

# **SAFETY DATA SHEET**

MCL-PowerBond

Prepared to OSHA, ANSI, NOHSC, WHMIS, 1002/58 & 1272/2008/EC Standards SDS Revision: 4.3 SDS

SDS Revision Date: 04/11/2019

	1. PRODUCT INDENTIFICATION						
1.1	Product Name:						
	LIGHT ELEGANCE PowerBond & P* Base Coat						
1.2	Chemical Name:						
	POLYURETHANE (METH)ACRYLATE PREPOLYMER RESIN BLEND						
1.3	Synonyms:						
	NA Taraha Namana						
1.4	Trade Names: P* Base Coat, PowerBond & Pink PowerBond						
1.5	Product Use:						
1.5	PROFESSIONAL USE ONLY						
1.6	Manufacturer's Name:						
	MCCONNELL LABS, INC.						
1.7	Manufacturer's Adress:						
	406 SW UMATILLA AVE, REDMOND, OR 97756 USA						
1.8	Emergency Phone:						
	CHEMTREC: +1 703 527 3887 / +1 800 424 9300 (CCN 696869)						
1.9	Business Phone / Fax:						
	+1 541 526 1417 / +1 541 526 1418						
	2. HAZARD INDENTIFICATION						
2.1	Hazard Identification:						
	This product is not classified as a HAZARDOUS SUBSTANCE according to the classification criteria of NOHSC: 1008 (2004) and						
	ADG Code (Australia). WARNING! MAY CAUSE AN ALLERGIC SKIN REACTION. AVOID SKIN CONTACT DUE TO SENSITIZING						
	POTENTIAL. CAUSES EYE IRRITATION. Hazard Statements (H): H317 - May cause an allergic skin reaction. H320 - Causes eye						
	irritation. Precautionary Statements (P): P243 - Take precaustionary measures against static discharge. P261 - Avoid						
	breathing fumes/gas/vapors/spray. P272 - Contaiminated work clothing should not be allowed out of the workplace.						
	P280 - Wear protective gloves. P302 + P352 - IF ON SKIN - wash with soap and warm water. P305 + P351 + P338 - IF IN						
	EYES - Rince continually with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing.						
	P333 + P313 - If skin reaction or a rash occurs, get medical attention. P337 + P313 - ilf eye irritation persists, P321 - for						
	specific first aid treatment (see section 4 of this Safety Data Sheet). P363 - Wash contaminated clothing before resuse.						
	P501 - Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF).						
2.2	Routes of Entry: Inhalation: YES Absorption: YES Ingestion: YES						
2.3	Effects of Exposure:						
2.0	INGESTION: If product is swallowed, may cause nausea, vomiting and/or diarrhea and central nervouse system depression.						
	EYES & SKIN: The liquid may produce eye discomfort and is capable of causing temporary impairment of vision and/or transient eye						
	inflamation, ulceration. The vapor is discomforting to the eye. Splashes may cause severe eye irritation, possible corneal						
	burns and eye damage. Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation						
	and watering. May be irritating to the skin, especially after prolonged contact. The product can cause allergic skin reactions						
	le a raches welts dermatitis) unon nrolonged or reneated evisionire						
	INHALATION: Vapors of this product may be moderately irritating to the nose, throat and other tissues of the respiratory system. Symptoms						
	of overexposure can include coughing, wheezing, nasal congestion and difficulty breathing. Inhalation of concentrated vaors						
	can cause central nervous system depression (e.g., drowsiness, headaches, nausea). Odor may give some warning of						
2.4	exposure but odor fatigue may occur.						
2.4	Symptoms of Overexposure:						
	Symptoms of skin overexposure may include redness, itiching and irritation of affected areas. Overexposure in eyes may cause redness, itching and watering. The product can cause allergic skin reactions (e.g., rashes, welts, deratitis) upon prolonged or repeated exposure.						
2.5	Acute Health Effects:						
2.5	Moderate irritation to eyes near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and						
L	nausea.						
2.6	Chronic Health Effects:						
	The material may cause an allergic reaction for some sensitive individuals.						
2.7	Target Organs:						
1	Eyes, skin						

