

3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)									OTHER
					ACGIH		NOHSC			OSHA				
					ppm		ppm			ppm				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
Bis-HEA Poly(1,4-butanediol)-9 / IPDI Copolymer	NA	NA	NA	20-60	NA	NA	NA	NF	NF	NF	NA	NA	NE	
Bis-HEMA Polyneopentyl Glycol Adipate/ IPDI Copolymer	82339-16-0	NA	NA	20-60	NA	NA	NF	NF	NF	NA	NA	NA		
Trimethylpropane trimethacrylate	3290-92-4	NA	NA	5-20	NA	NA	NF	NF	NF	NA	NA	NA		
Tripropyleneglycol diacrylate	42978-66-5	NA	NA	5-20	NA	NA	NF	NF	NF	NA	NA	NA		
1-Hydroxycyclohexyl phenyl ketone	947-19-3	NA	213-426-9	0.1 - 5	NA	NA	NF	NF	NF	NA	NA	NA		
Trimethylbenzoyl Diphenylphosphine Oxide	75980-60-8	NA	278-355-8	≤1.0	NA	NA	NF	NF	NF	NA	NA	NA		
Skin Sens. 1; Aquatic Chronic 4; H317, H413														
MAY ALSO CONTAIN:														
CI 77891 (Titanium Dioxide)	13463-67-7	XR2275000	236-675-5	≤1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 15850 (Red 6)	17852-98-1	NA	241-806-4	≤0.1	NA	NA	NF	NF	NF	NA	NA	NA		
CI 47005 (Yellow 10))	8004-92-0	NA	NA	≤0.1	NA	NA	NF	NF	NF	NA	NA	NA		
	21645-51-2													
CI 77491 (Iron Oxides)	1309-37-1	NO7420000	215-168-2	≤0.1	NA	NA	NF	NF	NF	NA	NA	NA		
CI77499 (Iron Oxides)	12227-89-3	NA	215-277-5	≤0.1	NA	NA	NF	NF	NF	NA	NA	NA		

** Due to trade secret information, more detailed concentrations of the ingredients cannot be provided.

4. FIRST AID MEASURES

4.1	<p>First Aid:</p> <p>INGESTION: If ingested, do not induce vomiting! If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.</p> <p>SKIN & EYES: If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. Open and close eyelid(s) to ensure thorough irrigation. Seek immediate medical attention. If problem persists, seek immediate medical attention. If irritation occurs & product is on the skin, rinse thoroughly with lukewarm water followed by a thorough washing of the affected area with plenty of soap and water. Remove all contaminated clothing including footwear and wash thoroughly before reuse. If irritation, redness or swelling persists, consult a physician immediately.</p> <p>INHALATION: Remove victim to fresh air at once. If breathing stops, perform artificial respiration. Seek immediate medical attention.</p>										
4.2	<p>Medical Conditions Aggravated by Exposure:</p> <p>Pre-existing dermatitis, other skin conditions and disorders of the target organs (eyes, skin)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #0000FF; color: white;">HEALTH</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="background-color: #FF0000; color: white;">FLAMMABILITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #FFFF00; color: black;">PHYSICAL HAZARDS</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #000000; color: white;">PROTECTIVE EQUIPMENT</td> <td style="text-align: center;">B</td> </tr> <tr> <td colspan="2">EYES SKIN</td> </tr> </table>	HEALTH	1	FLAMMABILITY	0	PHYSICAL HAZARDS	0	PROTECTIVE EQUIPMENT	B	EYES SKIN	
HEALTH	1										
FLAMMABILITY	0										
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5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method: > 100 °C (> 212 °F)
5.2	Autoignition Temperature: NA
5.3	Flammability Limits: Lower Explosive Limit (LEL): NA Upper Explosive Limit (UEL): NA
5.4	Fire & Explosion Hazards: When involved in a fire, this product may ignite and decompose to form toxic gases (e.g., CO, CO2 and Nox)
5.5	Extinguishing Methods: Water, Foam, CO2, Dry Chemical
5.6	Fire Fighting Procedures: First responders should wear eye protection. Structural fire fighters must wear full protective equipment and MSHA/NIOSH approved, self-contained breathing apparatus. If possible, prevent runoff water from entering storm drains, bodies of water or other environmentally sensitive areas. If necessary, rinse contaminated equipment with soapy water before returning to service.



