

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL NAME: N/A
PRODUCT NAME: Deluxe Acrylic Monomer
TRADE NAME/PRODUCT CODE: N/A
PRODUCT USE: Liquid

MANUFACTURER: CHRISTRIO CORP.
MANUFACTURER ADDRESS: 13955 Sycamore Way. Chino, CA 91710
EU ADDRESS: 167-171 Willoughby Lane, Tottenham, London N17 0SB; UK

24 HR. EMERGENCY TELEPHONE: 1(800) 535-5053/ International: 1-352-323-3500
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SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: **Flammable liquid and vapor**
Aspiration hazard if swallowed
Can enter lungs and cause damage
May cause eye, skin or respiratory tract irritation
Dangerous for the environment

Routes of Exposure: Vapors inhalation, skin and eyes contact

Physical Hazards: See section 11 for more information.

Acute Health Hazards: See section 11 for more information.

Eyes: Exposure causes eye irritation. Symptoms include stinging, tearing, redness, blurred vision, and swelling.

Skin: Can cause skin irritation. Prolonged or repeated contact may dry skin. Symptoms include redness, burning, drying, cracking, and skin burns.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness, and coma. Causes respiratory tract irritation. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation.

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Aspiration of material into lungs may cause chemical pneumonitis which may be fatal. May cause agitation, delirium, convulsions and muscle spasms.

Conditions Aggravated by Exposure: Prolonged or repeated skin contact may cause dermatitis. Effects may be delayed. Chronic exposure may cause thyroid damage with thyroid enlargement, a decrease in metabolic rate, the symptoms of hypothyroidism and reduction in the protein-bound fraction of the serum iodine and in the thyroxin content of the thyroid gland. May cause skin rashes, occasionally an exfoliated dermatitis occurs and may prove fatal.

Chronic Health Hazards: See section 11 for details.

Carcinogenicity: See section 11 for details.

Potential Environmental: See section 12 for details.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS#	EINECS#	R Phrases	%
01	Ethyl Methacrylate	97-63-2	202-597-5	R43	75
02	HEMA	868-77-9	212-782-2	R43	5-10
03	Triethylene Glycol Dimethacrylate	109-16-0	203-652-6	N/A	5-10
04	Dimethyltolylamine	99-97-8	202-805-4	R33, R52-53	1-3
05	2-(2-hydroxy-3,5-di(tert)-amylphenyl)	25973-55-1	247-384-8	N/A	1
06	Benzophenone-12	1843-05-6	217-421-2	N/A	0.5
07	CI 60725 / Violet 2	81-48-1	201-353-5	N/A	0.5

*see section 16 for Risk Phrase Key

SECTION 4: FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:

EYES:	If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently for 15 minutes with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.
SKIN:	Wash exposed area with mild soap and warm water for 15 minutes. If symptoms persist, seek medical attention.
INHALATION:	Remove to fresh air. If breathing is difficult, administer oxygen. If symptoms persist, seek medical attention.
INGESTION:	Rinse mouth do NOT induce vomiting. Possible aspiration hazard. Get medical attention immediately.
CLOTHING:	Remove contaminated clothing, wash thoroughly before reuse.
TREATMENT:	Treat symptoms conventionally, after thorough decontamination.
NOTE TO PHYSICIANS:	None available.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	Refer to Section 9 for details.
SUITABLE EXTINGUISHING MEDIA:	Foam, dry powder, cold water spray, carbon dioxide, foam.
UNSUITABLE EXTINGUISHING MEDIA:	Water may not be effective in extinguishing this fire.
PRODUCTS OF COMBUSTION:	Mixture
FIRE AND EXPLOSION HAZARDS:	When exposed to heat and/or flame, material is a fire explosion hazard. It may produce toxic products CO, Carbon Dioxide, and oxides of nitrogen.
SPECIAL FIRE FIGHTING PROCEDURES:	Cool fire exposed containers with water, remove away from building. Use self-contained breathing apparatus to fight fire.
SENSITIVE TO MECHANICAL IMPACT:	No
SENSITIVE TO STATIC DISCHARGE:	No

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	Review Section 5 before proceeding with clean-up. Remove sources of ignition and ventilate area. Use a respirator and other protective equipment as outlined in Section 8. Eliminate all sources of heat and ignition. Use absorbent material for spills and dike it, wash spilled material into retaining containers. Place containers in well ventilated areas.
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ENVIRONMENTAL PRECAUTIONS: Keep spills and cleaning runoffs out of municipal sewers and open bodies of water. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

METHODS FOR CONTAINMENT: Dike and contain spill with inert, non-combustible material (e.g. sand or earth).

METHODS FOR CLEAN-UP: Eliminate all sources of heat and ignition. Use absorbent material for spills and dike it, wash spilled material into retaining containers. Place containers in well-ventilated area. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with inert materials (e.g. vermiculite, dry sand, earth) and place in a chemical waste container. Do not use combustible materials such as sawdust.

SECTION 7: HANDLING AND STORAGE

HANDLING PROCEDURES: Wash thoroughly after handling. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin and clothing. Empty containers retain product residue and can be dangerous. Keep containers tightly closed. Avoid contact with heat, sparks and flames. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat sparks or open flame. Use only with adequate ventilation. Avoid breathing vapor.

STORAGE PROCEDURES: Store in well-ventilated area. Store @70 + 15°F, allow some air space above liquid level. Keep containers closed while not in use.

EXPLOSION HAZARD: Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even residue) can ignite explosively.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ITEM*	ACGIH		OSHA	
	TLV-TWA	TLV-STEL	PEL TWA	PEL CEILING
Ethyl Methacrylate	N/E	N/E	N/E	N/E
HEMA	N/E	N/E	N/E	N/E
Triethylene Glycol Dimethacrylate	N/E	N/E	N/E	N/E
Dimethyltolylamine	N/E	N/E	N/E	N/E
2-(2-hydroxy-3,5-di(tert)-amylphenyl)	N/E	N/E	N/E	N/E
Benzophenone-12	N/E	N/E	N/E	N/E
CI 60725 / Violet 2	N/E	N/E	N/E	N/E

- Abbreviations can be found in Section 16

ENGINEERING CONTROLS: Facilities storing or utilizing this material should be equipped with an eye facility and safety shower. Use process enclosures local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

RESPIRATORY PROTECTION: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by nuisance level organic vapor dust masks can be used; however the use of the respirator is limited. Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

EYE/FACE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other types of safety glasses.

HAND/SKIN PROTECTION: Wear resistant gloves. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

GENERAL HYGIENE CONSIDERATIONS: To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132), or European Standard EN166 be conducted before using this product. Provide eye wash stations and safety showers. Wear impervious clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/COLOR: Blue
PHYSICAL STATE: Liquid
ODOR: Acrylic/ Characteristic
ODOR THRESHOLD: N/A
pH: N/A
FREEZING POINT: N/A
BOILING POINT: 370.4°F(118°C)
FLASH POINT (closed cup): TCC 59.9°F (15.5°C)
EVAPORATION RATE (BuAc =1): N/A
FLAMMABLE LIMIT, AIR VOL%
 LOWER: 1.8%
 UPPER: N/E
VAPOR PRESSURE: @20°C 15
VAPOR DENSITY (AIR=1): N/D
RELATIVE DENSITY: N/D
SPECIFIC GRAVITY (H₂O=1): 0.932
SOLUBILITY IN WATER: Negligible
AUTOIGNITION TEMPERATURE: 770°F (410°C)
DECOMPOSITION TEMPERATURE: N/A
PERCENT VOLATILE W/W%: N/D

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions
CONDITIONS TO AVOID: Heat, flame, and ignition sources.
INCOMPATIBLE MATERIALS: Avoid oxidizing agents, acids & bases (heat).
HAZARDOUS DECOMPOSITION PRODUCTS: According to process conditions, hazardous decomposition products may be generated.
HAZARDOUS POLYMERIZATION: May occur
POSSIBILITY OF HAZARDOUS REACTIONS: May occur

SECTION 11: TOXICOLOGICAL PROPERTIES

TARGET ORGANS: N/A
 For Mixture: N/A
SYMPTOMS: Refer to Section 2 for information.
IMMEDIATE/DELAYED EFFECTS: Refer to Section 2 for information.
TOXICITY DATA: **Acute Oral:** Oral, rat, LD50
Ethyl Methacrylate – 14800
HEMA – 5050
Triethylene Glycol Dimethacrylate – 10837
Acute Inhalation: Mouse: Inhalation, rat: LC50

Ethyl Methacrylate – 8300ppm/ 4 hours

SENSITIZATION: ND/A

IRRITANCY: mild

CHRONIC EXPOSURE:

 Carcinogenicity: ND/A

 Reproductive Toxicity: ND/A

 Teratogenicity: ND/A

 Mutagenicity Data: CAS#: 141-78-6 = Hamster fibroblast 9g/L
sex chromosome Loss/Non-disjunction:
S. Cerevisiae 24400ppm

NAME OF TOXICOLOGICALLY SYNERGISTIC PRODUCTS: ND/A

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY:

 AQUATIC: ND/A

 SOIL: ND/A

 AIR: ND/A

ENVIRONMENTAL FATE:

Persistence and Degradability: ND/A

Biodegradation: The substance is toxic to aquatic organisms. In the food chain important to humans, bioaccumulation takes place, specifically in fish. No other information available.

Bioaccumulative Potential: Not known

Mobility in soil: Not known

Other Adverse effects: None known

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of this material and its container at hazardous or special waste collection point. Dispose in a safe manner in accordance with local/ national regulations.

SECTION 14: TRANSPORT INFORMATION

DOT (GROUND) PROPER SHIPPING NAME: UN1993 Flammable Liquid NOS, (Ethyl Methacrylate), Class 3, PG II

TECHNICAL NAME: N/A

DOT/UN CLASS: Class 3

NA/UN NUMBER: UN1993

PACKING GROUP: PGII

DOT RQ: N/A

MARINE POLLUTANT: No

SPECIAL PROVISIONS: 640D

EMERGENCY RESPONSE N/A

GUIDEBOOK (ERG) #:

IATA (DGR):

PROPER SHIPPING NAME: Non-regulated material

CLASS OR DIVISION: N/A

UN OR ID NUMBER: N/A

PACKAGING INSTRUCTIONS: N/A

EMERGENCY RESPONSE N/A

GUIDEANCE (ICAO)#:

IMO (IMDG):

PROPER SHIPPING NAME: Non-regulated material
CLASS OR DIVISION: N/A
UN OR ID NUMBER: N/A
SPECIAL PROVISION & STORAGE/SEGREGATION: None
EMERGENCY SCHEDULE (EmS)#: N/A
OTHER INFORMATION: FLASHPOINT

SECTION 15: REGULATORY INFORMATION

United States:

Clean Air act
HAP/ODS: This product contains the following Hazardous Air Pollutant (HAP's):
• None

Clean Water Act
Priority Pollutant List: The following ingredients are listed as hazardous pollutants under the CWA:
• None

FDA: Food Packaging
Status: This product has not been cleared by the FDA for use in food packaging and/or other applications and indirect food packaging additive.

OSHA: This product is considered to be hazardous under OSHA Hazard Communication Standard. Its hazards are:
• Immediate (acute) health hazard
• Fire Hazard
• Chronic (delayed) health hazard

RCRA: This product contains the following chemicals considered to be hazardous waste under RCRA (40 CFR 261).
• None

TSCA Inventory Status:
SARA Section 302: The components of this product are listed on the TSCA Inventory.
304 as extremely hazardous chemicals for emergency release notification ("CERCLA" List):
• None

SARA Section 311/312: This product is considered to be hazardous under OSHA Hazard Communication Standard and is regulated under section 311- 312 (40 CFR 370). Its hazards are
• Immediate (acute) health hazard
• Fire hazard
• Chronic (delayed) health hazard

SARA Section 313: This product contains the following chemicals which are 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:
• None

CERCLA Reportable Quantity (RQ): N/A

State Regulatory Information:
California Prop 65: This product may contain components that are covered under specific state criteria. None of the components in this product are listed in California's Prop 65.

State Regulations:

CA Right-to-Know law:

CA No Significant Risk Rule: N/A

Canada: N/A

Europe:

EINECS: Not all of the components of this product are listed in EINECS.
 Candidate List: N/A
 CSR Available: No
HAZARD SYMBOLS: **Xi: Irritant, F: Highly Flammable,**



RISK STATEMENTS:

R11: highly flammable.
 R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
 R33: Danger of cumulative effects.
 R36/37/38: Irritating to eyes, respiratory system, and skin
 R43: May cause sensitization by skin contact

SAFETY STATEMENTS:

S16: keep away from sources of ignition- no smoking
 S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advise.
 S36/37: Wear suitable protective clothing and gloves.
 S51: Use only in well-ventilated areas.

SECTION 16: OTHER INFORMATION

EU RISK PHRASES FOR REFERENCED INGREDIENTS (SEE SECTION 2)

Risk Phrases:

R11: Highly Flammable; R33: Danger of cumulative, R36/38: Irritating to eyes & skin; R43: May cause sensitization by skin contact;

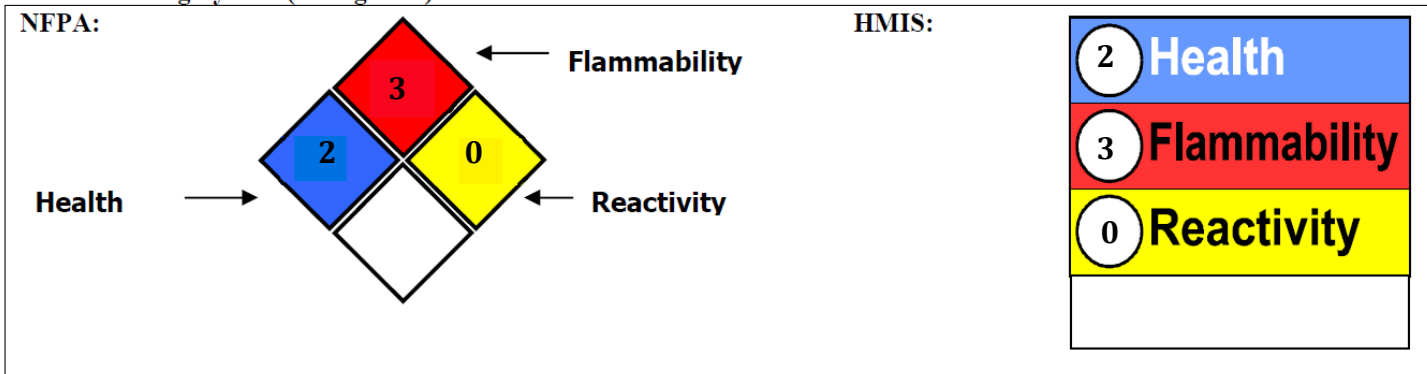
HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) RATING:

HEALTH: 2
 FLAMMABILITY: 3
 REACTIVITY: 0
 PERSONAL PROTECTIVE EQUIPMENT: Gloves and Safety Glasses or Chemical Splash Goggles.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD IDENTIFICATION RATING:

HEALTH: 2
 FLAMMABILITY: 3
 REACTIVITY: 0
 SPECIAL INFORMATION: N/A

Hazard Rating System (Pictograms)



ABBREVIATIONS:

NA Not Applicable
 NE Not Established
 ppm parts per million
 ND Not Determined
 G Gallon

mg	Milligram	L	Liter
gm	Gram	mol	Mole
kg	Kilogram	μ	Micro
mm	Millimeter	p	Pico
Pa	Pascals	c	cento
LC	Lethal Concentration	LD	Lethal Dose
TC	Toxic Concentration	TD	Toxic Dose
BOD	Biological Oxygen Demand	COD	Chemical Oxygen Demand
Lo	Lowest	ThOD	Theoretical Oxygen Demand
TLm	Threshold Limit	IC	Inhibitory Concentration
DOC	Dissolved Organic Carbon		
H	Hours	M	Months
D	Days	Y	Years
W	Weeks		
ACGIH	American Conference of Governmental Industrial Hygienist		
CPR	Controlled Product's Regulation		
CSR	Chemical Safety Report		
DOT	Department of Transportation		
DSL	Canadian Domestic Substances List		
EINECS	European Inventory of Existing Commercial Chemical Substances		
IARC	International Agency for Research for Cancer		
NDSL	Canadian Non-Domestic Substance List		
NOEL	No Observed Effect Level		
NOAEL	No Observed Adverse Effect Level		
OSHA	Occupational Safety and Health Administration		
PEL	Permissible Exposure Limit		
TLV	Threshold Limit Value		
TSCA	Toxic Substances Control Act		
WHMIS	Workplace Hazardous Materials Information System		

Update Composition:	Apr. 7 th , 2013	Format update
	Dec. 19 th , 2013	Added Hazard Rating System Pictogram
	Jan. 17 th , 2014	Standard review

THIS MATERIAL SAFETY DATA SHEET IS PREPARED IN COMPLIANCE WITH FEDERAL REGULATIONS (29 CFR 1910.1200), THE COMMONWEALTH OF CALIFORNIA REGULATIONS (TITLE 34, CHAPTERS 301-323) AND CANADIAN WHMIS REGULATIONS, ANY APPLICABLE STATE AND LOCAL REGULATIONS SHOULD BE CONSULTED. THE ABOVE INFORMATION MAY BE BASED IN PART ON INFORMATION PROVIDED BY COMPONENT SUPPLIERS AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY USE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OF THESE DATA, THE RESULTS TO BE OBTAINED FROM THE USE OF THE MATERIAL, OR THE HAZARDS CONNECTED WITH SUCH USE. SINCE THE INFORMATION CONTAINED HEREIN MAY BE APPLIED UNDER CONDITIONS BEYOND OUR CONTROL AND WITH WHICH WE MAY BE UNFAMILIAR, AND SINCE DATA MADE AVAILABLE SUBSEQUENT TO THE DATE HEREOF MAY SUGGEST MODIFICATION OF THE INFORMATION, WE ASSUME NO RESPONSIBILITY FOR THE RESULT OF ITS USE. THIS INFORMATION AND MATERIAL IS FURNISHED ON THE CONDITION THAT THE PERSON RECEIVING IT SHALL MAKE HIS/HER OWN DETERMINATION AS TO THE SUITABILITY OF THE MATERIAL FOR HIS/HER PARTICULAR PURPOSE AND ON THE CONDITION THAT HE/SHE ASSUME THE RISK OF HIS/HER USE THEREOF. IF THERE ARE ANY PROBLEMS OR CONCERNS UNDERSTANDING THIS MSDS FORM, PLEASE DIRECT ALL QUESTIONS TO INFOTRAC, CHEMICAL EMERGENCY RESOURCES SYSTEM AT 1 (800) 535-5053.