1 of 8

					FXPC	SURFI	IMITS	IN AIR	(mg/m	3)			
						GIH		NOHS		<u> </u>	OSH/	4	
					n	pm		ppm			ppm	1	-
					×		ES-	ES-	ES-				
CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	TLV	STEL	TWA	STEL	PEAK	PEL	STEL	IDLH	OTHER
Bis-HEA Poly (propylene	NA	NA	NA	10-40	NA	NA	NF	NF	NF	NA	NA	NA	
glycol)-53 / IPDI													
Copolymer			-	•					-				
Isopropylideneiphenyl	1565-94-2	NA	216-367-7	5-40	NA	NA	NF	NF	NF	NA	NA	NA	
bisoxyhydroxypropyl													
methacrylate					-	1	1	-	1	1	1	-	
Methacryloyloxyethanol	51978-15-5	NA	NA	5-40	NA	NA	NF	NF	NF	NA	NA	NA	
Maleate	27042 02 4	1	1	5.00	1	1	Lur	Luc	Luc	1	Isia	1	1
Hydroxypropyl Methacrylate	27813-02-1	NA	NA	5-30	NA	NA	NF	NF	NF	NA	NA	NA	
Bis-HEMA Poly(neopenty)	ΝΑ	NA	NA	5-20	NA	NA	NF	NF	NF	NA	NA	NA	
glycol adipate) / IPDI				5-20	INA	INA	INF	INF		INA	ΝA	INA	1
copolymer													
Methacryloyloxyethanol	868-77-9	NA	NA	0-10	NA	NA	NF	NF	NF	NA	NA	NA	
		•											•
Trimethylolpropane	3290-92-4	NA	NA	0-8	NA	NA	NF	NF	NF	NA	NA	NA	
Trimethacrylate		-	-	-	-	-	-	-	-	-	-	-	-
Methacrylic Acid	79-41-4	NA	NA	0-5	NA	NA	NF	NF	NF	NA	NA	NA	
					_	-	-	-	-	-	-		
Ethyl Acetate	141-78-6		205-500-4	0-5	150			200	NF	200	200	) #####	
	Flammable Liqu								1	1	1	1	Г
1-Hydroxycyclohexyl	947-13-3	NA		-	NA	NA	NF	NF	NF	NA	NA	NA	
phenylketone Trimethylbenzoyl	Accute Tox. Ora	NA			NA	NA	NF	NF	NF	NA	NA	NA	
Diphenylphosphine Oxide	75980-60-8	NA	278-355-8	≤1.0	ΝA	ΝA	INF	INF	INF	ΝA	ΝA	NA	
Cl 15850 (Red 6)	17852-98-1	NA	241-806-4	≤0.1	NA	NA	NF	NF	NF	NA	NA	NA	1
	17052 50 1	INA.	241 000 4	20.1	INA	INA				114	INA.	INA	
** Due to trade s	ecret informatio	n. more detaile	d concentratio	ons of the in	gredier	its can	not be	provid	led.				
		.,											
			4. FIRS	T AID N	/IEAS	URE	S						
4.1 First Aid:													
INGESTION:	If ingested, do	not induce voi	niting! If produ	uct has bee	n swall	owed,	drink	plenty	of wat	er or n	nilk IM	MEDIA	TELY. If the patient
	is vomiting, con	tinue to offer	water or milk.	Never give	water	or milk	to an	uncon	scious	perso	n. Coi	ntact th	ne nearest Poison
	<b>Control Center</b>	or local emerg	ency number.	Provide an	n estim	ate of t	the tin	ne at w	hich th	e mat	erial w	as inge	ested and the
				od									
	amount of the s	substance that	was swallow	eu.									
SKIN & EYES:					s of luk	ewarm	wate	r for at	least 1	5 min	utes.	Open a	and close eyelid(s)
SKIN & EYES:	If product gets	in the eyes, flu	ish with copio	us amount								-	and close eyelid(s) dical attention. If
SKIN & EYES:	If product gets	in the eyes, flu ough irrigation	ısh with copio Seek immedi	ous amount ate medica	lattent	ion. If	proble	em per	sists, s	eek im	media	ate me	dical attention. If
SKIN & EYES:	If product gets to ensure thore irritation occurs	in the eyes, flu ough irrigation & product is (	ish with copio Seek immedi on the skin, rir	ous amount ate medica nse thoroug	l attent shly wit	ion. If h lukev	proble warm v	em per water f	sists, s ollowe	eekim dbya	media thoro	ate meo ugh wa	dical attention. If ashing of the
SKIN & EYES:	If product gets to ensure thore	in the eyes, flu bugh irrigation & & product is vith plenty of s	ish with copio Seek immedi on the skin, rir oak and waste	ous amount ate medica use thorouger. Remove	l attent shly wit all con	ion. If h lukev tamina	proble warm v ted cle	em per water f othing	sists, s <sup>i</sup> ollowe includi	eekim d by a ng foo	media thoro	ate meo ugh wa	dical attention. If ashing of the
SKIN & EYES: INHALATION:	If product gets to ensure thoro irritation occurs affected area w	in the eyes, flu ough irrigation & product is vith plenty of s If irritation, rec	ish with copio Seek immedi on the skin, rir oak and waste	ous amount ate medica use thoroug er. Remove	l attent shly wit all con	ion. If h lukev tamina	proble warm v ted cle	em per water f othing	sists, s ollowe includi diately	eekim dbya ngfoo	media thoro twear	ate mee ugh wa and wa	dical attention. If ashing of the ash thoroughly
INHALATION: 4.2 Medical Conditio	If product gets to ensure thore irritation occurs affected area w before reuse Remove victim ons Aggravated by	in the eyes, flo ough irrigation & & product is o vith plenty of s if irritation rec to fresh air at a y Exposure:	ISH with copio Seek immedi on the skin, rir oak and waste bace. If breat!	ous amount ate medica ase thoroug er. Remove ing nersists hing stops,	l attent shly wit all con <u>consu</u> perforr	ion. If h lukev tamina It a phy n artific	proble warm v ted cle veician cial res	em per water f othing piratio HEAL	sists, s ollowe includi diately on. See	eekim dbya ngfoo	media thoro twear	ate mee ugh wa and wa	dical attention. If ashing of the ash thoroughly
INHALATION:	If product gets to ensure thore irritation occurs affected area w before reuse Remove victim ons Aggravated by	in the eyes, flo ough irrigation & & product is o vith plenty of s if irritation rec to fresh air at a y Exposure:	ISH with copio Seek immedi on the skin, rir oak and waste bace. If breat!	ous amount ate medica ase thoroug er. Remove ing nersists hing stops,	l attent shly wit all con <u>consu</u> perforr	ion. If h lukev tamina It a phy n artific	proble warm v ted cle veician cial res	em per water f othing piratio HEAL	sists, s ollowe includi diately on. See	eekim d by a ng foo kimm	media thoro twear	ate mee ugh wa and wa	dical attention. If ashing of the ash thoroughly al attention.
INHALATION: 4.2 Medical Conditio	If product gets to ensure thore irritation occurs affected area w before reuse Remove victim ons Aggravated by	in the eyes, flo ough irrigation & & product is o vith plenty of s if irritation rec to fresh air at a y Exposure:	ISH with copio Seek immedi on the skin, rir oak and waste bace. If breat!	ous amount ate medica ase thoroug er. Remove ing nersists hing stops,	l attent shly wit all con <u>consu</u> perforr	ion. If h lukev tamina It a phy n artific	proble warm v ted cle veician cial res	em per water f othing piratic HEAL FLAN	sists, s ollowe includi diately n. See .TH	eekim d by a ng foo k imm .ITY	nmedia thoro twear ediate	ate mee ugh wa and wa	dical attention. If ashing of the ash thoroughly al attention. 1