6. ACCIDENTAL RELEASE MEASURES

6.1	Spills: Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. For small spills (e.g., 1 gallon [3.785 liters]) wear appropriate personal protective equipment (e.g., goggles & gloves). Maximize ventilation (open doors and windows). Expose spilled material to UV light source for 2-5 minutes. Lift cured material from substrate and repeat until very little residue remains. Remove remaining spilled material with absorbent material and place into appropriate closed container(s). Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with warm, soapy water. Remove any contaminated clothing and wash before reuse. For large spills (e.g., > 1 gallon [3.785 liters]) deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Expose spilled material to UV light source for 2-5 minutes. Lift cured material from substrate and repeat until very little residue remains. Remove remaining spilled material with absorbent material and place into appropriate closed container(s). Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with warm, soapy water. Remove any contaminated clothing and wash before reuse. Keep spills and cleaning runoffs out of
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7. HANDLING AND STORAGE INFORMATION

7.1	Work & Hygiene Practices: Avoid prolonged contact with this material. Avoid breathing the vapors generated by this product. Use in a well ventilated location (e.g., local exhaust ventilation, fans). Wash exposed skin thoroughly with plenty of soap and water after using this product. If necessary, use a moisturizer after washing. Do not eat, drink or smoke while handling this product.
7.2	Storage & Handling: Use and store in a cool, dry, well ventilated location. Keep away from excessive heat. Keep away from incompatible materials listed in Section 10. Do not store in damaged or unmarked containers or storage devices. Keep containers securely closed when not in use. Open slowly on a level, stable surface. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. As a precaution against exposure to the eyes, nose, throat and face, this product should not be stored higher than waist level. KEEP AWAY FROM CHILDREN AT ALL TIMES!
7.3	Special Precautions: Do not store where temperatures can exceed 50 °C (122 °F).

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Ventilation & Engineering Controls:	Use with adequate ventilation (e.g., local exhaust ventilation, fans). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye wash station).	
8.2	Respiratory Protection:	No special respiratory protection is required under typical circumstances of use or handling. In instances where vapors or sprays of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR § 1910.134, application U.S. State regulations or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC Member States or Australia.	
8.3	Eye Protection:	Wear protective eyewear (e.g., safety glasses with side shields) at all times when handling this product. Always use protective eyewear when cleaning spills or leaks. Contact lenses pose a special hazard: soft lenses may absorb and concentrate irritants.	
8.4	Hand Protection:	None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., >1 gallon [3.785 liters]), wear nitrile or impervious gloves.	
8.5	Body Protection:	No apron required when handling small quantities. When handling large quantities (e.g., . 1 gallon), eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product, wash any exposed areas thoroughly with soap and water.	

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	1.1
9.2	Boiling Point:	NA
9.3	Melting Point:	ND
9.4	Evaporation Rate:	NA
9.5	Vapor Pressure:	ND
9.6	Molecular Weight:	NE
9.7	Appearance & Color:	Clear or pigmented liquid
9.8	Odor Threshold:	NE
9.9	Solubility:	Not soluble
9.1	pH:	NA
9.1	Viscosity:	approximately 65,000 cps
9.1	Other Information:	NA

10. STABILITY & REACTIVITY

10	Stability:	Relatively stable under ambient conditions when stored properly.
10	Hazardous Decomposition Products:	If exposed to extremely high temperatures, products of thermal decomposition may include irritating vapors and toxic gases (e.g., oxides of carbon and nitrogen).
10	Hazardous Polymerization:	Will not occur.
10	Conditions to Avoid:	Exposure or contact to extreme temperatures, incompatible chemicals, strong light sources, sparks and flame.
11	Incompatible Substances:	Strong oxidizers, peroxides, strong acids or alkalis.

11. TOXICOLOGICAL INFORMATION

11	Toxicity Data: This product has NOT been tested on animals to obtain toxicology data. There are toxicology data for the components of the product which are found in scientific literature. These data have not been presented in this document.
11	Acute Toxicity: See Section 2.5
11	Chronic Toxicity: See Section 2.6
11	Suspected Carcinogen: The ingredients of this product are not listed as carcinogens by the National Toxicology Program and have not been evaluated by the International Agency for Research on Cancer or the American Conference of Government Industrial Hygienists.
12	Reproductive Toxicity: This product is not reported to cause reproductive toxicity in humans.
	Mutagenicity: This product is not reported to produce mutagenic effects in humans.
	Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.
	Teratogenicity: This product is not reported to cause teratogenic effects in humans.
12	Irritancy of Product: See Section 2.3
12	Biological Exposure Indices: NE
12	Physician Recommendations: Treat symptomatically

12. ECOLOGICAL INFORMATION

12	Environmental Stability: This product will slowly volatilize from soil. Components of this product will slowly decompose into organic compounds.
12	Effects on Plants & Animals: There is no specific data available for this product on plant life.
12	Effects on Aquatic Life: There is no specific data available for this product on aquatic life.



