

**Section 1 - Chemical Product and Company Identification**

**Product name:** DMR III  
**Manufacturer:** LuxCreo, Inc.  
**Address:** 940 Old County Road. Belmont, CA 94002  
**Tel:** +1 650 336 0888  
**Email:** [info@luxcreo.com](mailto:info@luxcreo.com)

**Information in case of emergency**

**Tel:** +1 650 336 0888  
**Email:** [info@luxcreo.com](mailto:info@luxcreo.com)

**Section 2 – Hazards Identification**
**GHS Classification of the substance or mixture**

<b>Physical hazards</b>	Not classified
	Skin corrosion/irritation Category 4
	Eye damage/irritation Category 1
	Skin sensitisation Category 1
<b>Environmental hazardstoxicity</b>	Hazardous to the aquatic environment, Acute hazard Category 2
	Hazardous to the aquatic environment, long-term hazard Category 3

**Classification of the chemical**
**Pictogram(s):**


**Signal word:** Warning  
**Hazard statement:** Causes skin irritation.  
 Causes serious eye irritation.  
 May cause an allergic skin reaction.  
 Harmful to aquatic life with long lasting effects.

**Precautionary statements:**

**Prevention**  
 Avoid breathing dust/fume/gas/mist/ vapors/spray.  
 Wash hands thoroughly after handling.  
 Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment.  
 Wear protective gloves.  
 Wear eye protection/face protection.

**DMR III**
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**IResponse**

If on skin: Wash with plenty of water.  
 If in eyes: Rinse cautiously with water for several minutes.  
 Remove contactlenses, if present and easy to do. Continue rinsing.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 If eye irritation persists: Get medical advice/attention.  
 Take off contaminated clothing and wash it before reuse.  
 Not applicable.  
 Wash contaminated clothing before reuse.

**Storage**
**disposal:**

Dispose of contents/container in accordance with local regulation.

**Other hazards:**

Not available.

**Section 3 – Composition/Information on Ingredient**

Chemical name	CAS No.	Content (%)
Polyurethane acrylate	-	10-30%
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4-Aaryloylmorpholine	5117-12-4	10-30%
Tricyclic decane dimethanol diacrylate	42594-17-2	10-30%
Photoinitiators	162881-26-7	1-5%
Color paste	-	0.1%-1%
Assistant	-	0.1%-1%

**Section 4 – First Aid Measures**
**Skin contact:**

Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

**Eyes contact:**

Remove contact lenses. Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

**nhalation:**

Remove contact lenses. Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

**Ingestion:**

Rinse the mouth thoroughly with water. Give copious water to drink - consult doctor immediately.

**Section 5 – Fire Fighting Measures**

<b>Suitable Extinguishing Media:</b>	Carbon dioxide, alcohol resistant foam or dry powder.
<b>Unsuitable extinguishing media</b>	Avoid using DC water to extinguish fire, so as to avoid material splashes and fire spread.
<b>Firefighting equipment/instructions:</b>	In case of fire and/or explosion do not breathe fumes. Protective respirator with
<b>Hazardous combustion products:</b>	independent air supply. According to size of fire Full protection, if necessary. Dispose of contaminated extinction water according to official regulations.

**Section 6 – Accidental Release Measures**

For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations.

<b>Personal precautions, protective equipment and emergency procedures:</b>	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection
<b>Environmental precautions:</b>	If leakage occurs, dam up. Resolve leaks if this possible without risk. Prevent from entering drainage system. Inform the competent authorities when water or canalisation has been infiltrated.
<b>Methods and materials for containment and cleaning up:</b>	ISOak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13. Flush residue using copious water. Clean soiled bottles immediately.

**Section 7 – Handling and Storage**

<b>Handling:</b>	Avoid contact with skin and eyes. Avoid inhalation of vapour. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
<b>Storage:</b>	Keep container tightly closed in a dry and well-ventilated place. Store away from incompatible materials.

