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

SDS Revision: 1.0

SDS Revision Date: 5/14/2015

1.	PRODUCT	ጼ	COMPANY IDENTIFICATION
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1.1	Product Name:	BATTERY FOR 4 PC WHITE LED SOLAR LIGHT SET			
1.2	Chemical Name:	Nickel-Cadmium Battery			
1.3	Synonyms:	P/N 61444			
1.4	Trade Names:	Luminar Outdoor			
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			
1.9	Business Phone / Fax:	+1 (805) 388-1000			

#### 2. HAZARDS IDENTIFICATION

2.1 Hazard Identification: This product is

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).

**NOTE**: Under normal conditions of battery use, internal components will not present a health hazard. The following information is provided for battery electrolyte (acid) for exposure that may occur during container breakage or under extreme heat conditions such as fire.

DANGER! HARMFUL IF SWALLOWED. CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. MAY CAUSE CANCER. VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

Classification: Carc. 1; Acute Tox. 4; Skin Irrit. 2; Skin Sens. 1; Aq. Chronic 1

<u>Hazard Statements</u> (H): H302 – Harmful if swallowed. H315 – Causes skin irritation. H317 – May cause an allergic skin reaction. H350 – May cause cancer. H410 – Very toxic to aquatic life with long lasting effects.

Precautionary Statements (P): P261 – Avoid breathing dust/fume/gas/mist/vapors. P264 – Wash hands and exposed skin areas with soap and warm water thoroughly after handling. P270 – Do not eat, drink or smoke while sing this product. P272 – Contaminated work clothing should not be allowed out of the workplace. P273 – Avoid release to the environment. P280 – Wear protective gloves/eye protection. P301+P312 – IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P330 – Rinse mouth. P302+P352 – IF ON SKIN: Wash with plenty of warm water and soap. P332+P313 – If skin irritation occurs: Get medical advice/attention. P362+P364 – Take off contaminated clothing and wash it before reuse. P391 – Collect spillage. P501 – Dispose of contents/container to licenses treatment, storage and disposal facility (TSDF).

<u>IF INGESTED</u>: CALL THE NATIONAL BATTERY INGESTION HOTLINE AT +1 (202) 625-3333 COLLECT, DAY OR NIGHT. IN CANADA, CALL +1 (416) 813-5900.



#### 3. COMPOSITION & INGREDIENT INFORMATION

					EXPOSURE LIMITS IN AIR (mg/m³)								
					ACC	SIH		NOHSC			OSHA		
					pp	m		ppm			ppm		
CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	TLV	STEL	ES- TWA	ES- STEL	ES- PEAK	PEL	STEL	IDLH	OTHER
IRON (STEEL)	7439-89-6	NO4565500	231-096-4	20-60	(5)	NA	NF	NF	NF	(10)	NA	NA	0.5 - NIOSH
IKON (STEEL)	Acute Tox. 4;	Skin Corr. 1A; H3	02, H314										
CADMIUM OXIDE	1306-19-0	EV1930000	215-146-2	15-40	(0.002)	NA	NF	(0.01)	NF	NA	NA	9	
CADINION OXIDE	Acute Tox. 2;	Muta. 2; Carc. 1B	; Repr. 2; STOT	RE 1; Aq.	Acute 1	; Aq. C	hronic 1	l; H301	, H330,	H341,	H350, H	<del>1</del> 361, ⊦	l372, H410
	12054-48-7	QR7040000	235-008-5	15-40	(1)	NA	NF	NF	NF	NA	NA	NA	(0.15) NIOSH
NICKEL HYDROXIDE	Acute Tox. 4; Skin Irrit. 2; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1A; Repr. 1B; STOT RE 1; Aq. Acute 1; Aq. Chronic 1; H302+H332, H315, H317, H334, H341, H350, H360, H372, H410								nronic 1;				
NICKEL	7440-02-0	QR5950000	231-111-4	5-10	(1.5)	NA	(1)	NF	NA	NA	NA	(10)	
NICKEL	Carc. 2; STO	Carc. 2; STOT RE 1; Skin Sens. 1; Aquatic Chronic 3; H351, H372**, H317, H412											
DOTA COULINA LIVEDE OVIDE	1310-58-3	TT2100000	215-181-3	3-7	NA	NA	(2)	NF	NF	NA	NA	NA	
POTASSIUM HYDROXIDE	Acute Tox. Oral 4; Acute Tox. Inh. 4; H302, H332												
SODIUM HYDROXIDE	1310-73-2	WB4900000	215-185-5	1-3	2	NA	2	NF	NF	2	NA	10	
30DIOW TT DROXIDE	Skin Corr. 1A;	H314											
LITHIUM HYDROXIDE	1310-65-2	OJ6307070	215-183-4	1-3	NA	NA	NF	NF	NF	NA	NA	NA	
LITHIOW HTDROXIDE	Acute Tox. 4,	Skin Corr. 1B											
CORAL T OVIDE	1307-96-6	NA	215-154-6	1-3	(0.02)	NA	(0.02)	NF	NF	NA	NA	NA	
COBALT OXIDE	Acute Tox. 4;	Skin Sens. 1; Aqu	atic Acute 1; Aq	uatic Chro	nic 1; H	302, H3	317, H4	00, H4′	10				



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			4. FIRST AID MEASURES				
4.1	First Aid:	Ingestion:	Give large quantities of water, but do NOT induce vounconscious person. Contact the nearest Poison Control assistance and instructions. Seek immediate medical at victim's head lowered (forward) to reduce the risk of aspir.	Center or letention. If	ocal emerge	ncy telephone i	number for
		Eyes:	If product gets in the eyes, flush eyes thoroughly with co- holding eyelid(s) open to ensure complete flushing. If the use, consult a physician or emergency room immediately.	eyes or fac			
		Skin:	If an open battery cell: Remove contaminated clothing a discomfort persists and/or the skin reaction worsens, contaminated clothing until after it has been properly clear	nd wash af contact a			
		Inhalation:	Remove victim to fresh air at once. Under extreme respiration. Seek immediate medical attention.		if breathing	g stops, perfor	m artificial
4.2	Effects of Exposure:	Ingestion:	May cause severe irritation of mouth, throat, esophage cadmium compounds may cause abdominal pain, nausea				
		Eyes:	Severe irritation, burns, cornea damage, blindness.				
		Skin:	Severe irritation, burns, and ulceration if open battery cell				
4.3	Symptoms of Overexposure:	Inhalation: Ingestion:	Inhalation of metal dust or fumes may cause irritation of u Severe discomfort, nausea, vomiting and headache. H				racion and
4.0	Cymptomo or everexpessure.	ingestion.	permanent tissue destruction of the esophagus and diges		swallowed. It	nay cause cor	1051011 allu
		Eyes:	May cause irreversible eye injury. Contact with eyes may Severe irritation, redness, and watering.	/ cause sev	ere irritation	n, and possible	eye burns.
		<u>Skin</u> :	Severe skin irritation, red, itching skin, burns and ulcera skin.		•		
		Inhalation:	May cause cyanosis (bluish discoloration of skin due to clead to chemical pneumonitis and pulmonary edema. In which is characterized by flu-like symptoms with metallic muscle pain and increased white blood cell count. Causes	halation of taste, feve	fumes may r, chills, cou	cause metal f gh, weakness,	ume fever, chest pain,
4.4	Acute Health Effects:	Hazardous e	exposure can occur only when product is heated above the				
		damaged to create dust, vapor, or fume. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns or mouth, esophagus, and gastrointestinal tract. Contents include toxic cadmium and cadmium compounds which can cause excessive salivation, choking, nausea, persistent vomiting, diarrhea, abdominal pain, dizziness, faintness, unconsciousness, and possible liver and kidney injury.					
4.5	Chronic Health Effects:		osure may cause effects similar to those of acute exposure.		amage to or	gans through pi	olonged or
4.6	Target Organs:	Skin, Respira	atory System, Central Nervous System (CNS)				
4.7	Medical Conditions Aggravated by Exposure:	NA		HEALTH	l e		3
	riggiarated by Expedition			FLAMM.	ABILITY		0
				PHYSIC	AL HAZAF	RDS	0
				PROTE	CTIVE EQU	JIPMENT	X
				EYES	SKIN	LUNGS	
			5. FIREFIGHTING MEASURES				
5.1	Fire & Explosion Hazards:	This materia	al can burn but will not readily ignite. However, if involve	d in a fire,	this produc	t may	
		temperatures	at high temperatures to form toxic gases (e.g., CO, $CO_X$ , s above 212 °F can cause venting of the liquid electrolyte. Potential for exposure to cadmium to carbon and the electrolyte.	Internal s	horting could	d also	
5.2	Extinguishing Methods:		eathing apparatus.				U
5.3	Firefighting Procedures:	Use extingu containers. F chemical, ca quantities of sewers, drai gear includii	CO <sub>2</sub> , Dry Chemical, Alcohol Foam. Use water spray to cool containers.  Use extinguishing media most appropriate for the surrounding fire. Do NOT get water inside containers. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect				
		against pote	ntial hazardous combustion or decomposition products and	oxygen def	riciencies.		