## **5. FIREFIGHTING MEASURES**

5.1 Flashpoint & Method:

>100 °C (ASTM D93-15)

5.2 Autoignition Temperature:

5.3 Flammability Limits:

Upper Explosive Limit (UEL): NA

When involved in a fire, this product may ignite and decompose to form toxic gases (e.g., CO, CO2 and Nox)

Lower Explosive Limit (LEL): NA

5.5 Extinguishing Methods:

Fire & Explosion Hazards:

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 enviormentally sensitive reas. If necessary, rinse contaminated equipment with soapy water before returning to service.

## 6. ACCIDENTAL RELEASE MEASURES

## 6.1 Spills:

5.4

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 entery 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 to UV light source for 2-5 minutes. Lift cured material from substrate and repeat until very little residue remains. Remove remaining spilled 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

## 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 devises. 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 shoiuld 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 $^{\circ}\mathrm{C}$ (122 F).

3 of 8

	8. EXPOSURE CONTROLS & PERSONAL PROTECTION 4							
8.1	8.1 Ventilation & Engineering Controls: Use with adequate ventilation (e.g., local exhaust ventilation, fans). Ensure appropriate decontaimination							
	equipment is available (e.g., sink safety shower, eve 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 Candaian CAS Standard Z94.4-93 and applicable						
		standards of Canadian Brovinces, 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 nose 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						
		liters1) wear nitrile or imprevious 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	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 Threashold:	NE						
9.8	Solubility:	Not soluble						
9.9	pH:	NA						
9.1	Viscosity:	approximately 2,000 cps						
9.1	Flash Point:	NA						
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, incompatable chemicals, strong light sources, sparks and flame.
11	Incompatable 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 produt 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: Koc =
	1.82. Water Solubility: 120 parts H <sub>2</sub> O 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 biodegredation. This compound's half life is 6.1 hours.
12	Effects on Plants & Animals:
	There is no specific data availble for this product on plant life.
12	Effects on Aquatic Life:
	There is no specific data availble 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.

