Model Grey
 Other means of identification : LDNDTGY01, LDNDTGY05

1.2. Recommended use and restrictions on use

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

1.3. Supplier

Supplier

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

Only Representative

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

1.4. Emergency telephone number

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

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

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Hazardous to the aquatic environment – Chronic Hazard Category 3	H412	Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning

Hazard statements (GHS US) : H317 - May cause an allergic skin reaction
 H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS US) : P261 - Avoid breathing fume, mist, spray, vapors.
 P272 - Contaminated work clothing must not be allowed out of the workplace.
 P273 - Avoid release to the environment.
 P280 - Wear eye protection, protective gloves.
 P302+P352 - If on skin: Wash with plenty of soap and water.
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P363 - Wash contaminated clothing before reuse.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

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2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	GHS US classification
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	(CAS-No.) 162881-26-7	1 – 3	Aquatic Chronic 1, H410
Titanium Dioxide Paste	(CAS-No.) 13463-67-7	0.028 – 0.27972	Carc. 2, H351
mequinol, 4-methoxyphenol, hydroquinone monomethyl ether	(CAS-No.) 150-76-5	0.00168 – 0.00175	Acute Tox. 4 (Oral), H302

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

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible). Never give anything by mouth to an unconscious person. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Apply artificial respiration if victim is not breathing.
First-aid measures after skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If swallowed, seek medical advice immediately and show this container or label. Rinse mouth out with water. Get medical advice/attention if you feel unwell.

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

Symptoms/effects	: May be harmful in contact with skin.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May be harmful in contact with skin.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically. First aid may be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

5.2. Specific hazards arising from the chemical

Fire hazard	: In case of fire, irritating fumes come free.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire	: Keep cool. Protect from sunlight. Keep container tightly closed and away from heat, sparks and flame.
Firefighting instructions	: Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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Other information : High temperature decomposition products are harmful by inhalation. On exposure to high temperature, may decompose, releasing toxic gases.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes. Clean up any spills as soon as possible, using an absorbent material to collect it. Evacuate area.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. See section 8 of the SDS for more information on personal protective equipment. Avoid contact with skin and eyes. Avoid breathing spray, mist, vapors.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Wear recommended personal protective equipment. Use self-contained breathing apparatus and chemically protective clothing. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

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.

Methods for cleaning up : Take up liquid spill into absorbent material. This material and its container must be disposed of in a safe way, and as per local legislation.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Avoid breathing vapors, spray, mist. Wear personal protective equipment. Use only outdoors or in a well-ventilated area.

Handling temperature : 10 – 50 °C

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

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ensure adequate ventilation, especially in confined areas.

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

Storage temperature : < 25 °C

Storage area : Store in a well-ventilated place.

Special rules on packaging : Store in a closed container.

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

No respiratory protection needed under normal use conditions. In case of inadequate ventilation wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
Appearance : Liquid.
Color : dark gray
Odor : characteristic
Odor threshold : No data available
pH : No data available
Melting point : Not applicable
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Flammability : Not applicable.
Vapor pressure : No data available
Relative vapor density at 20°C : No data available
Relative density : No data available
Solubility : No data available
Partition coefficient n-octanol/water (Log Pow) : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
No data availableViscosity, kinematic : No data available
Viscosity, dynamic : 250 (200 – 350) mPa·s
Explosion limits : No data available
Explosive properties : No data available
Oxidizing properties : No data available

9.2. Other information

No additional information available

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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

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

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

mequinol, 4-methoxyphenol, hydroquinone monomethyl ether (150-76-5)

LD50 oral rat	1600 mg/kg Source: HSDB, ChemIDplus, NITE
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: other:OECD No 423 Acute Oral Toxicity – Acute Toxic Class Method
ATE US (oral)	1600 mg/kg body weight

Titanium Dioxide Paste (13463-67-7)

LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)
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Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Titanium Dioxide Paste (13463-67-7)

IARC group	2B - Possibly carcinogenic to humans
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Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

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

NOAEL (oral,rat,90 days)	> 1000 mg/kg body weight Animal: rat, Guideline: other:92/69/eec
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mequinol, 4-methoxyphenol, hydroquinone monomethyl ether (150-76-5)

LOAEL (oral,rat,90 days)	300 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:EPA OPPTS 870.3650 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
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mequinol, 4-methoxyphenol, hydroquinone monomethyl ether (150-76-5)

NOAEL (oral,rat,90 days)	150 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:EPA OPPTS 870.3650 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
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Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects	: May be harmful in contact with skin.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May be harmful in contact with skin.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

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

LC50 - Fish [1]	> 0.09 mg/l Test organisms (species): other:Zebra Fish Brachydanio rerio
EC50 - Crustacea [1]	> 1.175 mg/l Test organisms (species): other aquatic crustacea:Daphnia Magna

mequinol, 4-methoxyphenol, hydroquinone monomethyl ether (150-76-5)

LC50 - Fish [1]	28.5 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	3 mg/l Test organisms (species): Daphnia magna
ErC50 algae	54.7 mg/l Source: EHCA
LOEC (chronic)	> 1.45 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.68 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Titanium Dioxide Paste (13463-67-7)

LC50 - Fish [1]	155 mg/l Test organisms (species): other:Japanese Medaka
EC50 - Crustacea [1]	19.3 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	27.8 mg/l Test organisms (species): Daphnia magna
NOEC (chronic)	≥ 2.92 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

mequinol, 4-methoxyphenol, hydroquinone monomethyl ether (150-76-5)

Partition coefficient n-octanol/water (Log Pow)	1.23 Source: ECHA
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal 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.

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Ecological information : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

UV LCD Dental Model Grey

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

phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	CAS-No. 162881-26-7	1 – 3%
mequinol, 4-methoxyphenol, hydroquinone monomethyl ether	CAS-No. 150-76-5	0.00168 – 0.00175%
Titanium Dioxide Paste	CAS-No. 13463-67-7	0.028 – 0.27972%

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

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

EPA TSCA Regulatory Flag PMN - PMN - indicates a commenced PMN substance.

15.2. International regulations

CANADA

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

Listed on the Canadian DSL (Domestic Substances List)

mequinol, 4-methoxyphenol, hydroquinone monomethyl ether (150-76-5)

Listed on the Canadian DSL (Domestic Substances List)

Titanium Dioxide Paste (13463-67-7)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

UV LCD Dental Model Grey

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

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

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

mequinol, 4-methoxyphenol, hydroquinone monomethyl ether (150-76-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Titanium Dioxide Paste (13463-67-7)

Listed on IARC (International Agency for Research on Cancer)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

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

SECTION 16: Other information

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Full text of H-phrases:

H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

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
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

SDS US (GHS HazCom 2012)

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.