

3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m3)									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	20-50	NE	NE	NE	NE	NE	NE	NE	NE	NE	
Acrylates Copolymer	25133-97-5	NA	NA	10-30	NE	NE	NE	NE	NE	NE	NE	NE	NE	
Isobornyl Methacrylate	7534-94-3	NA	231-403-1	10-30	NE	NE	NE	NE	NF	NE	NE	NE	NE	
Isobutyl Methacrylate	97-86-9	NA	202-613-0	5-25	NE	NE	NE	NE	NF	NE	NE	NE	NE	
Trimethylebenzoyl Diphenylphosphine Oxide	75980-60-8	NA	278-355-8	≤1.0	NA	NA	NF	NF	NF	NA	NA	NA	NA	

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

4. FIRST AID MEASURES

4.1	First Aid:	<p>INGESTION: If ingested, do not induce vomiting! If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient</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)</p> <p>INHALATION: Remove victim to fresh air at once. If breathing stops, perform artificial respiration. Seek immediate medical attention.</p>											
4.2	Medical Conditions Aggravated by Exposure:	Pre-existing dermatitis, other skin conditions and disorders of the target organs (eyes, skin)	<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;">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>EYES SKIN</td> <td></td> </tr> </table>	HEALTH	1	FLAMMABILITY	0	PHYSICAL HAZARDS	0	PROTECTIVE EQUIPMENT	B	EYES SKIN	
HEALTH	1												
FLAMMABILITY	0												
PHYSICAL HAZARDS	0												
PROTECTIVE EQUIPMENT	B												
EYES SKIN													

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	

6. ACCIDENTAL RELEASE MEASURES



6.1	Spills:	<p>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</p>	
-----	---------	--	--

7. HANDLING AND STORAGE INFORMATION

3 of 7

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 protections 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:	< 1 (air=1)
9.6	Appearance & Color:	Clear or pigmented liquid
9.7	Odor Threshold:	NE
9.8	Solubility:	Not soluble
9.9	pH:	NA
9.1	Viscosity:	approximately 4,000 cps
9.1	Flash Point:	26.7 °C (80 °F), calc
9.1	Other Information:	NA

10. STABILITY & REACTIVITY

4 of 7

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 Internail Agency for Research on Cancer or the American Conference of Government Industrial Hygenists.
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 products is not reported to cause teratogenic effects in humans.
12	Irritancy of Product: See Section 2.3
12	Biological Exposure Indicies: NE
12	Physician Recommendations: Treat syptomatically

12. ECOLOGICAL INFORMATION

12	Environmental Stability: This product will slowly volatile from soil. Components of this product will slowly decompose into organic compounds. Butyl Acetate: $K_{OC} = 1.82$. Water Solubility: 120 parts H₂O at 25 °C (77 °F). Bioconcentration Factor = 4-14. Bioconcentration is not anticipated to be significant. This compound can be removed from contaminated environments from volatilization and biodegradation. This compound's half life is 6.1 hours.
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 inaccordance 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

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 products 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/NDL. 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).	
16	67/548/EEC (European Union), Australian NOHSC:2011 (2003), and GHS Requirements: The primary cononents 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

6 of 7

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:
HONA Ltd
13614125, Wednesbury Street
Newport, NP190FG Wales

17 Prepared by:
McConnell Labs, Inc.
406 SW Umatilla Ave
Redmond, OR 97756 USA
Tel: +1 541 526 1417
Fax: +1 541 526 1418



McConnell Labs

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:

CAS No.	Chemical Abstract Service Number
---------	----------------------------------

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.
-----	--

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

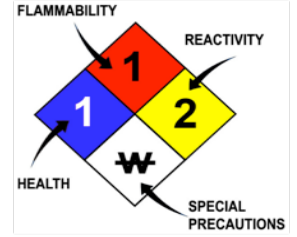
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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 ₀₁	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD ₀₁ , LD ₀₁ , & LD ₀₁ or TC, TC ₀₁ , LC ₀₁ , & LC ₀₁	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 ₀₁	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