This material becomes an inert plastic upon prolonged exposure to sources of OV light and sumight. 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						
descr	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						
4 5							
15	SARA Reporting:						
1 -	NA SADA Thread ald Diagning Quantity						
15	SARA Threshold Planning Quantity:						
4.5							
15	TSCA Inventory Status:						
1 -	All components of this product are listed in the TSCA Inventory or are exempt						
15	CERCLA Reportable Quantity (RQ):						
10	BUTYL ACETATE: 5,0000 lbs (2,270 kg)						
10	Other Federal Requirements:						
16	This products complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics	).					
10	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						
16	product are on the Priorities Substances List.						
10	State Regulatory Information:	awa Culhatanaaa					
	Butyl Acetate is listed on the following state criteria list(s): Deleware Air Quality Management List (DE), Massachusetts Hazard						
	List (MA), Minnesota Hazardous Substances List (MN), New Jersery Right-to-Know List (NJ), Pennsylvania Right-to-Know List	PA), and					
	Washington Permissible Exposure Limits for Air Contaminants (WA).						
	No other ingredients in this producd, present in a concentration of 1.0% or greater, are listed on any of the following state cri						
	California Proposition 65 (CA), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts H	azardous					
	Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances list, (MN), New Jersey Right-to	-Know List (NJ),					
	new Yord Hazardous Substances List (NY), Pennsylvania Right-to-Know list (PA), Washington Permissible Exposures List (WA)	, Wisconsin					
	Hazardous Substances List (11/1)	-					
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.						
	Butyl Acetate: Flammable (F). Harmful (Xi).						
	Risk Phrases (R): H226 - Flammable liquid. H315 - Irritating to eyes, skin and respiratory system. H317 - May cuase an						
	allergic skin reaction. 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. Keep away from sources of ignition - No Smoking. Avoid contact with skin and eyes, rinse						
	immediately with planty of water and cook medical advice						

6 of 8

	16. OTHER INFORMATION					
16 Other Information: WARNING! MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES EYE IRRITATION. Avoid breathing fume, gas, mist, vapors, spray. Wear potective 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 ta 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 persuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other governement 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 sonsult 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.lightelegrap.co.com					
17	Prepared by: McConnell Labs, Inc. 406 SW Umatilla Ave Redmond, OR 97756 USA Tel: +1 541 526 1417 Fax: +1 541 526 1418					

## **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	ACGIH American Conference on Governmental Industrial Hygienists					
TLV	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:

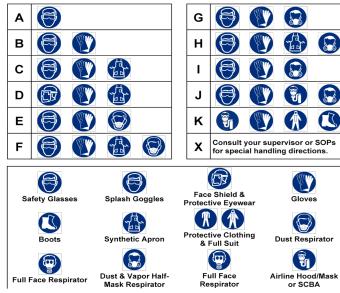
CPR Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.

## HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

## HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard	HEALTH
1	Slight Hazard	FLAMMABILITY
2	Moderate Hazard	PHYSICAL HAZARDS
3	Severe Hazard	PERSONAL PROTECTION
4	Extreme Hazard	

## PERSONAL PROTECTION RATINGS:



#### OTHER STANDARD ABBREVIATIONS:

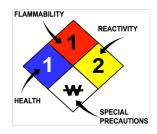
NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

## 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
₩	Use No Water
ох	Oxidizer
TREFOIL	Radioactive



#### TOXICOLOGICAL INFORMATION:

LD <sub>50</sub>	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
	S
LC <sub>50</sub>	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD <sub>Io</sub>	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD <sub>Io</sub> , LD <sub>Io</sub> , & LD <sub>o</sub> or	Lowest dose (or concentration) to cause lethal or toxic effects
TC, TC <sub>o</sub> , LC <sub>io</sub> , & LC <sub>o</sub>	
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TLm	Median threshold limit
log K <sub>ow</sub> or log K <sub>oc</sub>	Coefficient of Oil/Water Distribution

#### **REGULATORY INFORMATION:**

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
тс	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:

0	۲	٨		1			Ĩ
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:

		<b>N</b>	*		exit	×	×
С	E	F	Ν	0	т	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

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

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