**Section 8 – Exposure Controls, Personal Protection**

<b>Occupational exposure limits (OEL):</b>	Not information.
<b>Monito Method:</b>	Not information.
<b>Engineering Control:</b>	Exhaust ventilation is required. Safety shower and eye bath equipment.
<b>Personal protective equipment:</b>	It is not necessary to use protective equipment under normal conditions of use.
<b>Respiratory Protection:</b>	Use in large/emergency situations: If the exposure limit is exceeded or if irritation or other symptoms occur, use a respirator approved by NIOSH/MSHA or EU standard EN136 Recommended filter type: Particulate filter Small scale/lab use: maintain good ventilation
<b>Eyes Protection:</b>	Safety glasses with side shields (EU standard-EN166).
<b>Body Protection:</b>	Wear compatible protective clothing.
<b>Hands Protection:</b>	eProtective gloves, natural rubber (EN 374)
<b>Other Protections:</b>	Wash hands with soap and clean water after handing. Keep the workplace clean. The workplace must be strictly prohibited to fireworks and food. No smoking, drinking and eating at working site. Pay attention to personal hygiene.

**Section 9 – Physical and Chemical Properties**

<b>Appearance</b>	
<b>Physical state</b>	Liquid
<b>Form</b>	Liquid
<b>Color</b>	Orange
<b>Odor</b>	No obvious smell
<b>Odor threshold</b>	Not available
<b>pH</b>	Not available
<b>Vapor pressure</b>	Not available
<b>Melting point/Freezing point</b>	Not available

<b>initial boiling point and boiling range</b>	Not available
<b>Flash point</b>	Not available
<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available
<b>Explosion limits</b>	Not available
<b>Vapor density</b>	Not available
<b>Relative density</b>	1.10 (25 ° C)
<b>Solubility (water)</b>	Not available
<b>Partition coefficient</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	Not available
<b>Specific gravity</b>	Not available
<b>Flammability limits in air, upper, %by volume</b>	Not available
<b>Flammability limits in air, lower, % by volume</b>	Not available
<b>VOC</b>	Not available
<b>Percent volatile</b>	Not available
<b>Other data</b>	
<b>Viscosity</b>	932 (25.0 ° C)

## Section 10 – Stability and Reactivity

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Incompatible materials. Strong heat
<b>Incompatible materials</b>	Avoid contact with oxidizing agents, strong alkalis and strong acids.
<b>Hazardous Decomposition Products:</b>	Oxides of carbon and other toxic fumes.
<b>Possibility of hazardous reactions</b>	No dangerous reactions known.

## Section 11 – Toxicological Information

<b>Acute Toxicity:</b>	<b>Phenyl bis (2,4,6-trimethylbenzoyl) phosphine oxide:</b> LD50 Oral-Rat-Male and Female-> 2,000 mg/kg (OECD Test Guideline 401) LD50 transdermal-rat-male and female-> 2,000 mg/kg (OECD Test Guideline 402)
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**Skin irritation:****Phenyl bis (2,4,6-trimethylbenzoyl) phosphine oxide:**

Skin-Rabbit Result: No skin irritation-4 h  
(OECD Test Guideline 404)

**Eye irritation:****(2,4,6-trimethylbenzoyl) diphenylphosphine oxide:**

Skin-Rabbit  
Result: No skin irritation-24 h  
Remarks: (ECHA).

**Phenyl bis (2,4,6-trimethylbenzoyl) phosphine oxide: Eyes-rabbit**

Result: No eye irritation-72 h  
(OECD Test Guideline 405)

**(2,4,6-trimethylbenzoyl) diphenylphosphine oxide: Eyes-rabbit**

Result: No eye irritation  
(Draize Test)

**Sensitization:****Phenyl bis (2,4,6-trimethylbenzoyl) phosphine oxide: Maximum response test-guinea pig**

Result: positive  
(OECD Test Guideline 406)

**Mutagenicity:**

Classification according to EU CLP Regulation 1272/2008,  
Annex 6 (Table 3.1/3.2)

**Phenyl bis (2,4,6-trimethylbenzoyl) phosphine oxide: Test type: Ames test**

Test system: Escherichia coli/Salmonella typhimurium Metabolism  
activation: with or without metabolic activation  
Method: OECD Test Guide 471