8.6

Body Protection:

### SAFETY DATA SHEET

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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards SDS Revision: 1.0 SDS Revision Date: 5/14/2015 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. <u>Large Spills</u>: 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. Collect in acidresistant container. Keep spills and cleaning runoffs out of drains, municipal sewers and open bodies of water. 7. HANDLING & STORAGE INFORMATION Work & Hygiene Practices: 7 1 Do not eat, drink or smoke when handling this product. Handle as to avoid puncturing container(s). 72 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. Store at a cool and constant temperature. Never seal or encapsulate nickel cadmium batteries. Encapsulating (or potting) of batteries will not allow cell venting and can cause high pressure rupture. Accidental short circuit for a few seconds will not seriously affect the battery. But prolonged short circuit will cause the 7.3 Special Precautions: battery to lose energy, and can cause the safety release vent to open. Prolonged short-circuits will cause high cell temperatures which can cause skin burns. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, and metal covered tables or metal belts used for assembly of batteries into devices. Do not open the battery. The negative electrode material may be pyrophoric. Should an individual cell from a battery become disassembled, spontaneous combustion of the negative electrode is possible. This is much more likely to happen of the electrode is removed from its metal container. Here can be a delay between exposure to air and spontaneous combustion. If soldering or welding to the battery is required, use of tabbed batteries is recommended. If this cannot be done, consult the manufacturer for proper precautions to prevent seal damage or short-circuit. WARNING. CHARGE ONLY WITH SPECIFIED CHARGERS ACCORDING TO DEVICE MANUFACTURER'S INSTRUCTIONS. DO NOT OPEN BATTERY, DISPOSE OF IN FIRE OR SHORT-CIRCUIT - MAY IGNITE, EXPLODE, LEAK OR GET HOT CAUSING PERSONAL INJURY. 8. EXPOSURE CONTROLS & PERSONAL PROTECTION NOHSC 8.1 Exposure Limits: **ACGIH** OSHA OTHER ppm (mg/m<sup>3</sup>) ES-TWA CHEMICAL NAME(S) TLV STEL ES-STEL STEL IDLH **ES-PEAK** PEL IRON (STEEL) (5) NA NF NF NF (10)NA NA 0.5 - NIOSH **CADMIUM OXIDE** (0.002)NA NF (0.01)NF NA NA (9)NICKEL HYDROXIDE (0.15) NIOSH (1) NA NF NF NF NA NA NA POTASSIUM HYDROXIDE NA NA NF NF NA NA (2) NA SODIUM HYDROXIDE NA 2 NA 2 NF NF 2 10 (1) (0.02) **NICKEL** (1.5)NA NF NA NA NA (10)NF NF NA NA NA COBALT OXIDE (0.02)NA 8.2 Ventilation & Engineering General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general Controls exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station) Respiratory Protection: No special respiratory protection is required under typical circumstances of use or handling. In 8.3 instances where mist or vapors of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia. Avoid eye contact. ANSI approved safety glasses with side shields should be used when handling or 8.4 Eve Protection: using this sealed electric storage battery. 8.5 Hand Protection: Use gloves constructed of chemical-resistant materials such as neoprene or heavy nitrile rubber 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.

be available.

No apron required when handling sealed undamaged battery. Where contact is likely, corrosion-resistant apron, clothing and boots should be worn. Eye wash stations and deluge showers should



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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards SDS Revision: 1.0 SDS Revision Date: 5/14/2015 9. PHYSICAL & CHEMICAL PROPERTIES Appearance: NA 92 Odor NA Odor Threshold: 9.3 NA 9.4 NA 9.5 Melting Point/Freezing Point: NA Initial Boiling Point/Boiling 9.6 NA 9.7 Flashpoint: NA 9.8 Upper/Lower Flammability NA Vapor Pressure: 99 NA 9.10 Vapor Density: NA Relative Density: 9.11 NA Solubility: 9.12 NA 9.13 Partition Coefficient (log Pow): NA 9.14 Autoignition Temperature NA 9.15 Decomposition Temperature: NA NA 9.17 Other Information: NA 10. STABILITY & REACTIVITY 10.1 Stability: Stable under normal conditions; unstable with heat or contamination Hazardous Decomposition 10.2 Oxides of carbon (CO, CO<sub>2</sub>). Thermal degradation may produce hazardous fumes of cadmium and nickel, hydrogen gas, caustic vapors of potassium hydroxide and other hazardous by-products. 10.3 Hazardous Polymerization: Will not occur. 10.4 Conditions to Avoid: Open flames, sparks, high heat, incompatible substances and direct sunlight, and incompatible substances. 10.5 Incompatible Substances: Avoid extreme heat and ignition sources. Store away from oxidizers. Do not exceed heat, crush, disassemble, shortcircuit or recharge. 11. TOXICOLOGICAL INFORMATION Inhalation: NO Absorption: YES 11.1 Routes of Entry: 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 and is presented below: Cadmium Oxide: LD<sub>50</sub> (oral, rat): 63-259 mg/kg; Nickel Hydroxide: LD<sub>50</sub> (oral, rat): 1,540 mg/kg; Cobalt Oxide: LD<sub>50</sub> rat): 202 mg/kg; Potassium Hydroxide: LD50 (oral, rat): 273 mg/kg; Lithium Hydroxide: LD50 (oral, rat): 210 mg/kg 11.3 Acute Toxicity: See Section 4.4 Chronic Toxicity: 11.4 See Section 4.5 Nickel is listed as IARC Group 2B (Possibly carcinogenic to humans); NTP13 Group 1 (Known human carcinogen); 11.5 Suspected Carcinogen: CA65 (cancer). Nickel Hydroxide is listed as IARC Group 1 (Carcinogenic to humans); NTP13 Group 1 (Known human carcinogen). Cadmium Oxide is listed as IARC Group 1 (Carcinogenic to humans); NTP13 Group 1 (Known human carcinogen). Nickel is listed as IARC Group 2B (Possibly carcinogenic to humans); NTP13 Group 1 (Known human carcinogen); CA65 (cancer). 11.6 Reproductive Toxicity: Cadmium Oxide is reported to cause reproductive effects in humans. Mutagenicity This product has been reported to produce mutagenic effects in animals (mouse) Embryotoxicity: This product is not reported to produce embryotoxic effects in humans. Teratogenicity: Cadmium Oxide is reported to cause reproductive effects in animals. Reproductive Toxicity: <u>Cadmium Oxide</u> is reported to cause reproductive effects in humans. Irritancy of Product: 11.7 The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure. Biological Exposure Indices: 118 11.9 Physician Recommendations: Treat symptomatically and supportively. 12. ECOLOGICAL INFORMATION 12.1 **Environmental Stability** There are no specific data available for this product. Effects on Plants & Animals 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. 13.2 Special Considerations: NA



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		14. TRANSPORTATION I	NFORMATION				
	he basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional lescriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.						
14.1	49 CFR (GND):	NOT REGULATED					
14.2	IATA (AIR):	NOT REGULATED					
14.3	IMDG (OCN):	NOT REGULATED					
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					
					<u> </u>		
15.4		15. REGULATORY INF					
15.1	SARA Reporting Requirements:	This product contains <u>Nickel Hydroxide</u> , <u>Nickel</u> and <u>S</u> of Section 313 of SARA Title III and 40 CFR Part 373	•		rting requirements		
15.2	SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities f	or the components of this prod	luct.			
15.3	TSCA Inventory Status:	The components of this product are listed on the TSC	A Inventory or are otherwise of	exempt.			
15.4	CERCLA Reportable Quantity (RQ):	Nickel: 45.4 kg (100 lbs)					
15.5	Other Federal Requirements:	Cadmium (and its compounds), Cobalt (and its comp Pollutants (HAPs) under the Clean Air Act (CAA).  Nickel (and its compounds) listed as Toxic Pollutants and Nickel (and its compounds) are listed as Priority 1 or Class 2 ozone depletors.	<u>Cadmium</u> (and its compound under the Clean Water Act (C	ds), <u>Cobalt</u> (and its WA). <u>Cadmium</u> (a	compounds) and nd its compounds)		
15.6	Other Canadian Regulations:	This product has been classified according to the has Sheet contains all of the information required by the listed on the DSL/NDSL. None of the components Substances List. WHMIS D1, D2B (Toxic, Other Toxic)	e CPR. The components of s of this product are listed of	this product are			
15.7	State Regulatory Information:	Cadmium Oxide can be found on the following star Hazardous Substances List (MA), Minnesota Hazar Pennsylvania Right-to-Know List (PA), and Washington Nickel Hydroxide is listed on the following state criteria Nickel is listed on the following state criteria Nickel is listed on the following state criteria No other ingredients in this product, present in a concriteria lists: California Proposition 65 (CA65), Delawa (FL), Illinois Hazardous Substances List (MI), Minnesota Hazardous Substances List (MI), Minnesota Hazardous Substances List (NY), Pennsylvania Righ Washington Permissible Exposures List (WA), Wiscon WARNING: This product contains a substance(s) knoreproductive harm. California law requires this warning	dous Substances List (MN), on Permissible Exposures List a lists: California Proposition 6 MA, MI, MN, NJ, PA, and WA. riteria lists: FL, MA, MN, NJ, PA, artia lists: FL, MA, MN, NJ, PA, centration of 1.0% or greater, are Air Quality Management Lists achusetts Hazardous Substances List (MN), New Jersey t-to-Know List (PA), Rhode Islain Hazardous Substances List (MN) to the State of California to	New Jersey Right- (WA). 5 (CA65), MA, NJ, and WA. and WA. are listed on any of st (DE), Florida Tox stances List (MA), Right-to-Know Lis and Hazardous Su st (WI). o cause cancer, bir	the following state tic Substances List Michigan Critical st (NJ), New York bstances List (RI), th defects or other		
15.8	Other Requirements:	The primary component of this product is listed in And Cadmium Oxide: Toxic, Harmful (T+, N). Risk Ph Very toxic by inhalation. May cause cancer. To prolonged exposure through inhalation and if swallow Very toxic to aquatic organisms - may cause long-ter Safety Phrases (S): S45-53-60-61 – In case of accidinmediately (show the label where possible). Avoid use. This material and its container must be dispose environment. Refer to special instructions/safety data Nickel Hydroxide: Harmful (Xn). Risk Phrases (R): 4 May cause sensitization by skin contact. Safety Pclothing. This material and its container must be distored to the environment. Refer to special instructions.  Potassium Hydroxide: Corrosive (C). Risk Phrases severe burns. Safety Phases (S): 26-36/37/39-45 - I with plenty of water and seek medical advice. Weye/face protection. In case of accident or if you f (show the label where possible).	rases (R): R26-45-48/23/25-6 xic: danger of serious dama yed. Possible risk of harm to the adverse effects in the aquation of it you feel unwell seek exposure - obtain special inside of as hazardous waste. Avoisheet.  0-43 - Limited evidence of carthases (S): 36-60-61 Wear supposed of as hazardous waste.  (R): 22-43 - Harmful if swall in case of contact with eyes, river suitable protective cloth	2-63-68-50/53 – ge to health by he unborn child. tic environment. medical advice structions before id release to the cinogenic effect. itable protective . Avoid release lowed. Causes nse immediately ing, gloves and			



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		16. OTHER INFO	DRMATION			
16.1	Other Information:	DANGER! HARMFUL IF SWALLOWED. CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. MAY CAUSE CANCER. VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.  Avoid breathing dust/fume/gas/mist/vapors. Wash hands and exposed skin areas with soap and warm water thoroughly after handling. Do not eat, drink or smoke while sing this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/eye protection. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of warm water and soap. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage. Dispose of contents/container to licenses treatment, storage and disposal facility (TSDF).  IF INGESTED: CALL THE NATIONAL BATTERY INGESTION HOTLINE AT +1 (202) 625-3333 COLLECT, DAY OR NIGHT. IN CANADA, CALL +1 (416) 813-5900. KEEP OUT OF REACH OF CHILDREN.  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.harborfreight.com				
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.

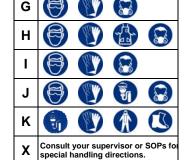
#### HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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



#### PERSONAL PROTECTION RATINGS:

1 LIV	SONAL I	KOILC	IION KA	TINGS.
Α				
В				
С				
D	固			
Е				
F				





Splash Goggl





Safety Glasses





Roots

Synthetic Apron

& Full Suit

Airline Hood/Mask or SCBA

# Full Face Respirator Dust & Vapor Half-Mask Respirator OTHER STANDARD ABBREVIATIONS:

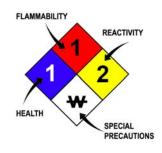
ML	Maximum Limit	
mg/m3	milligrams per cubic meter	
NA	Not Available	
ND	Not Determined	
NE	Not Established	
NF	Not Found	
NR	No Results	
ppm	parts per million	
SCBA	Self-Contained Breathing Apparatus	

#### 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	
₩	Use No Water	
ох	Oxidizer	
TREFOIL	Radioactive	



#### TOXICOLOGICAL INFORMATION:

TOXICOLOGICAL IN CHIMATION.					
LD <sub>50</sub>	Lethal Dose (solids & liquids) which kills 50% of the exposed animals				
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>lo</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				
TL <sub>m</sub>	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				
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:

0	<b>③</b>	<b>(2)</b>		$\odot$	(1)		
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:

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С	Е	F	N	0	Т	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

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

			$\Diamond$			<b>\</b>		
GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environ- ment