

Grinding

**MATERIAL SAFETY DATA SHEET**

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

**FLAP DISC**



Emergency Phone Number:  
866-734-3438

Date: April 30, 2006 Product Information Number: 888-838-0615

**SECTION 1 - PRODUCT IDENTIFICATION**

Product Name/Class: Flap Disc, Radnor by Norton, Zirc

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	1344-28-1	14-17	5 MCG/M <sup>3</sup>	15 MCG/M <sup>3</sup>
Zirconia Oxide	1314-23-4	9-11	5 MCG/M <sup>3</sup>	5 MCG/M <sup>3</sup>
Duroplastic Phenol or Urea Resin Binder & Inert Backing	N/A	60-70	5 MCG/M <sup>3</sup>	15 MCG/M <sup>3</sup>
Cured Epoxy Adhesive	N/A	5-10	5 MCG/M <sup>3</sup>	15 MCG/M <sup>3</sup>

**SECTION 3 - PHYSICAL CHARACTERISTICS**

Boiling Point:	Specific Gravity (H <sub>2</sub> O = 1):	Solubility in Water:
N/A	N/A	N/A
Vapor Pressure (mm Hg):	Melting Point:	%v/volatile:
N/A	N/A	N/A
Vapor Density (Air = 1):	Evaporation Rate (Butyl Acetate=1):	Appearance and Odor:
N/A	N/A	Grinding disc affixed with overlapping abrasive flaps.

**SECTION 4 - FIRE and EXPLOSION HAZARD DATA**

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

Extinguishing Media: Water, Carbon Dioxide, Foam, Dry Chemical

Special Fire Fighting Procedures: Non Flammable. Fiber and resin binder will burn or decompose; use respiratory protection. Sparks from grinding and sanding operations can ignite combustibles and flammables. Remove any fuel storage cans, paper, cloth and other combustible material from the work area that could be ignited during the sanding or 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 in certain environments. Use with adequate ventilation.

**SECTION 5 - REACTIVITY DATA**

Stability	Conditions to Avoid:
Unstable <input type="checkbox"/>	N/A
Stable <input checked="" type="checkbox"/>	

Incompatibility (Materials to Avoid): N/A

Hazardous Decomposition or Byproducts: In use, dust and decomposing resin fumes are generated. In most cases, the material removed from work piece will be significantly greater than the coated abrasive product components.

Hazardous Polymerization	Conditions to Avoid:
May Occur <input type="checkbox"/>	N/A
Will Not Occur <input checked="" type="checkbox"/>	

**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 itself 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.

Health = 1	Health = 1	Health = 1
Flammability = 0	Flammability = 0	Flammability = 0
Reactivity = 0	Reactivity = 0	Reactivity = 0
0 = Minimal Hazard	Other = N/A	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 proper mounting thread diameter and pitch. Never force wheel onto improper tool mounting. 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.

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.

Precautions to Be Taken in Handling and Storing: Good housekeeping must be practiced during storage, transfer and use, to avoid excessive dust accumulations. In most cases the material removed from the work piece will be significantly greater than the abrasive product used. 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. See OSHA 29 CFR 1910.134 and other applicable sections.

Ventilation: Use local exhaust ventilation when general ventilation is not keeping the airborne concentration below the TLV. See OSHA 29 CFR 1910.94 and other applicable sections.

Protective Gloves: Standard work gloves, preferably leather, required during use. See OSHA 29 CFR 1910.138 and other applicable sections.

Eye Protection: Always wear eye protection during sanding or grinding operations. See OSHA 29 CFR 1910.133 and other applicable sections.

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 sections.

Work/Hygiene 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. Zirconia Oxide; 3. Resin binder; 4. Cured epoxy adhesive; 5. Steel, aluminum or die cast mounting hardware.

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.