13. DISPOSAL CONSIDERATIONS

13	Waste Disposal: Dispose in accordance with local, state and Federal waste laws.
13	Special Considerations: This material becomes an inert plastic upon prolonged exposure to sources of UV light and sunlight. Disposal of inert plastics is safer for the environment and is more easily handled for disposal according to local, state and Federal regulations.



14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG, SCT, ADR and the CTDGR.	
14	49 CFR (GRD): NOT REGULATED
14	IATA (AIR): NOT REGULATED
14	IMDG (OCN): NOT REGULATED
14	TDGR (Canadian GND): NOT REGULATED
15	ADR/RID (EU): NOT REGULATED
15	MEXICO (SCT): NOT REGULATED
15	ADGR (AUS): NOT REGULATED

15. REGULATORY INFORMATION

15	SARA Reporting: NA	
15	SARA Threshold Planning Quantity: NA	
15	TSCA Inventory Status: All components of this product are listed in the TSCA Inventory or are exempt	
15	CERCLA Reportable Quantity (RQ): NA	
16	Other Federal Requirements: This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics).	
16	Other Canadian Regulations: This product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are on the Priorities Substances List.	
16	State Regulatory Information: Ingredients in this mixture are found on the following state criteria lists: <u>Titanium Dioxide</u> is listed on the following state criteria list(s): Massachusetts Hazardous Substances List (MA), Minnesota Hazardous Substances List (MN), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposure List (WA). <u>Benzophenone</u> is listed on the following state criteria list(s): MN. No other ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposure List (WA), Wisconsin Hazardous Substances List (WI).	
16	67/548/EEC (European Union), Australian NOHSC:2011 (2003), and GHS Requirements: The primary components of this product are not listed in Annex 1 of EU Directive 67/548/EEC. Irritant (Xi). Risk Phrases (R): 36/37/38 - Irritating to eyes, respiratory system and skin. Safety Phrases (S): 2-23-29 - Keep out of reach of Children. Do not breath gas, fumes, vapor or spray. Do not empty into drains.	

16. OTHER INFORMATION

16	Other Information: WARNING! MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES EYE IRRITATION. Avoid breathing fume, gas, mist, vapors, spray. Wear protective gloves and eye/face protection. IF ON SKIN - Wash with soap and water. IF IN EYES - Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. If skin irritation or a rash occurs - get medical advice/attention. Do not take internally. Keep away from heat and open flame. KEEP OUT OF THE REACH OF CHILDREN.	
16	Terms & Definitions: Please see last page of this SDS.	
16	Disclaimer: This Safety Data Sheet (SDS) is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of McConnell Labs' knowledge, the information contained herein is reliable and accurate as of the date it was prepared; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.	
16	Prepared for: McConnell Labs, Inc. 406 SW Umatilla Ave Redmond, OR 97756 USA Tel: +1 541 526 1417 Fax: +1 541 526 1418 http://www.lighttelescope.com	 McConnell Labs
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DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

HAZARD RATINGS:

CAS No.	Chemical Abstract Service Number
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EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

HEALTH
FLAMMABILITY
PHYSICAL HAZARDS
PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Synthetic Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

OTHER STANDARD ABBREVIATIONS:

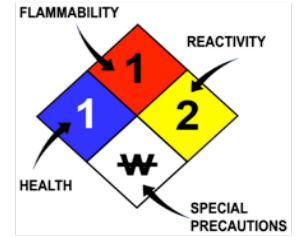
NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:	
Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
W	Use No Water
OX	Oxidizer
TREFOIL	Radioactive



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC ₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD ₁₀	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD ₁₀ , LD ₁₀ , & LD ₅₀ or TC, TC ₀₁ , LC ₁₀ , & LC ₅₀	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL _m	Median threshold limit
log K _{OW} or log K _{OC}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)
WGK	Wassergefährdungsklassen (German Water Hazard Class)

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

EC (67/548/EEC) INFORMATION:

C	E	F	N	O	T	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment