HARBOR FREIGHT TOOLS

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# **SAFETY DATA SHEET**

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

+1 (805) 388-1000

SDS Revision: 1.1

SDS Revision Date: 7/25/2015

1. PRODUCT & COMPANY IDENTIFICATION					
Product Name:	4 IN 40 GRIT METAL CUT-OFF WHEEL 10 PC				
Chemical Name:	Aluminum Oxide				
Synonyms:	P/N 45432				
Trade Names:	Warrior				
Product Uses & Restrictions:	Abrasive Wheel				
Distributor's Name:	Harbor Freight Tools USA, Inc.				
Distributor's Address:	26541 Agoura Road, Calabasas, CA 91302 USA				
Emergency Phone:	CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 676687)				

#### 2. HAZARDS IDENTIFICATION

Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE, but not as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). WARNING! MAY CAUSE AN ALLERGIC SKIN REACTION. MAY BE HARMFUL IF INHALED. Classification: Skin Sens. 1B; Acute Tox. Inh. 5 Hazard Statements (H): H317 - May cause an allergic skin reaction. H333 - May be harmful if Precautionary Statements (P): P261 - Avoid breathing dust. P304 + P312 - IF INHALED: Call a POISON CENTER/doctor if you feel unwell. P280 - Wear protective gloves/eye protection/face protection. P302+P352 - IF ON SKIN - Wash with soap and water. P333+P313 - If skin irritation occurs: Get medical advice/attention. P501 - Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF).



#### 3. COMPOSITION & INGREDIENT INFORMATION

					EXPOSURE LIM				IMITS IN	MITS IN AIR (mg/m³)			
					AC	GIH		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
ALLIMINIUM OVIDE	1344-28-1	BD1200000	215-691-6	60-100	(10)	NA	NF	NF	NF	(10)	NA	NA	
ALUMINUM OXIDE	Skin Sens. 1B;	Acute Tox. Inh. 5	5; H317, H333										
DUENOUS DECIN	9003-35-4	NA	500-005-2	10-30	NA	NA	NF	NF	NF	NA	NA	NA	
PHENOLIC RESIN													
CALCULA OLU FATE DU IVEDATE	1010-41-4	EW4150000	231-900-3	1-5	NA	NA	NF	NF	NF	NA	NA	NA	
CALCIUM SULFATE DIHYDRATE													

			4. FIRST AID MEASURES
4.1	First Aid:	Ingestion:	Ingestion unlikely; however, if ingested, do not induce vomiting. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.
		Eyes:	If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes lifting upper and lower lids, occasionally.
		Skin:	Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at least 15 minutes.
		Inhalation:	Remove victim to fresh air at once. If breathing is difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.
4.2	Effects of Exposure:	Ingestion:	If product is swallowed, may cause gastrointestinal disturbance.
		Eyes:	Exposure to dust may cause eye irritation. Symptoms of overexposure may include redness, itching, irritation and watering.
		Skin:	May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.
		Inhalation:	Coughing, wheezing, shortness of breath, impaired pulmonary function. Irritation or soreness in throat, nose and respiratory tract.

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HFT-45432 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 - cont'd 4.3 Symptoms of Overexposure: If product is swallowed, may cause gastrointestinal disturbance. Ingestion: Exposure to dust may cause eye irritation. Symptoms of overexposure may include redness, itching, Eyes: irritation and watering. May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in Skin: some sensitive individuals. Inhalation: Coughing, wheezing, shortness of breath, impaired pulmonary function. Irritation or soreness in throat, nose and respiratory tract. 4.4 Acute Health Effects: Non-irritating when used as directed. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of dust can cause coughing, wheezing, shortness of breath, impaired pulmonary function. Irritation or soreness in throat, nose and respiratory tract. Chronic Health Effects: 4.5 Non-irritating when used as directed. Possible allergic dermatitis in some sensitive individuals 4.6 Target Organs: Eyes, Skin, Lungs, Respiratory System. 4.7 Medical Conditions Pre-existing dermatitis, other skin conditions. **HEALTH** 1 Aggravated by Exposure: **FLAMMABILITY** 0 PHYSICAL HAZARDS 0 PROTECTIVE EQUIPMENT В **EYES** SKIN 5. FIREFIGHTING MEASURES 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, CO<sub>2</sub> Hydrocarbons). Burning or thermal decomposition can produce the following combustion or decomposition products: Phenol, Formaldehyde, Carbon Monoxide and/or carbon dioxide. Carbon Monoxide is highly toxic if inhaled Carbon dioxide in sufficient concentration can act as an asphyxiant. 5.2 Extinguishing Methods: CO<sub>2</sub>, Dry Chemical, Foam. Use water spray to cool containers. 5.3 Firefighting Procedures: Keep containers cool until well after the fire is out. Fight fires as for surrounding materials. As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fireexposed surfaces and to protect personnel. Fight fire upwind. 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 potential hazardous combustion or decomposition products and oxygen deficiencies. 6. ACCIDENTAL RELEASE MEASURES Spills: Before cleaning any spill individuals involved in cleanup must wear appropriate Personal Protective Equipment. Plastic or rubber gloves, respirator, eye protection and apron may be required for clean-up of large spills. No special precautions are required for intact packaging containing this product. If product is crushed, use respiratory protection equipment. Do not use compressed air to clean up any residue. Use a wet method or vacuums equipped with High Efficiency Particulate (HEPA) filters to clean up any residues from this product. Waste must be placed in dust tight containers or sealed plastic bags for disposal. Label properly. Keep spills and cleaning runoffs out of drains, municipal sewers and open bodies of water. 7. HANDLING & STORAGE INFORMATION Work & Hygiene Practices: Do not eat, drink or smoke when handling this product. Wash unintentional residues with soap and warm water. 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. Avoid temperatures above 120 °F. Keep away from incompatible substances. Special Precautions: Clean all dusts and particulates promptly as they present a slip and fall hazard. 7.3 8. EXPOSURE CONTROLS & PERSONAL PROTECTION 8.1 Exposure Limits: ACGIH NOHSC OSHA OTHER ppm (mg/m<sup>3</sup>) STE ES-TWA TLV STEL ES-STEL ES-PEAK IDLH CHEMICAL NAME(S) PFI **ALUMINIUM OXIDE** (10)NA NF NF NF (10) NA 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 dusts generated from the use of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station) Respiratory Protection: 8.3 In instances where dusts are generated when using this product, 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.



Teratogenicity:

11.7

11.8

11.9

Reproductive Toxicity:

Biological Exposure Indices:

Physician Recommendations:

NE

Treat symptomatically.

Irritancy of Product:

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HFT-45432 Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards SDS Revision: 1.1 SDS Revision Date: 7/25/2015 8. EXPOSURE CONTROLS & PERSONAL PROTECTION 8.4 Eye Protection: Avoid eye contact. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU) 8.5 Hand Protection: Heavy-duty work gloves recommended under normal conditions of use to avoid abrasions and reduce risk of exposure to hands. 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: No apron required under normal circumstances; however, it is recommended. Upon completion of work activities using this product), wash any exposed areas thoroughly with soap and water. If necessary, refer to appropriate standards of Canada, the EU member states, or U.S. OSHA. 9. PHYSICAL & CHEMICAL PROPERTIES Dark brown to black solid article Appearance: 9.2 Odor: Odorless 9.3 Odor Threshold: NA 9.4 NA 9.5 Melting Point/Freezing Point: 2100 °C (3812 °F) - Alumina 9.6 Initial Boiling Point/Boiling NA Range: 9.7 Flashpoint: NA 9.8 Upper/Lower Flammability NA Limits: 9.9 Vapor Pressure: NA 9.10 Vapor Density: NA 9.11 Relative Density: 2.0 9.12 Solubility: Insoluble 9.13 Partition Coefficient (log Pow) NA 9.14 Autoignition Temperature: NA 9.15 Decomposition Temperature: NA 9.16 Viscosity NA 9.17 Other Information: NA 10. STABILITY & REACTIVITY 10.1 Stability: Stable under normal conditions. 10.2 Hazardous Decomposition Oxides of carbon (CO, CO<sub>2</sub>), metal oxides, particulates. Products: Hazardous Polymerization: 10.3 10.4 Conditions to Avoid: Open flames, high heat, incompatible substances and direct sunlight. 10.5 Incompatible Substances: Avoid extreme heat and ignition sources. Store away from oxidizers, strong acids and alkalis. 11. TOXICOLOGICAL INFORMATION Inhalation: YES 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: NA Reproductive Toxicity: This product is not reported to produce 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.

