SAFETY DATA SHEET

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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 1. PRODUCT & COMPANY IDENTIFICATION 1.1 Product Name: 3 IN 60 GRIT THIN METAL CUT-OFF WHEEL 10 PC 1.2 Chemical Name: Aluminum Oxide 1.3 Synonyms P/N 96550 1.4 Trade Names: Warrior 1.5 Product Uses & Restrictions: Abrasive Wheel 1.6 Distributor's Name: Harbor Freight Tools USA, Inc. Distributor's Address: 1.7 26541 Agoura Road, Calabasas, CA 91302 USA Emergency Phone: CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 676687) 1.8 19 Business Phone / Fax: +1 (805) 388-1000 2. HAZARDS IDENTIFICATION Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE, but not as DANGEROUS GOODS 2.1 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 inhaled. 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 LIMITS IN AIR (mg/m³) ACGIH NOHSC OSHA ppm ppm ppm ES ES-ES-STEL CHEMICAL NAME(S) CAS No. RTECS No. EINECS No. % TLV STEI TWA STEL PEAK PEL IDLH OTHER 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; H317, H333 10-30 NA NA NF NF NF NA NA NA 9003-35-4 NA 500-005-2 PHENOLIC RESIN 1010-41-4 EW4150000 NA NA NF NF NF NA NA 231-900-3 1-5 NA CALCIUM SULFATE DIHYDRATE 4. FIRST AID MEASURES Ingestion unlikely; however, if ingested, do not induce vomiting. Contact the nearest Poison Control Center 4.1 First Aid: Ingestion: 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. If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes lifting Eyes: upper and lower lids, occasionally. Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at <u>Skin</u>: 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. Effects of Exposure: 4.2 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. Skin: May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals. Coughing, wheezing, shortness of breath, impaired pulmonary function. Irritation or soreness in throat, Inhalation: nose and respiratory tract.

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HFT-96550 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 43 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 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. 4.5 Chronic Health Effects: 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 0 PHYSICAL HAZARDS **PROTECTIVE EQUIPMENT** В 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). 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: CO₂, Dry Chemical, Foam. Use water spray to cool containers. 53 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 Before cleaning any spill individuals involved in cleanup must wear appropriate Personal Protective Equipment. Plastic 6.1 Spills 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 7.1 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. 7.3 Special Precautions: Clean all dusts and particulates promptly as they present a slip and fall hazard. 8. EXPOSURE CONTROLS & PERSONAL PROTECTION Exposure Limits: ACGIH NOHSC OSHA OTHER 8.1 $ppm (ma/m^3)$ STE TLV STEL ES-TWA ES-STEL ES-PEAK PEL IDLH CHEMICAL NAME(S) ALUMINIUM OXIDE (10) NF NF (10) NA NF 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). 8.3 Respiratory Protection: 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.

Range:

Limits: Vapor Pressure:

Flashpoint:

Vapor Density:

Solubility:

Viscosity:

Relative Density:

Other Information:

Upper/Lower Flammability

Partition Coefficient (log Pow):

Decomposition Temperature:

Autoignition Temperature:

9.7

9.8

9.9

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NA

NA

NA

NA

2.0

NA

NA

NA

NA

NA

Insoluble

SDS Revision: 1.1

SDS Revision Date: 7/25/2015

	8.	EXPOSURE CONTROLS & PERSONAL PROTECTION – cont'd	
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).	0
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	
9.1	Appearance:	Dark brown to black solid article	
9.2	Odor:	Odorless	
9.3	Odor Threshold:	NA	
9.4	pH:	NA	
9.5	Melting Point/Freezing Point:	2100 °C (3812 °F) – Alumina	
9.6	Initial Boiling Point/Boiling Range:	NA	

10. STABILITY & REACTIVITY

10.1	Stability:	Stable under normal conditions.
10.2	Hazardous Decomposition Products:	Oxides of carbon (CO, CO ₂), metal oxides, particulates.
10.3	Hazardous Polymerization:	Will not occur.
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

				•/			
11.1	Routes of Entry:	Inhalation:	YES	Absorption:	YES	Ingestion:	YES
11.2	Toxicity Data:	This product has NOT be available for some of the					entific literature, is
11.3	Acute Toxicity:	See Section 4.4					
11.4	Chronic Toxicity:	See Section 4.5					
11.5	Suspected Carcinogen:	NA					
11.6	Reproductive Toxicity:	This product is not report	ted to produce rep	roductive toxicity in hu	imans.		
	Mutagenicity:	This product is not repor	ted to produce mu	tagenic effects in hum	ans.		
	Embryotoxicity:	This product is not report	ted to produce em	bryotoxic effects in hu	mans.		
	Teratogenicity:	This product is not repor	ted to cause terato	genic effects in huma	ns.		
	Reproductive Toxicity:	This product is not report	ted to cause repro	ductive effects in hum	ans.		
11.7	Irritancy of Product:	The product can cause a	allergic skin reactio	ns (e.g., rashes, welts	, dermatitis) upo	on prolonged or repeate	ed exposure.
11.8	Biological Exposure Indices:	NE					
11.9	Physician Recommendations:	Treat symptomatically.					

HARBOR FREIGHT TOOLS Guality Teols at Ridiculously Low Prices

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Prepa	red to OSHA, ACC, ANSI, NO	OHSC, WHMIS, 2001/58 & 1272/2008/EC Standards	SDS Revision: 1.1	SDS Revision Date: 7/25/2015
		12. ECOLOGICAL INFOR	MATION	
12.1	Environmental Stability:	There are no specific data available for this product.		
12.2	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 CONSIDE	RATIONS	
13.1	Waste Disposal:	Dispose of in accordance with federal, state, provincial and	d local regulations.	
13.2	Special Considerations:	NA		
		14. TRANSPORTATION INF	ORMATION	
		nber, proper shipping name, hazard class & division, packin e required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.	ng group) is shown for eac	h mode of transportation. Additional
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		
		15. REGULATORY INFOR	RMATION	
15.1	SARA Reporting Requirements:	This product contains Aluminum Oxide, a substance subje	ect to SARA Title III, Sectio	on 313 reporting requirements.
15.2	SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for th	e components of this prod	uct.
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA In-	ventory or are otherwise ex	xempt.
15.4	CERCLA Reportable Quantity (RQ):	NA		
15.5	Other Federal Requirements:	None of the ingredients are listed as Hazardous Air Po Pollutants under the Clean Water Act (CWA). None of the Water Act (CWA). This product does not contain any Class	he ingredients are listed a	s Priority Pollutants under the Clean
15.6	Other Canadian Regulations:	This product has been classified according to the hazard all of the information required by the CPR. The comp DSL/NDSL. None of the components of this product are lis WHMIS D2B (Other Toxic Effects).	criteria of the CPR and the conents of this product a	ne SDS contains re listed on the
15.7	State Regulatory Information:	Alumina (Aluminum Oxide) is found on the following state Minnesota Hazardous Substances List (MN), New Je Exposures List (WA). No other ingredients in this product, present in a concentr criteria lists: California Proposition 65 (CA65), Delaware List (FL), Massachusetts Hazardous Substances List (MA Substances List (MN), New Jersey Right-to-Know List (N Right-to-Know List (PA), Washington Permissible Exposur NOTE: This product contains a substance(s) known to t reproductive harm.	rsey Right-to-Know List ation of 1.0% or greater, a Air Quality Management), Michigan Critical Substa JJ), New York Hazardous res List (WA), Wisconsin H	(NJ), and Washington Permissible are listed on any of the following state List (DE), Florida Toxic Substances unces List (MI), Minnesota Hazardous Substances List (NY), Pennsylvania lazardous Substances List (WI).
15.8	Other Requirements:	The primary components of this product are listed in Anne: Harmful (Xn). <u>Risk Phrases</u> (R): 20-38 – Harmful if inhale 23-24-62 - Keep away from children. Do not breathe due do not induce vomiting: seek medical advice immediatel possible.	 d. Irritating to skin. <u>Safety</u> st. Avoid contact with skin 	<u>/ Phrases</u> (S): 2- n. If swallowed,

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		16. OTHER INFO	RMATION	
16.1	Other Information:	WARNING! MAY CAUSE AN ALLERGIC SKIN I IF INHALED: Call a POISON CENTER/doctor if y IF ON SKIN – Wash with soap and water. If skin i OF CHILDREN. NOTE: This product contains a substance(s) kno reproductive harm.	you feel unwell. Wear protective rritation occurs: Get medical advi	gloves/eye protection/face protection. ice/attention. KEEP OUT OF REACH
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.		
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OS government regulations must be reviewed for app Tools USA, Inc.'s knowledge, the information of accuracy, suitability or completeness is not guara provided. The information contained herein relat other materials, all component properties must b consult the latest edition.	blicability to this product. To the contained herein is reliable and nteed and no warranties of any es only to the specific product(s	e best of ShipMate's & Harbor Freight accurate as of this date; however, type, either expressed or implied, are). If this product(s) is combined with
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 T Quality Tools at Ridiculously Low I	
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

Explosive

Flammable

Oxidizer

Pressurized

Corrosive

Toxic

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No. Chemical Abstract Service Number

EXPOSURE	LIMITS IN AIR:
ACGIH	American Conference on Governmental Industrial Hygienists
C	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 M	EASURES:

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 & I	REA	CTIVITY RATINGS:
0	Minimal Hazard		HEALTH
1	Slight Hazard		FLAMMABILITY
2	Moderate Hazard		PHYSICAL HAZARDS
3	Severe Hazard		PERSONAL PROTECTION
4	Extreme Hazard		

PERSONAL PROTECTION RATINGS:

Α						G				
В						н			品	
С	0		E.			I	0	(T))
D	B		E-F			J		(T)		
Е	0					к	3	(T)		
F			E-F			X			ipervisor g directio	or SOPs fense.
Sa	fety Glasse	es	Splash	Goggles	F		Shield 8 ive Eyew		Glo	ves
	Boots		Syntheti	c Apron	F		tive Cloth	ing	Dust Re	spirator
			8	3						'n
	Face Respir	rator	Mask Re	apor Half- espirator	2.		ull Face spirator		Airline Ho or S	ood/Mask CBA
	ML			TATIONS						
	mg/m3			ibic meter						
<u> </u>	NA	Not Av								
	ND		etermined							
	NE	Not Es	tablished							
	NF	Not Fo	ound							
	NR	No Re	sults							

ppm parts per million SCBA Self-Contained Breathing Apparatus

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILI	TY 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

	RATINGS:			-				
0				F			1997-1997-1997-19	
1	· ·					RE/	ACTIVITY	
2				_				
4								
ACD		lazaru			$\langle 1 \rangle$	<u>× 2</u>	>	
ALK					\wedge			
COR					/ <	₩Х		
₩				н	EALTH	×		
ох	Oxidizer						ECIAL ECAUTIONS	
TREFOIL	Radioacti	ve				PK	ECAUTIONS	
TOXICOLO	GICAL IN	FORMAT	ION:					
	LD ₅	Lethal I s	Dose (solids	& liquids) wł	nich kills 50%	of the expos	ed animals	
	LC ₅	Lethal o	concentration	(gases) whi	ch kills 50% o	of the expose	d animal	
	ppn	n Concer	tration expre	ssed in part	s of material p	per million pa	rts	
	TD _I	-	dose to caus					
	TCL		concentratio					
	-D ₁₀ , & LD ₀ o		dose (or con	centration) t	o cause letha	I or toxic effe	cts	
16,16,	, LC _{io} , & LC		tional Agona	for Posser	ch on Cancer			
	NTI		al Toxicology		on on Cancel			
	RTEC		0.	•	nical Substar	ICES		
	BCI		centration Fa					
	TL,		threshold lim					
log K	ow or log Ko		ent of Oil/Wa		ion			
REGULAT								
WHMIS				Material Info	rmation Syste	m		
DOT			ransportatior		ŕ			
TC	Transport	Canada						
EPA	U.S. Envi	ronmental F	Protection Ag	ency				
DSL		Domestic \$	Substance Lis	st				
NOHSC	National (Occupationa	al Health and	Safety Com	mission (Aus	tralia)		
NDSL			stic Substan		List			
PSL			bstances List					
TSCA			e Control Act					
EU			ropean Union					
WGK	Ŭ				lazard Class)		Sustam	
HMIS-III			-		ous Materials			
\oslash	۲	٨	$\textcircled{\begin{subarray}{c} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	1	۲		Ř	
Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F	
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive	
-				Irritation	Infectious	Corrosive	Reactive	
Compressed				Irritation	Infectious	Corrosive	Reactive	
Compressed EC (67/548				Irritation	Infectious	Corrosive	Reactive	
				Irritation	Infectious	Corrosive	Reactive Xn	
EC (67/548	B/EEC) INF		DN:	8	<u></u>	×	×	
EC (67/548	E E E Explosive	Flammable	N	O Oxidizing	T	Xi	Xn	
EC (67/548	E E E Explosive	Flammable	N Harmful	O Oxidizing	T	Xi	Xn	

Harmful

Irritating

Health

Hazard

Environmen