MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet (MSDS) complies with the requirements of OSHA's Hazard Communication Standard.

ALUMINUM OXIDE RESIN FIBRE SANDING PAD/FLAP DISC

RADNOR WELDING PRODUCTS

Emergency Phone Number: 866-734-3438

Date: April 30, 2006

Product Information Number: 888-838-0615

SECTION 1 – PRODUCT IDENTIFICATION

Product Name/Class	Aluminum Oxide Sanding Pad/Flap Disc
Product Number	004025
Manufacturer	Radnor Welding Products 259 N. Radnor-Chester Road Suite 100 Radnor, PA 19087-5283

SECTION 2 – HAZARDOUS INGREDIENTS

Material	CAS Number	% By Weight	ACGIH TLV	OSHA
Aluminum Oxide, Non-fibrous	1344-28-1	55 - 65	10 MG/M^3	15 MG/M^3
Cloth or Paper Backing	N/A	20 – 30	ND	ND
Cured Phenol Formaldehyde Resin	9003-35-4	2.5 – 13.5	ND	ND
Animal Glue Bond	N/A	2.5 – 13.5	ND	ND
Cured Urea Formaldehyde Resin	9011-05-6	2.5 – 13.5	ND	ND

ND = No data available.

SECTION 3 – PHYSICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H_2O = 1): N/A	Solubility in Water : N/A
Vapor Pressure (mm Hg): N/A	Melting Point: N/A	%Volatile: N/A
Vapor Density (Air = 1): N/A	Evaporation Rate (Butyl Acetate=1): N/A	Appearance and Odor: Flat sheets or sheets bonded to wheel. Slightly sweet odor.

SECTION 4 – FIRE and EXPLOSION HAZARD DATA

Flash Point (Method Used): N/A	Flammable Limits:	LEL: N/A
		UEL: N/A

Extinguishing Media: N/A

Special Fire Fighting Procedures: Non-Flammable. Sparks from grinding and sanding operations can ignite combustibles and flammables. Remove any fuel storage cans, paper, cloth and other material from the work area that could be ignited during grinding operations. Refer to American National Standard Z49.1 for fire prevention during the use of welding and allied procedures.

Unusual Fire and Explosion Hazards: Solid massive form is not combustible. Suspended airborne particulate matter resulting from sanding and grinding operations may present explosion hazard is certain environments. Use with adequate ventilation.

SECTION 5 – REACTIVITY DATA

Stability	Unstable ☐	Conditions to Avoid: Acids of all types with a pH of less than 4.0.
	Stable ☒	

Incompatibility (Materials to Avoid): Acids of all types with a pH of less than 4.0.

Hazardous Decomposition or Byproducts: In use, dust and decomposing odors may be generated. Thermal decomposition may produce trace amounts of phenol and formaldehyde.

Hazardous Polymerization	May Occur ☐	Conditions to Avoid: N/A
	Will Not Occur ☒	

SECTION 6 – HEALTH HAZARD DATA

Routes of Entry: ☒ Inhalation ☐ Skin ☒ Ingestion ☒ Eyes

Health Hazards (Acute and Chronic): Acute: Dust may be irritating to eyes and respiratory tract at high concentrations. Chronic: May affect breathing capacity or aggravate existing respiratory disorders. Dust generated during use may contain trace amounts of phenol and formaldehyde, which, under excessive exposure, may cause skin sensitization and airway obstruction. For products containing inorganic flourides, excessive exposure has been shown to increase bone density. No known adverse effects associated with ingestion, but ingestion not recommended.

Carcinogenicity: The composition of dust/particulate matter are dependent upon several factors that are unknown and unknowable to the product manufacturer, and depend largely upon the composition of the work-piece on which this product is used, and any coating that may have been applied (see Section 5). Always assume that such particulates may contain toxic and/or carcinogenic materials, and follow sound Work/Hygiene practices as recommended by ANSI Z49.1. Under normal handling conditions, the product presents no health hazards.

Signs and Symptoms of Exposure: Short-term (acute) overexposure may result in discomfort such as irritation of nose, throat, or eyes. Some may experience skin irritation. Long-term (chronic) overexposure to dust may result in respiratory tract disorders.

Medical Conditions Generally Aggravated by Exposure: May aggravate pre-existing respiratory problems (e.g. asthma, emphysema).

Emergency and First Aid Procedures: Call for medical aid. Employ first aid techniques recommended by the American Red Cross. IF BREATHING IS DIFFICULT give oxygen. IF NOT BREATHING employ CPR (Cardiopulmonary Resuscitation) techniques. Flush eyes with water. Vacuum off excess dust from skin. Wash well with soap and water. Remove to fresh air. If ingested, call poison control center, hospital emergency room or physician immediately.

HMIS Rating	HMIS Scale	NFPA Rating	NFPA Scale
Health = 1	4 = Severe Hazard	Health = 1	4 = Severe Hazard
Flammability = 0	3 = Serious Hazard	Flammability = 0	3 = Serious Hazard
Reactivity = 0	2 = Moderate Hazard	Reactivity = 0	2 = Moderate Hazard
	1 = Slight Hazard	Other = N/A	1 = Slight Hazard
	0 = Minimal Hazard		0 = Minimal Hazard

SECTION 7 – PRECAUTIONS for SAFE HANDLING and USE

General: Should be used in accordance with 29 CFR 1910.211-214 & 1910.241-243. Always handle and store wheels in a safe manner. Always inspect wheels before mounting. Always check machine speed against the established maximum safe operating speed marked on the wheel. Always check mounting flanges for equal and correct diameter. Always ensure work rest is properly adjusted. Always use a safety guard covering at least one-half of the wheel. Always allow newly mounted wheels to run at operating speed, with guard in place, for at least one minute before using. Always turn off coolant before stopping wheel to avoid creating an out-of-balance wheel.

Steps to Be Taken in Case Material Is Released or Spilled: If large quantities of dust are spilled, remove by vacuuming or wet sweeping to prevent heavy concentration of airborne dust. Follow federal, state and local regulations concerning disposal of waste.

Waste Disposal Method: Use standard landfill methods. Discard any product residue, disposable container, or liner in an environmentally acceptable manner. Products with listed flourides may be slightly soluble.

Precautions to Be Taken In Handling and Storing: Good housekeeping must be practiced during storage, transfer and use, to avoid excessive dust accumulations. See Section 8.

SECTION 8 – CONTROL MEASURES

Respiratory Protection *(Specify Type)*: If exposure is above the PEL or TLV, use NIOSH approved respirator for fume and dust.

Ventilation: Use local exhaust ventilation when general ventilation is not keeping the airborne concentration below the TLV.

Protective Gloves: Standard work gloves, preferably leather, required during use.

Eye Protection: Always wear eye protection during sanding or grinding operations.

Other Protective Clothing or Equipment: Use of this product may create elevated sound levels. Hearing protection should be worn when required. (See OSHA 29 CFR 1910.134 and other applicable regulations.)

Work/Hygienic Practices: Wash hands thoroughly after use, and before eating, drinking, smoking, applying cosmetics or contact lenses. Maintain exposure below the PEL/TLV. Use industrial hygiene monitoring to ensure that your use of this material does not create exposures which exceed PEL/TLV. Always use exhaust ventilation. Refer to the following sources for important additional information. ANSI Z49.1, The American Welding Society, P.O. Box 351040, Miami, FL 33135, OSHA (29CFR 1910) U.S. Department of Labor, Washington, D.C. 20210.

OTHER INFORMATION REQUIRED BY STATE OR FEDERAL LAW

California Proposition 65 Information: Warning: This product contains a chemical known to the State of California to cause cancer or birth defects or reproductive harm.

New Jersey Right-To-Know Information: 5 most predominant ingredients/hazardous and non-hazardous): 1. Aluminum oxide; 2. Cloth or paper; 3. Cured phenol formaldehyde resin; 4. Animal glue bond; 5. Cured urea formaldehyde resin.

SARA Title III Notification Information: All chemical compounds marked with an asterisk (*) are toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Super Fund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Disclaimer of Expressed and Implied Warranties: The information in this document is believed to be correct as of the date issued. However, no warranty of merchantability, fitness for any particular purpose, or any other warranty is expressed or is to be implied regarding the accuracy or completeness of this information, the results to be obtained from the use of this information or the product, the safety of this product, or the hazards related to its use.