Section 1 – Chemical Product and Company Identification

Product name:	DCA PLUS
Manufacturer:	LuxCreo, Inc.
Address:	350 W. Ontario Street, Suite 700, Chicago, IL ,USA, 60654
Tel:	+1 650 336 0888
Email:	info@luxcreo.com
Emergency contact:	
Tel:	+1 650 336 0888
Email:	info@luxcreo.com

Section 2 – Hazards Identification

GHS Classification of the substance or mixture

Physical hazards:	Not classified.
Skin corrosion/irritation:	Category 2
Eye damage/irritation:	Category 2A
Skin sensitisation:	Category 1
Environmental hazardstoxicity:	Hazardous to the aquatic environment.
Acute hazard:	Category 3
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.

Response:	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 methacrylate A	/	10~60%
Polyurethane methacrylate B	/	5~30%
Isobornyl methacrylate	7534-94-3	10-50%
Antioxidant 1010	6683-19-8	<5%
Photoinitiator TMO	270586-78-2	<5%

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:	Check for and remove contact lenses. Wash thoroughly for several minutes using copious water. Seek medical help if necessary.
Inhalation:	If inhaled, immediately remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.
Ingestion:	Rinse the mouth thoroughly with water. Give copious water to drink - consult doctor immediately.

Section 5 – Fire Fighting Measures

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

Section 6 – Accidental Release Measures

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

Personal precautions, protective equipment and emergency procedures:	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.
Environmental precautions:	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.
Methods and materials for containment and cleaning up:	Soak 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

Handling:	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.
Storage:	Keep container tightly closed in a dry and well-ventilated place. Store away from incompatible materials.

Section 8 – Exposure Controls and Personal Protection

Occupational exposure limits (OEL):	No information.
Monitor method:	No information.
Engineering control:	Exhaust ventilation is required. Safety shower and eye bath equipment.

Personal protective equipment

Respiratory protection:	Respiratory protection equipment is not required under normal conditions of use or for small scale/lab use but ensure good ventilation. Respiratory protection equipment is required for large scale use or 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.
Eyes protection:	Safety glasses with side shields (EU standard-EN166).
Body protection:	Wear compatible protective clothing.
Hands protection:	Protective gloves, natural rubber (EN 374).
Other protections:	Wash hands with soap and clean water after handling. 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

Appearance:	
Physical state:	**Liquid.**
Form:	**Liquid.**
Color:	**Transparent.**
Odor:	**No obvious smell.**
Odor threshold:	**Not available.**
pH:	**Not available.**
Vapor pressure:	**Not available.**
Melting point/Freezing point:	**Not available.**

Initial boiling point and boiling range:	Not available.
Flash point:	Not available.
Evaporation rate:	Not available.
Flammability (solid, gas):	Not available.
Explosion limits:	Not available.
Vapor density:	Not available.
Relative density (water =1):	0.95-1.15 g/cm^3 (25.0 °C)
Solubility (water):	Not available.
Partition coefficient:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Specific gravity:	Not available.
Flammability limits in air, upper, %by volume:	Not available.
Flammability limits in air, lower, %by volume:	Not available.
VOC:	Not available.
Percent volatile:	Not available.
Other data:	
Viscosity:	2000-3000 cps (40.0 °C)

Section 10 – Stability and Reactivity

Stability:	Material is stable under normal conditions.
Distribution of ban:	Incompatible materials. Strong heat.
Conditions to avoid:	Avoid contact with oxidizing agents, strong alkalis and strong acids.
Hazardous decomposition products:	Oxides of carbon and other toxic fumes.
Hazardous polymerization:	No dangerous reactions known.

Section 11 – Toxicological Information

Polyurethane methacrylate A

Acute toxicity:	No data available.
Skin irritation:	No data available.
Eye irritation:	No data available.
Mutagenicity:	No data available.
Carcinogenicity:	No data available.
Reproductive toxicity:	No data available.

Polyurethane methacrylate B

Acute toxicity:	
Ingestion:	Slightly or not harmful by ingestion
Dermal:	Slightly or not harmful in contact with skin
Skin irritation:	Not irritating to skin In animals： No skin irritation (OECD Test Guideline 404, Rabbit)
Eye irritation:	Not irritating to the eyes. No eye irritation (OECD Test Guideline 405, Rabbit)
Mutagenicity:	Based on the available information, it is not possible to conclude on the hazard potential of this product.
Carcinogenicity:	No data available.
Reproductive toxicity:	Based on the available data, the substance is not suspected of having reprotoxic potential.

Isobornyl methacrylate

Acute toxicity:	
Ingestion:	May be harmful if swallowed.
Dermal:	May be harmful in contact with skin.
Skin irritation:	According to available experimental data: Causes mild skin irritation Mild skin irritation (OECD Test Guideline 404)
Eye irritation:	No eye irritation ((Results obtained on a similar product).) (Draize Test)
Mutagenicity:	Results from tests do not lead to considering the product as genotoxic
Carcinogenicity:	No data available.
Reproductive toxicity:	Based on the available data, the substance is not suspected of having reprotoxic potential.
Fertility:	Absence of toxic effects on fertility
In animals :	NOAEL (Parental toxicity): 25 mg/kg bw/day NOAEL (Fertility): 500 mg/kg bw/day (Method: OECD Test Guideline 421, Rat, By oral route)
Foetal development:	No data available.

Antioxidant 1010

Acute toxicity:	LD50rat (oral): > 5,000 mg/kg (OECD Guideline 423)
Acute inhalation toxicity:	LC50 rat (by inhalation): > 1.95 mg/l 4 h (similar to OECD guideline 403)
Acute dermal toxicity:	No mortality was observed. An aerosol was tested. LD50 rat (dermal): > 3,160 mg/kg (other)
Skin irritation:	
Eye irritation:	Not irritating
Mutagenicity:	Not irritating No mutagenic effect was found in various tests with bacteria and mammals.
Carcinogenicity:	In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.
Reproductive toxicity:	The results of animal studies gave no indication of a fertility impairing effect

Photoinitiator TMO

Acute toxicity:	LD50rat (oral): > 2,120 mg/kg (OECD Guideline 423)
Skin irritation:	No data available.
Eye irritation:	Not irritating
Mutagenicity:	No data available.
Carcinogenicity:	No data available.
Reproductive toxicity:	No data available.

Section 12 – Ecological Information

Polyurethane methacrylate A

Ecotoxicology Assessment:	No data available.
Toxicity :	No data available.
Fish:	
Aquatic invertebrates:	No data available.
Aquatic plants:	No data available.
Persistence and degradability Biodegradation (In water):	No data available.
Mobility in soil:	No data available.

Polyurethane methacrylate B

Ecotoxicology Assessment:	All available and relevant data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment. Acute aquatic toxicity : Harmful to aquatic life. Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.
Toxicity : **Fish:**	Harmful to fish. LC50, 96 h (Danio rerio (zebra fish)) : 10,1 mg/l (Method: OECD Test Guideline 203)
Aquatic invertebrates:	No effect up to the limit of solubility. EC50, 48 h (Daphnia magna (Water flea)) : > 1,2 mg/l (Method: OECD Test Guideline 202) No effect up to the limit of solubility
Aquatic plants:	No effect up to the limit of solubility. ErC50, 72 h (Desmodesmus subspicatus (Scenedesmus subspicatus)) : > 0,68 mg/l (Method: OECD Test Guideline 201) No effect up to the limit of solubility
Persistence and degradability Biodegradation (In water):	Not readily biodegradable. Not readily biodegradable.: 22 % after 28 d (Method: OECD Test Guideline 301 B)
Mobility in soil:	Vapor pressure:0,0000262 Pa, 25 °C, (Method: OECD Test Guideline 104) Surface tension:52,09 mN/m 20 °C /10,161 mg/l (Method: OECD Test Guideline 115)

Isobornyl methacrylate

Ecotoxicology Assessment:	All available and relevant data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment. Acute aquatic toxicity : Toxic to aquatic life. Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects
Toxicity :	Toxic to fish.
Fish:	LC50, 96 h (Danio rerio (zebra fish)) : 1,79 mg/l (Method: OECD Test Guideline 203)
Aquatic invertebrates:	No effect up to the limit of solubility EC50, 48 h (Daphnia magna (Water flea)) (Method: OECD Test Guideline 202) No effect up to the limit of solubility
Aquatic plants:	Toxic to algae. ErC, 72 h (Pseudokirchneriella subcapitata (microalgae)) : 2,28 mg/l (Method: OECD Test Guideline 201)
Persistence and degradability Biodegradation (In water):	Readily biodegradable. Readily biodegradable: 70 % after 28 d (Method: OECD Test Guideline 310)
Mobility in soil:	log Koc: 3,71 (Method: OECD Test Guideline 121)
Other harmful effects:	No data.

Antioxidant 1010

Ecotoxicology Assessment:

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition

of the degradation activity of activated sludge is not anticipated when introduced to biological

treatment plants in appropriate low concentrations.

No toxic effects occur within the range of solubility.

Toxicity :

Fish:

LC50 (96 h) > 100 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 92/69/EEC, C.1, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has

been tested. Limit concentration test only (LIMIT test). The details of the toxic effect relate to the

nominal concentration. No toxic effects occur within the range of solubility.

Aquatic invertebrates:

EC50(24 h) > 86 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has

been tested. The statement of the toxic effect relates to the analytically determined concentration. No

toxic effects occur within the range of solubility.

Aquatic plants:

EC50(72 h) > 100 mg/l (growth rate), Scenedesmus subspicatus (Directive 88/302/EEC, part C, p.

89, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has

been tested. The details of the toxic effect relate to the nominal concentration. No toxic effects occur

within the range of solubility.

Persistence and degradability
Biodegradation (In water):

Assessment of stability in water:

In contact with water the substance will hydrolyse slowly.

The product has not been tested. The statement has been derived from the structure of the product.

Mobility in soil:

No data available.

Other harmful effects:

No data.

Photoinitiator TMO

Ecotoxicology Assessment:	No data available.
Toxicity :	No data available.
Fish:	No data available.
Aquatic invertebrates:	No data available.
Aquatic plants:	No data available.
Persistence and degradability Biodegradation (In water):	No data available.
Mobility in soil:	No data available.

Section 13 – Disposal Considerations

Waste treatment methods:	Please refer to the requirements of relevant laws and regulations of your country or region before disposal.
Packaging:	Please refer to the requirements of relevant laws and regulations of your country or region before disposal.

Section 14 – Transport Information

UN number:	Not regulated as dangerous goods.
ADR, IMDG, IATA	
UN proper shipping name:	Not regulated as dangerous goods.
ADR, IMDG, IATA	
Transport hazard class (es):	Not regulated as dangerous goods.
ADR, IMDG, IATA	
Packing group:	Not regulated as dangerous goods.
ADR, IMDG, IATA	
Secondary risk:	Not regulated as dangerous goods.
Environmental hazard:	No information.
Transportation notes:	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: **18th January 2025**

To the best our knowledge, the information contained herein is accurate and complete as of the date issued. End-use material performance may be impacted by, but not limited to, part design, processing and operating conditions, color treatment, test conditions, etc. As LuxCreo cannot control or anticipate the conditions under which the materials may be used, users shall review the information in specific context of the planned use. To the maximum extent permitted by law, LuxCreo will not be responsible for damages of any nature resulting from the use or reliance upon the information specified in this document. No express or implied warranties are given other than those implies mandatory by law. Users are responsible for determining that LuxCreo materials are safe, lawful, and technically suitable for the intended use, as well as for identifying the proper disposal or recycling methods consistent with applicable environmental laws and regulations. Unless otherwise expressly indicated in writing, LuxCreo's products and data sheets relating thereto are subject to change without notice. Users should check for and obtain the latest relevant information and verify that such information is current and complete before placing orders.