This product is not reported to cause teratogenic effects in humans.

This product is not reported to cause reproductive effects in humans.

The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.

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Quality Teols at Ridiculously Low Prices

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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 12. ECOLOGICAL INFORMATION 12.1 Environmental Stability: There are no specific data available for this product 122 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: 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** 14.1 14.2 IATA (AIR): **NOT REGULATED** 14.3 IMDG (OCN): NOT REGULATED TDGR (Canadian GND): 14.4 **NOT REGULATED** ADR/RID (EU): 14.5 **NOT REGULATED** SCT (MEXICO): 14.6 NOT REGULATED 14.7 ADGR (AUS): NOT REGULATED 15. REGULATORY INFORMATION SARA Reporting 15.1 This product contains Aluminum Oxide, a substance subject to SARA Title III, Section 313 reporting requirements. Requirements 15.2 SARA Threshold Planning There are no specific Threshold Planning Quantities for the components of this product. 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 Other Federal Requirements: None of the ingredients are listed as Hazardous Air Pollutants (HAPs). None of the ingredients are listed as Toxic 15.5 Pollutants under the Clean Water Act (CWA). None of the ingredients are listed as Priority Pollutants under the Clean Water Act (CWA). This product does not contain any Class 1 or Class 2 ozone depletors. 15.6 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 product are listed on the Priorities Substances List. WHMIS D2B (Other Toxic Effects). 15.7 State Regulatory Information: Alumina (Aluminum Oxide) is found on the following state criteria list: Massachusetts Hazardous Substances List (MA, Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), and Washington Permissible Exposures List (WA). 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 (WI). NOTE: This product contains a substance(s) known to the State of California to cause cancer, birth defects, or other 15.8 Other Requirements: The primary components of this product are listed in Annex I of EU Directive 67/548/EEC: Harmful (Xn). Risk Phrases (R): 20-38 - Harmful if inhaled. Irritating to skin. Safety Phrases (S): 2-23-24-62 - Keep away from children. Do not breathe dust. Avoid contact with skin. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label where

possible.

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Quality Tools at Ridiculously Low Prices

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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 16. OTHER INFORMATION Other Information: WARNING! MAY CAUSE AN ALLERGIC SKIN REACTION. MAY BE HARMFUL IF INHALED. Avoid breathing dust. IF INHALED: Call a POISON CENTER/doctor if you feel unwell. Wear protective gloves/eye protection/face protection. IF ON SKIN - Wash with soap and water. If skin irritation occurs: Get medical advice/attention. KEEP OUT OF REACH OF CHILDREN. NOTE: 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 HARBOR FREIGHT TOOLS

Quality Tools at Ridiculously Low Prices Calabasas, CA 91302 USA Tel: +1 (805) 388-1000 http://www.harborfreight.com 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:

	1111400.





Splash Gogg









Protective Clothing & Full Suit

Dust Respirator

**Full Face Respirator** 

Dust & Vapor Half-Mask Respirator



Airline Hood/Mask or SCBA

#### OTHER STANDARD ABBREVIATIONS:

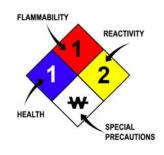
ML	Maximum Limit		
mg/m3	milligrams per cubic meter		
NA Not Available			
ND	Not Determined		
NE Not Established			
NF Not Found			
NR No Results			
ppm parts per million			
SCBA	Self-Contained Breathing Apparatus		

### NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:					
Autoignition Minimum temperature required to initiate combustion in air with no othe 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>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:

***************************************	WORLD ENGLISHED OF MAKE LINES IDENTIFIED (WILLIAM) OF OF EMIL									
0	<b>(4)</b>	<b>(</b>	<b>②</b>	<b>(T)</b>	<b>®</b>		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:

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

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

			$\Diamond$			$\Diamond$		<b>(</b> *)
GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment