

Page 1 of 6 **HFT-97866**

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards

SDS Revision: 1.1

SDS Revision Date: 7/25/2015

1.1	Product Name:	AA NIMH RECHARGEABLE BATTERIES	
1.2	Chemical Name:	Nickel Metal Hydride Battery	
1.3	Synonyms:	P/N 97866	
1.4	Trade Names:	Thunderbolt Magnum	
1.5	Product Uses & Restrictions:	Electric Storage Battery	
1.6	Distributor's Name:	Harbor Freight Tools USA, Inc.	
1.7	Distributor's Address:	26541 Agoura Road, Calabasas, CA 91302 USA	
1.8	Emergency Phone:	CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 676687)	
1.9	Business Phone / Fax:	+1 (805) 388-1000	

2. HAZARDS IDENTIFICATION

2.1 Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of [NOHSC: 1088 (2004)] and ADG Code (Australia).

The materials contained in this product may only represent the hazards below if the integrity of the battery is compromised, physically or electrically abused:

DANGER! CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. HARMFUL IF SWALLOWED.

Hazard Statements (H): H314 – Causes severe skin burns and eye damage. H302 – Harmful if swallowed. H411 – Toxic to aquatic life with long lasting effects.

Precautionary Statements (P): P260 – Do not breathe fumes/mist/vapor/spray. P264 – Wash

Precautionary Statements (P): P260 – Do not breathe fumes/mist/vapor/spray. P264 – Wash hands and exposed skin areas with soap and warm water thoroughly after handling. P273 – Avoid release to the environment. P280 – Wear protective gloves/eye protection. P301+P330+P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P363 - Wash contaminated clothing before reuse. P304+P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 – Immediately call a POISON CENTER or doctor/physician. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P405 – Store locked up. P501 – Dispose of contents/container to licenses treatment, storage and disposal facility (TSDF).



3. COMPOSITION & INGREDIENT INFORMATION

					EXPOSURE LIMITS IN AIR (mg/m ³)								
					AC	GIH		NOHSC			OSHA	١	
					pp	om		ppm			ppm		
							ES-	ES-	ES-				
CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	% 30-60	TLV	STEL	TWA	STEL	PEAK	PEL	STEL	IDLH	OTHER
POSITIVE ELECTRODE:				30-60									
	12054-48-7	QR7040000	235-008-5		10	NA	NF	NF	NF	5	l NA	NA	
NICKEL HYDROXIDE				. 4. Door									tic Acute 1; Aquatic
NICKEL HTDROXIDE			332, H334, H34						керг.	16, 51	OIRE	r, Aqua	alic Acute 1; Aqualic
	CHIOTIC 1, 1150	12, 11010, 11017, 1	1002, 11004, 1104	30-60	1000, 110	J12, 114	00, 1141	011001					
NEGATIVE ELECTRODE:				30-00									
			MISCH M	ΕΤΔΙ ΔΙΙ ()Y								
	7439-91-0	INA	231-099-0		l NA	NA	NF	NF	NF	NA	NA	NA	
LANTHANUM	7 100 01 0	1107	201 000 0		1471	14/1				1471	1 10/1	1171	
	7440-45-1	FK485000	231-154-9		NA	NA	NF	NF	NF	NA	NA	NA	
CERIUM	Flam. Sol. 1; F		201 101 0		1471	14/1				1471	1 177	1171	
	7440-00-8	QO8575000	231-109-3		NA	NA	NF	NF	NF	NA	NA	NA	
NEODYMIUM		4000.0000	201 100 0								1	1	
	7440-10-0	NA	231-120-3		NA	NA	NF	NF	NF	NA	NA	NA	
PRASEODYMIUM	Pyr. Sol. 1; H2	250	1=0=0.0	1									<u>I</u>
	1. 7		NICKEL M	ETAL ALL	OY								
NIO(E)	7440-02-0	QR5950000	231-111-4	30-60	1.5	NA	1	NA	NA	1	NA	10	
NICKEL	Skin Sens. 1,	Carc. 2, CTOT R	E 1, Aquatic Chro	nic 3, H31	7, H35	1, H372	, H412						
CODALT	7440-48-4	GF8750000	231-158-0		(.02)	NA	(.05)	NA	NA	(.01)	NA	NA	DUST
COBALT	Skin Sens. 1,	Resp. Sens. 1, A	quatic Chronic 4;	H317, H33	34, H41	3					•		•
MANGANESE	7439-96-5	OO9275000	231-105-1		5	NA	1	NF	3	5	NA	NA	FUME
MANGANESE													
ALUMINUM	7429-90-5	BD0330000	231-072-3		10	NA	5	NF	NF	10	15	5	RESP FRAC
ALOWINOW	Pyr. Sol. 1, Wa	ater React. 2; H2	50, H261										
ZINC	7440-66-6	ZG8600000	231-175-3	15-40	NA	NA	NF	NF	NF	NA	NA	NA	
ZINC	Aquatic Acute	1; Aquatic Chron	nic 1; H400, H410										
ELECTROLYTE:				7-13									
ELECTROLTTE.													
POTASSIUM HYDROXIDE	1310-58-3	TT2100000	215-181-3		2	NA	2	NF	NF	NE	NA	NA	
FOTASSIONITTIDROXIDE	Acute Tox. 4,												
SODIUM HYDROXIDE	1310-73-2	WB4900000	215-185-5		2	NA	2	NF	NF	2	NA	10	
30DIOWITT DROXIDE	Skin Corr. 1A;												
LITHIUM HYDROXIDE	1310-65-2	OJ6307070	215-183-4		NA	NA	NF	NF	NF	NA	NA	NA	
LITTIONITITEROXIDE	Acute Tox. 4,	Skin Corr. 1B											



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4. FIRST AID MEASURES 4 1 First Aid: Give large quantities of water, but do NOT induce vomiting. Never give anything by mouth to an Ingestion: unconscious person. Contact the nearest Poison Control Center or local emergency telephone number for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. If product gets in the eyes, flush eyes thoroughly with copious amounts of water for at least 15 minutes, Eyes: holding eyelid(s) open to ensure complete flushing. If the eyes or face become swollen during or following use, consult a physician or emergency room immediately. If an open battery cell: Remove contaminated clothing and wash affected areas with soap and water. If Skin: discomfort persists and/or the skin reaction worsens, contact a physician immediately. Do not wear contaminated clothing until after it has been properly cleaned. Inhalation: Remove victim to fresh air at once. Under extreme conditions, if breathing stops, perform artificial respiration. Seek immediate medical attention. 4.2 Effects of Exposure: Severe irritation, burns, cornea damage, blindness. Nickel compounds may cause irritation. Eyes: Skin: Severe irritation, burns, and ulceration if open battery cell comes into contact with skin. May cause severe irritation of mouth, throat, esophagus, and stomach. Acute ingestion of lead Ingestion: compounds may cause abdominal pain, nausea, vomiting, diarrhea, and severe cramping. This may lead rapidly to systemic toxicity. Breathing of vapors or mists may cause severe respiratory irritation. Inhalation of fumes may cause Inhalation: irritation of upper respiratory tract and lungs. 4.3 Symptoms of Overexposure: Ingestion: Severe discomfort, nausea, vomiting and headache. Symptoms of nickel toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances, and Severe irritation, redness, and watering, damage to cornea and possible blindness. Eyes: Skin: Severe skin irritation, red, itching skin, burns and ulceration, if open battery cell comes into contact with Inhalation: May cause irritation to the upper respiratory system. Overexposure to sprays or mists may cause chemical pneumonitis. 4.4 Acute Health Effects: Hazardous exposure can occur only when product is heated above the melting point, oxidized or otherwise processed or damaged to create dust, vapor, or fume. Chronic Health Effects: 4.5 4 6 Target Organs: Eyes, Skin, Respiratory System 47 Medical Conditions Overexposure to electrolyte mist may cause lung damage and **HEALTH** 2 Aggravated by Exposure: aggravate pulmonary conditions. Contact of electrolyte (water and **FLAMMABILITY** 1 hydroxide solution) with skin may aggravate skin diseases such as PHYSICAL HAZARDS 1 eczema and contact dermatitis. Contact of electrolyte (water and metal PROTECTIVE EQUIPMENT В hydroxide solution) with eyes may damage cornea and/or cause blindness. **EYES** SKIN 5. FIREFIGHTING MEASURES 5.1 Fire & Explosion Hazards: This material can burn but will not readily ignite. However, if involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, CO2, Hydrocarbons) 5.2 Extinguishing Methods: CO₂, Dry Chemical, Alcohol Foam. Use water spray to cool containers. 5.3 Firefighting Procedures: In case of fire where nickel metal hydride batteries are present, apply a smothering agent such as METL-X, sand, dry grand dolomite, or soda ash, or flood the area with water .A smothering agent will extinguish burning nickel metal hydride batteries. Water may not extinguish burning batteries but will cool the adjacent batteries can be controlled with water. When water is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended. Fire fighters should wear self-contained breathing apparatus. Burning nickel metal hydride batteries can produce toxic fumes including oxides of nickel, cobalt, aluminum, manganese, lanthanum, cerium, neodymium, and praseodymium. 6. ACCIDENTAL RELEASE MEASURES 6.1 Spills: Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment, including protective gloves and eyewear. Plastic or rubber gloves, respirator, eye/face protection and chemical-resistant apron may be required for clean-up of large spills. Small Spills: Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible material such as vermiculite or sand to soak up the product and place into a container for later disposal. Do not use water or a material such as "speedy dry" to soak up material. Sweep up material using non-sparking materials (e.g., plastic brooms, shovels, dustpans) and place into a plastic container or plastic liner within another container. Large Spills: Keep incompatible materials away from spill. Stay upwind and away from spill or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant. Recover as much free liquid as possible and collect in alkali-resistant container. Use absorbent to pick up residue. Keep spills and cleaning runoffs out of drains, municipal sewers and open bodies of water.



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	7. HANDLING & STORAGE INFORMATION										
7.1	Work & Hygiene Practices:	Do not eat, drink or smoke when	handlin	g this pr	oduct. Ha	andle as to	avoid pun	cturing c	ontaine	r(s).	
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Keep away from incompatible substances. Protect containers from physical damage. Storage and handling									
		areas should have equipment to capture and neutralize spills.									
7.3	Special Precautions:	NA									
		8. EXPOSURE CON	TDOL	C 9 I	DEDSC		POTE	CTIO	NI .		
8.1	Exposure Limits:	6. EXPOSURE CON	ACG		PERSU	NOHSC	KUIE	CIIO	OSHA		OTHER
0.1	ppm (mg/m ³)	CHEMICAL NAME(S)	TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	OTHER
		NICKEL HYDROXIDE	10	NA	NF	NF	NF	5	NA	NA	
		NICKEL	1.5	NA	1	NA	NA	1	NA	10	
		COBALT	(.02)	NA	(.05)	NA	NA	(.01)	NA	NA	
		MANGANESE	5	NA	1	NF	3	5	NA	NA	
		SODIUM HYDROXIDE	2	NA	2	NF	NF	2	NA	10	
8.2	Ventilation & Engineering	POTASSIUM HYDROXIDE	2	NA ta affa at	2	NF	NF	NE	NA	NA	the
0.2	Controls:	Use local or general exhaust ver product. Ensure appropriate dec									
8.3	Respiratory Protection:	No special respiratory protection									ion otation):
		necessary, use only respiratory									
		§1910.134, or applicable U.S.			ns, or th	e approp	riate stand	dards of	Canad	la, its	
		provinces, EU member states, o									
8.4	Eye Protection:	Wear protective eyewear (e.g.,	, safety	glasses	with side	e-shield) a	at all time	s when	handlin	g this	
		product. Always use protective									
		special hazard; soft lenses may									
			available. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).								
8.5	Hand Protection:	Use gloves constructed of cher			aterials s	uch as ne	oprene or	heavy n	itrile ruk	ber if	
		frequent or prolonged contact is expected. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, or the EU member states.									
8.6	Body Protection:	Avoid prolonged and/or repeated skin contact. Use clean and impervious protective clothing (e.g.,									
		neoprene or Tyvek®) if splashing or spraying conditions are present. Protective clothing should									
		include long-sleeves, apron, boots and additional facial protection. If necessary, refer to appropriate standards of Canada, the EU member states, or U.S. OSHA.									
		standards of Canada, the EO me	ember st	ates, or	U.S. USH	IA.				ı	
		9. PHYSICAL	& CI	HFMI	CALP	ROPE	RTIFS				
9.1	Appearance:	Grayish, greenish color (positive			<u> </u>						
9.2	Odor:	Electrolyte is clear liquid with sh			r.						
9.3	Odor Threshold:	NA									
9.4	pH:	> 12 (electrolyte)									
9.5	Melting Point/Freezing Point:	Melting point of misch metal allo	y begins	at 995°	°F (manga	nese).					
9.6	Initial Boiling Point/Boiling Range:	Boiling point of electrolyte is 212	2°F (100°	°C) (wat	er).						
9.7	Flashpoint:	259 °C (498 °F) - Hydrogen									
9.8	Upper/Lower Flammability	NA ,									
9.9	Limits: Vapor Pressure:	11 mm Hg @ 77 °F									
9.10	Vapor Pressure. Vapor Density:	NA									
9.11	Relative Density:	< 1.3 (water = 1.0)									
9.12	Solubility:	Electrolyte: 100% soluble in wat	er								
9.13	Partition Coefficient (log Pow):	NA									
9.14	Autoignition Temperature:	NA									
9.15	Decomposition Temperature:	NA									
9.16	Viscosity:	NA NA									
9.17	Other Information:	NA									
		10. ST/	ABILI'	TY &	REAC	TIVITY	,				
10.1	Stability:	Stable under normal conditions;									
10.2	Hazardous Decomposition Products:	Metal hydroxides (e.g., Ni(OH) ₂ ,					nO, NiO, e	tc.) may	form if i	nvolved	in a fire.
10.3	Hazardous Polymerization:	Will not occur.									
10.4	Conditions to Avoid:	Open flames, sparks, high heat,	incompa	atible su	bstances a	and direct	sunlight.				
10.5	Incompatible Substances:	Avoid extreme heat and ignition	sources.	Store a	way from	oxidizers.	Do not ex	ceed rat	ed capa	city.	



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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards SDS Revision: 1.1 SDS Revision Date: 7/25/2015 11. TOXICOLOGICAL INFORMATION Inhalation: NO 11.1 Routes of Entry: Absorption: YES Ingestion: YES 11 2 Toxicity Data: This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, is available for some of the components of the product, but is not presented in this document 11.3 Acute Toxicity: See Section 4.4 11.4 Chronic Toxicity: See Section 4.5 11.5 Suspected Carcinogen: Nickel metal and its compounds are suspected carcinogens; however, the acute and chronic effects of nickel alloys are not known. Nickel (metal) is a suspected carcinogen, IARC Group 2B, NTP 97-2. There are no known chronic health effects for nickel metal alloys. Reproductive Toxicity: 11.6 This product is not reported to cause reproductive effects 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. Reproductive Toxicity: This product is not reported to cause reproductive effects in humans. 11.7 Irritancy of Product: The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure. 11.8 Biological Exposure Indices: May cause damage to organs through prolonged or repeated exposure. Physician Recommendations: 11.9 Treat symptomatically. 12. ECOLOGICAL INFORMATION 12.1 Environmental Stability: There are no specific data available for this product Effects on Plants & Animals: 12.2 There are no specific data available for this product. 12.3 Effects on Aquatic Life There are no specific data available for this product. 13. DISPOSAL CONSIDERATIONS 13.1 Waste Disposal Dispose of in accordance with federal, state, provincial and local regulations. Special Considerations 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 and the CTDGR. 49 CFR (GND): NOT REGULATED 14.2 IATA (AIR): .dh. UN3496, BATTERIES, NICKEL-METAL HYDRIDE, 9 14.3 IMDG (OCN): ďħ, UN3496, BATTERIES, NICKEL-METAL HYDRIDE, 9 14.4 TDGR (Canadian GND) NOT REGULATED 14.5 ADR/RID (EU): NOT REGULATED 14.6 SCT (MEXICO): NOT REGULATED 14.7 ADGR (AUS): **NOT REGULATED** 15. REGULATORY INFORMATION SARA Reporting 15.1 This product contains Nickel Hydroxide, Nickel, Magnesium, Aluminum, Sodium Hydroxide, which are subject to the Requirements reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373. Nickel, Cobalt, Manganese (metals), and Aluminum (fumes and dusts) are subject to SARA Title 313 (EPCRA). SARA Threshold Planning 15.2 This product does not contain any substances with a SARA threshold planning quantity. Quantity: 15.3 TSCA Inventory Status: The components of this product are listed on the TSCA inventory or are otherwise exempt. 15.4 CERCLA Reportable Quantity Nickel Hydroxide: 4.5 kg (10 lbs); Nickel: 45.4 kg (100 lbs); Potassium Hydroxide: 454kg (1,000 lbs); Sodium Hydroxide: (RQ): 454 kg (1,000 lbs) 15.5 Other Federal Requirements: Nickel Hydroxide (listed as Nickel compounds), Nickel is listed as a hazardous air pollutant (HAP). Nickel Hydroxide, Potassium Hydroxide and Sodium Hydroxide are listed as a Hazardous Substance under the CWA. Nickel Hydroxide is listed as a Toxic Pollutant under the Clean Water Act. Nickel is listed as a Priority Pollutant under the Clean Water Act. Nickel is listed as a Toxic Pollutant under the Clean Water Act. 15.6 Other Canadian Regulations: This product has been classified according to the hazard criteria of the Controlled Products Regulations (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 listed on the Priorities Substances List. WHMIS E, D2B (Corrosive, Other Toxic Effects)



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		15. REGULATORY INFO	RMATION – cont'd
15.7	State Regulatory Information:	Hazardous Substances List (MA), Minnesota Haz Pennsylvania Right-to-Know List (PA). Nickel is found on the following state criteria lists: Aluminum is found on the following state criteria lists: Potassium Hydroxide is found on the following s and Washington Permissible Exposures List (WA Sodium Hydroxide is found on the following state Lithium Hydroxide is found on the following state NOTE: This product contains a substance(s) kn reproductive harm. No other ingredients in this product, present in a criteria lists: California Proposition 65 (CA65), List (FL), Massachusetts Hazardous Substant Hazardous Substances List (MN), New Jersey	ists: MA, MN, NJ and PA. tate criteria lists: Florida Toxic Substances List (FL), MA, MN, NJ, PA). criteria lists: FL, MA MN, NJ, PA and WA.
15.8	Other Requirements:	The primary components of this product are not ling Nickel Oxyhydroxide: Harmful (Xn). Risk Phrase effect. May cause sensitization by skin contain protective clothing. This material and its container release to the environment. Refer to special instruction of the environment of the environment. Refer to special instruction of the	ses (R): 40-43 - Limited evidence of carcinogenic ct. Safety Phrases (S): 36-60-61 Wear suitable er must be disposed of as hazardous waste. Avoid
		16. OTHER INFO	DPMATION
16.1	Other Information:	DANGER! CAUSES SEVERE SKIN BURNS A fumes/mist/vapour/spray. Wash hands and exponent and release to the environment. Wear protect induce vomiting. IF ON SKIN (or hair): Remowater/shower. IF INHALED: Remove victim to Immediately call a POISON CENTER or doctor/p Remove contact lenses if present and easy to dowarning: Use only the specified chargers and dispose of in fire or short circuit-may explode, for cracked. NON-SPILLABLE BATTERY. WARNING: This product contains a substance(s) reproductive harm.	AND EYE DAMAGE. HARMFUL IF SWALLOWED. Do not breathed be seed skin areas with soap and warm water thoroughly after handling. The strive gloves/eye protection. IF SWALLOWED: Rinse mouth. Do NOT we
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	government regulations must be reviewed for ap Tools USA, Inc.'s knowledge, the information accuracy, suitability or completeness is not guara provided. The information contained herein rela	SHA's Hazard Communication Standard, 29 CFR §1910.1200. Other oplicability to this product. To the best of ShipMate's & Harbor Freight contained herein is reliable and accurate as of this date; however, anteed and no warranties of any type, either expressed or implied, are ites only to the specific product(s). If this product(s) is combined with be considered. Data may be changed from time to time. Be sure to
16.4	Prepared for:	Harbor Freight Tools USA, Inc. 26541 Agoura Road Calabasas, CA 91302 USA Tel: +1 (805) 388-1000 http://www.harborfreight.com/	HARBOR FREIGHT TOOLS Quality Tools at Ridiculously Low Prices
16.5	Prepared by:	ShipMate, Inc. P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com	

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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:

CAS No.	Chemical Abstract Service Number		
EXPOSURE	EXPOSURE LIMITS IN AIR:		
ACGIH	American Conference on Governmental Industrial Hygienists		
С	Ceiling Limit		
ES	Exposure Standard (Australia)		
IDLH	Immediately Dangerous to Life and Health		
OSHA	U.S. Occupational Safety and Health Administration		
PEL	Permissible Exposure Limit		
STEL	Short-Term Exposure Limit		
TLV	Threshold Limit Value		
TWA	Time Weighted Average		

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.

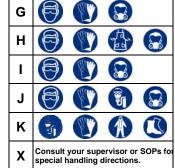
HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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



PERSONAL PROTECTION RATINGS:

Α			
В			
С			
D		THE STATE OF THE S	
Е			
F		The state of the s	





Splash Goggle









Protective Clothing & Full Suit





Dust & Vapor Half-Mask Respirator





OTHER STANDARD ABBREVIATIONS:

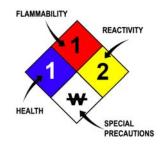
ML	Maximum Limit	
mg/m3	milligrams per cubic meter	
NA	Not Available	
ND	Not Determined	
NE	Not Established	
NF	Not Found	
NR	No Results	
ppm	parts per million	
SCBA	Self-Contained Breathing Apparatus	

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILI	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
ох	Oxidizer
TREFOIL	Radioactive



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals s
LC ₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD _{io}	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD _{Io} , LD _{Io} , & LD _o or TC, TC _o , LC _{Io} , & LC _o	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 Kow or log Koc	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				
NOHSC	National Occupational Health and Safety Commission (Australia)				
NDSL	Canadian Non-Domestic Substance List				
PSL	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)				
HMIS-III	National Paint & Coatings Association Hazardous Materials Identification System				

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

0	(*)	(2)		\odot	(R
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:

15.4		N	*			X	X
С	E	F	N	0	Т	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

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

			\Diamond			\limits		*
GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environ- ment