

Page 1 of 6 HFT-97872

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

SDS Revision: 1.1

SDS Revision Date: 7/25/2015

	1. PRODUCT & COMPANY IDENTIFICATION				
1.1	Product Name:	D NIMH RECHARGEABLE BATTERIES			
1.2	Chemical Name:	Nickel Metal Hydride Battery			
1.3	Synonyms:	P/N 97872			
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

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 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 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/m³)								
					AC	ACGIH		NOHSC			OSHA		
					pp	om		ppm			ppm		
CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	TLV	STEL	ES- TWA	ES- STEL	ES- PEAK	PEL	STEL	IDLH	OTHER
POSITIVE ELECTRODE:				30-60									
1 0011112 222011(052)													
	12054-48-7	QR7040000	235-008-5		10	NA	NF	NF	NF	5	NA	NA	
NICKEL HYDROXIDE									Repr. 1	IB; STO	OT RE 1	; Aqua	tic Acute 1; Aquatic
	chronic 1; H3	302, H315, H317,	H332, H334, H34		1360, H	372, H4	00, H41	0H351					
NEGATIVE ELECTRODE:				30-60									
				ETAL ALL									
LANTHANUM	7439-91-0	NA	231-099-0		NA	NA	NF	NF	NF	NA	NA	NA	
L/ ((VIII)/ ((VO)VI													
CERIUM	7440-45-1	FK485000	231-154-9		NA	NA	NF	NF	NF	NA	NA	NA	
CERTOW	Flam. Sol. 1;												
NEODYMIUM	7440-00-8	QO8575000	231-109-3		NA	NA	NF	NF	NF	NA	NA	NA	
NEODTWIOW													
PRASEODYMIUM	7440-10-0	NA	231-120-3		NA	NA	NF	NF	NF	NA	NA	NA	
FRASEODTWIOW	Pyr. Sol. 1; F	1250											
			NICKEL M	IETAL ALL	.OY								
NICKEL	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	onic 3, H31	7, H35	1, H372	, H412						
COBALT	7440-48-4	GF8750000	231-158-0	1-5	(.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							•
MANICANIECE	7439-96-5	OO9275000	231-105-1	1-5	5	NA	1	NF	3	5	NA	NA	FUME
MANGANESE		•				•				•			•
A I I I A A I A I I I A A	7429-90-5	BD0330000	231-072-3	1-5	10	NA	5	NF	NF	10	15	5	RESP FRAC
ALUMINUM	Pyr. Sol. 1, V	Vater React. 2; H2	50, H261										
71110	7440-66-6	ZG8600000	231-175-3	15-40	NA	NA	NF	NF	NF	NA	NA	NA	
ZINC	Aquatic Acut	e 1; Aquatic Chroi	nic 1: H400, H410)									
		,	,,	7-13									
ELECTROLYTE:													
	1310-58-3	TT2100000	215-181-3		2	NA	2	NF	NF	NE	NA	NA	
POTASSIUM HYDROXIDE	Acute Tox 4	, Skin Corr. 1A	1-10 1010	l							1		1
	1310-73-2	WB4900000	215-185-5		2	NA	2	NF	NF	2	NA	10	
SODIUM HYDROXIDE	Skin Corr. 1A			1									ſ.
	1310-65-2	OJ6307070	215-183-4		NA	NA	NF	NF	NF	NA	NA	NA	
LITHIUM HYDROXIDE		, Skin Corr. 1B	_ 10 100 1		1 1773	1171				14/ (1 177	14/ (
	/ toute Tox. 4	, Chill Coll. 1D											



Page 2 of 6 **HFT-97872**

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards SDS Revision: 1.1 SDS Revision Date: 7/25/2015

			4. FIRST AID MEASURES				
4.1	First Aid:	Ingestion:	Give large quantities of water, but do NOT induce vomi unconscious person. Contact the nearest Poison Control Ce assistance and instructions. Seek immediate medical attervictim's head lowered (forward) to reduce the risk of aspiration of product gets in the eyes, flush eyes thoroughly with copies.	enter or local emergency telephone number for ntion. If vomiting occurs spontaneously, kee on.			
		Eyes:	holding eyelid(s) open to ensure complete flushing. If the ey use, consult a physician or emergency room immediately.				
		Skin:	If an open battery cell: Remove contaminated clothing and discomfort persists and/or the skin reaction worsens, cor contaminated clothing until after it has been properly cleaned	ntact a physician immediately. Do not wea			
	F" + 45	Inhalation:	Remove victim to fresh air at once. Under extreme cor respiration. Seek immediate medical attention.	nditions, if breathing stops, perform artificia			
4.2	Effects of Exposure:	Eyes: Skin:	Severe irritation, burns, cornea damage, blindness. Nickel co Severe irritation, burns, and ulceration if open battery cell co	mes into contact with skin.			
		Ingestion:	May cause severe irritation of mouth, throat, esophagu compounds may cause abdominal pain, nausea, vomiting, crapidly to systemic toxicity.	diarrhea, and severe cramping. This may lea			
		Inhalation:	Breathing of vapors or mists may cause severe respirate irritation of upper respiratory tract and lungs.				
4.3	Symptoms of Overexposure:	Ingestion:	Severe discomfort, nausea, vomiting and headache. Syr fatigue, abdominal pain, loss of appetite, muscular achirritability.	mptoms of nickel toxicity include headach les and weakness, sleep disturbances, ar			
		Eyes: Skin:	Severe irritation, redness, and watering, damage to cornea a Severe skin irritation, red, itching skin, burns and ulceration skin.	•			
		Inhalation:	May cause irritation to the upper respiratory system. Overex pneumonitis.	cposure to sprays or mists may cause chemic			
4.4	Acute Health Effects:		exposure can occur only when product is heated above the me create dust, vapor, or fume.	elting point, oxidized or otherwise processed			
4.5	Chronic Health Effects:	NA	, , ,				
4.6	Target Organs:	Eyes, Skin,	Respiratory System				
4.7	Medical Conditions Aggravated by Exposure:	aggravate p	oulmonary conditions. Contact of electrolyte (water and	TEALTH 2 FLAMMABILITY 1			
			olution) with skin may aggravate skin diseases such as contact dermatitis. Contact of electrolyte (water and metal	PHYSICAL HAZARDS 1			
			olution) with eyes may damage cornea and/or cause F	PROTECTIVE EQUIPMENT B EYES SKIN			
			5. FIREFIGHTING MEASURES				
5.1	Fire & Explosion Hazards:	decompose	al can burn but will not readily ignite. However, if involved i at high temperatures to form toxic gases (e.g., CO, CO ₂ , Hydro				
5.2	Extinguishing Methods:		emical, Alcohol Foam. Use water spray to cool containers.				
5.3	Firefighting Procedures:	METL-X, sar extinguish b cool the adj gas may evo smothering a Burning nick	re where nickel metal hydride batteries are present, apply a send, dry grand dolomite, or soda ash, or flood the area with wateurning nickel metal hydride batteries. Water may not extinguist accent batteries can be controlled with water. When water is oblve. In a confined space, hydrogen gas can form an explosive agents are recommended. Fire fighters should wear self-contaited metal hydride batteries can produce toxic fumes including nanganese, lanthanum, cerium, neodymium, and praseodymium	er .A smothering agent will h burning batteries but will used, however, hydrogen e mixture. In this situation, ained breathing apparatus. g oxides of nickel, cobalt,			
			6. ACCIDENTAL RELEASE MEASURE	<u> </u>			
6.1	Spills:		ning 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.					



Page 3 of 6 **HFT-97872**

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

SDS Revision: 1.1

SDS Revision Date: 7/25/2015

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		7. HANDLING	8 & S	TOR A	IGE IN	FORM	ATION				
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 ne	utralize sp	ills.					
7.3	Special Precautions:	NA									
		8. EXPOSURE CON	TROL	S & I	PERSO	DNAL F	PROTE	СТІО	N		
8.1	Exposure Limits:		ACC	SIH		NOHSC	•		OSHA		OTHER
	ppm (mg/m³)	CHEMICAL NAME(S)	TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
		NICKEL HYDROXIDE	10	NA	NF	NF	NF	5	NA	NA	
		NICKEL COBALT	1.5	NA	1 (05)	NA	NA NA	1 (04)	NA	10	
		MANGANESE	(.02) 5	NA NA	(.05)	NA NF	NA 3	(.01) 5	NA NA	NA NA	
		SODIUM HYDROXIDE	2	NA	2	NF NF	NF	2	NA	10	
		POTASSIUM HYDROXIDE	2	NA	2	NF	NF	NE	NA NA	NA	
8.2	Ventilation & Engineering	Use local or general exhaust ver									rom the use of this
	Controls:	product. Ensure appropriate dec									
8.3	Respiratory Protection:	No special respiratory protection									,
		necessary, use only respirator									
		§1910.134, or applicable U.S.	state r	egulatio							
		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			ested and	approved	l under ap	propriate	e gover	nment	
0.5	Hand Bastastian	standards such as NIOSH (US)								,	
8.5	Hand Protection:	Use gloves constructed of cher									
		frequent or prolonged contact is expected. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the									
8.6	Body Protection:		appropriate standards of Canada, or the EU member states.								
0.0	Body Frotcotton.	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 me					111000000	y, 10101 ·	o appic	priato	
	I.	,									
		9. PHYSICAL	_ & CI	HEMI	CAL P	ROPE	RTIES				
9.1	Appearance:	Grayish, greenish color (positive	electro	de).							
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	Boiling point of electrolyte is 212	2 °F (100	°C) (wa	ater).						
9.7	Range: Flashpoint:	259 °C (498 °F) - Hydrogen	,	, (-,-							
9.8	Upper/Lower Flammability										
	Limits:	NA									
9.9	Vapor Pressure:	11 mm Hg @ 77 °F									
9.10	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 NA									
9.14 9.15	Autoignition Temperature:	NA NA									
9.15	Decomposition Temperature: Viscosity:										
9.16	Other Information:	NA NA									
5.17	Salor information.	1 14/1									
		10. ST	ABII I	TY &	REAC	TIVITY	7				
10.1	Stability:	Stable under normal conditions;									
10.2	Hazardous Decomposition	Metal hydroxides (e.g., Ni(OH) ₂ ,					nO NiO a	tc) may	form if i	nvolvad	in a fire
40.0	Products:		wiii(OH)	∠, ८ .(८.) 8	and metal	OVINGO (IAIL	io, ivio, e	w.j iliay		ivoived	ııı a ııı c.
10.3	Hazardous Polymerization:	Will not occur.									
10.4	Conditions to Avoid:	Open flames, sparks, high heat, incompatible substances and direct sunlight.									
10.5	Incompatible Substances:	ble Substances: Avoid extreme heat and ignition sources. Store away from oxidizers. Do not exceed rated capacity.									



Page 4 of 6 **HFT-97872**

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): Alb. 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)



Page 5 of 6 **HFT-97872**

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SDS Revision: 1.1

SDS Revision Date: 7/25/2015

		15. REGULATORY INFORMATION – cont'd
15.7	State Regulatory Information:	Nickel Hydroxide is found on the following state criteria lists: California Proposition 65 (CA65), Massachusetts Hazardous Substances List (MA), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ) and Pennsylvania Right-to-Know List (PA). Nickel is found on the following state criteria lists: CA65, MA, MN, NJ and PA. Aluminum is found on the following state criteria lists: MA, MN, NJ and PA. Potassium Hydroxide is found on the following state criteria lists: Florida Toxic Substances List (FL), MA, MN, NJ, PA and Washington Permissible Exposures List (WA). Sodium Hydroxide is found on the following state criteria lists: FL, MA MN, NJ, PA and WA. Lithium Hydroxide is found on the following state criteria lists: MN. NOTE: This product contains a substance(s) known to the State of California to cause cancer, birth defects or other reproductive harm. 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 (CA65), Delaware Air Quality Management List (DE), 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 Exposures List (WA), Wisconsin Hazardous Substances List (MI).
15.8	Other Requirements:	The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC.
		Nickel Oxyhydroxide: Harmful (Xn). Risk Phrases (R): 40-43 - Limited evidence of carcinogenic effect. May cause sensitization by skin contact. Safety Phrases (S): 36-60-61 Wear suitable protective clothing. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions. Potassium Hydroxide: Corrosive (C). Risk Phrases (R): 22-43 - Harmful if swallowed. Causes severe burns. Safety Phrases (S): 26-36/37/39-45 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and
		eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately
		(show the label where possible). Sodium Hydroxide: Corrosive (C). Risk Phrases (R): 22-43 - Harmful if swallowed. Causes severe burns. Safety Phrases (S): 26-36/37/39-45 - In case of contact with eyes, rinse immediately with
		plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
		16. OTHER INFORMATION
16.1	Other Information:	DANGER! CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. HARMFUL IF SWALLOWED. Do not breathe fumes/mist/vapour/spray. Wash hands and exposed skin areas with soap and warm water thoroughly after handling. Avoid release to the environment. Wear protective gloves/eye protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. KEEP OUT OF REACH OF CHILDREN. WARNING: Use only the specified chargers according to device manufacturer's instructions. Do not open battery, dispose of in fire or short circuit-may explode, leak or get hot causing personal injury. Caution: do not use if case is cracked. NON-SPILLABLE BATTERY. WARNING: This product contains a substance(s) known to the State of California to cause cancer, birth defects or other reproductive harm.
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.
16.3	Disclaimer:	This Safety Data Sheet 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 ShipMate's & Harbor Freight Tools USA, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is 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.
16.4	Prepared for:	Harbor Freight Tools USA, Inc.
		26541 Agoura Road Calabasas, CA 91302 USA Tel: +1 (805) 388-1000 Http://www.behorfreight.com/
16.5	Prepared by:	http://www.harborfreight.com/ ShipMate, Inc.
	.,	P.O. Box 787 Sisters, Oregon 97759-0787 USA
		Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700
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Page 6 of 6 **HFT-97872**

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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	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.

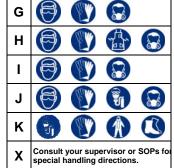
HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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	
Ε			
F	(ET)		





Splash Goggle











Dust Respirat







Airline Hood/Mask or SCBA

OTHER STANDARD ABBREVIATIONS:

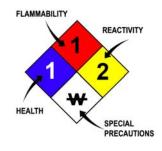
ML	Maximum Limit		
mg/m3	milligrams per cubic meter		
NA	Not Available		
ND	Not Determined		
NE	Not Established		
NF	Not Found		
NR	No Results		
ppm	parts per million		
SCBA	Self-Contained Breathing Apparatus		

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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	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:

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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. T		M	*		9	×	×
С	Е	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