Result: negative

Test type: In vitro chromosome aberration test

Test system: human lymphocytes

Metabolism activation: with or without metabolic activation Method: OECD  
Test Guide 473

Result: negative

Test type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolism activation: with or without metabolic activation Method: OECD  
Test Guide 476

Result: negative

**(2,4,6-trimethylbenzoyl) diphenylphosphine oxide: Mutagenicity  
(mammalian cell test): Negative chromosomal variation.**

	Result: negative
	In vitro mammalian cell gene mutation test
	Result: negative
	Ames test
	Escherichia coli/Salmonella typhimurium
	Result: negative
<b>Carcinogenicity:</b>	No known significant effects or critical hazards.
<b>Reproductive Toxicity:</b>	<b>(2,4,6-trimethylbenzoyl) diphenylphosphine oxide:</b>
	Suspected of damaging fertility.
<b>Other information:</b>	No data.

## Section 12 – Ecological Information

<b>Ecotoxicity:</b>	<b>Phenyl bis (2,4,6-trimethylbenzoyl) phosphine oxide:</b> Toxicity to fish Semi-static test LC50-Danio rerio (zebrafish)-> 0.09 mg/l-96 h (OECD Test Guideline 203) Toxicity to water flea and other aquatic invertebrates Static test EC50-Daphnia magna (Water flea)-> 1.17 mg/l-48 h (OECD Test Guideline 202) Toxicity to algae Static test ErC50-Desmodesmus subspicatus (Terella subspicatus)-> 0.26 mg/l- 72 h (OECD Test Guideline 201) Toxicity to bacteria Static test EC50-activated sludge-> 100 mg/l-3 h (OECD Test Guideline 209)
<b>Biodegradable:</b>	<b>Phenyl bis (2,4,6-trimethylbenzoyl) phosphine oxide:</b> Biodegradability Aerobic-exposure time 28 d Result: 1%-non-biodegradable. (OECD Test Guideline 301B).
<b>Bioconcentration or biological accumulation:</b>	<b>Phenyl bis (2,4,6-trimethylbenzoyl) phosphine oxide:</b> Bioaccumulation Cyprinus carpio (carp)-28 d At 24.3 °C (phenyl bis(2,4,6-trimethylbenzoyl)phosphorus oxide) Bioconcentration factor (BCF): <5 (OECD Test Guideline 305) No data. No data.
<b>Mobility in soil:</b>	
<b>Other harmful effects:</b>	

**Section 13 – Disposal Considerations**

<b>UN Number:</b> ADR, IMDG, IATA	Not regulated as dangerous goods.
<b>UN proper shipping name:</b> ADR, IMDG, IATA	Not regulated as dangerous goods.
<b>Transport hazard class(es):</b> ADR, IMDG, IATA	Not regulated as dangerous goods
<b>Packing group</b> ADR, IMDG, IATA	Not regulated as dangerous goods
<b>Secondary risk:</b>	Not regulated as dangerous goods
<b>Environmental hazard:</b>	No information
<b>Transportation Notes:</b>	No information.

**Section 14 – Transport Information**

<b>UN Number:</b> ADR, IMDG, IATA	Not regulated as dangerous goods.
<b>UN proper shipping name:</b> ADR, IMDG, IATA	Not regulated as dangerous goods.
<b>Transport hazard class(es):</b> ADR, IMDG, IATA	Not regulated as dangerous goods.
<b>Packing group</b> ADR, IMDG, IATA	Not regulated as dangerous goods.
<b>Secondary risk:</b>	Not regulated as dangerous goods.
<b>Environmental hazard:</b>	No information.
<b>Transportation Notes:</b>	No information.

**Section 15 – Regulatory Information**

**GHS Labelling Elements:** Classification and labelling are carried out according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).regulations.

**Chemical safety assessment**

For this mixture, no chemical safety assessment has been carried out.



**Section 16 – Additional Information**

MSDS Creation Date: **11<sup>th</sup> August 2021**

This MSDS was prepared sincerely on the basis of the information we could obtain, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. Products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

**END OF REPORT**