MATERIAL SAFETY DATA SHEET
Resinoid Bonded Abrasives
MSDS #1/2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identity / Trade Name: Grinding and Cutting Wheels, Resinoid (Type 1, Type 27, Type 28, Type 29), Cup Wheels (Type 11) Cones and Plugs (Type 16, Type 17 and Type 18), Mounted Points, UA-MTX, UA-GFX, A36F, A54F.

Product Use: Abrasive materials used for cutting and grinding metals, concrete, masonry and building materials.

Manufacturer:

Mailing Address
United Abrasives, Inc.
185 Boston Post Road
North Windham, CT 06256

Physical Address
United Abrasives, Inc.
185 Boston Post Road
North Windham, CT 06256

Internet: www.unitedabrasives.com

Information Phone: (860) 456-7131 **Emergency Phone**: (860) 456-7131

MSDS Date of Preparation: August 24, 2012

2. HAZARDS IDENTIFICATION

This product is a black, brown or reddish colored solid wheel with no odor.

EMERGENCY OVERVIEW

Dust may cause eye and respiratory irritation. Dust particles may cause abrasive injury to the eyes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component	CAS #	%
Aluminum Oxide	1344-28-1	0-95
Silicon Carbide	409-21-2	0-95
Zirconium Oxide	1314-23-4	0-80
Cured Phenolic Resin	N/A	1-30
Nitrile Compounds	N/A	1-20
Fluoride Compounds	N/A	1-20
Iron Pyrite	12068-85-8	0-20
Woven Fiberglass	N/A	0-15
Calcium Compounds	N/A	0-15
Sulfur	7704-34-9	0-15
Calcium Oxide	1305-78-8	1-10
Cryolite	15096-52-3	1-10
Cured Epoxy Resin	N/A	1-10
Titanium Dioxide	13463-67-7	0-5
Calcium Carbonate	1317-65-3	0-5
Aluminum Potassium fluoride	14484-69-6	0-5
Iron Oxide	1309-37-1	0-5
Graphite	7782-42-5	0-5
Potassium Fluoroborate	14075-53-7	0-5

4. FIRST AID MEASURES

Ingestion: If grinding dust is swallowed, seek medical attention.
Inhalation: If overexposed to grinding dust, remove victim to fresh air and get medical attention.
Eye Contact: Flush eyes thoroughly with water, holding open eyelids. Get medical attention if irritation persists. Obtain immediate medical attention for foreign body in the eye.
Skin Contact: Wash dust from skin with soap and water. Launder contaminated clothing before reuse.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use any media that is appropriate for the surrounding fire.
Special Firefighting Procedures: None needed.
Unusual Fire and Explosion Hazards: This product is not combustible, however, consideration must be given to the potential fire/explosion hazards from the base material being processed. Many materials create flammable/explosive dusts or turnings when machined or ground.
Hazardous Combustion Products: None known.

6. ACCIDENTAL RELEASE MEASURES

Pick up, sweep up or vacuum and place in a container for disposal. Minimize generation of dust. Notify authorities as required by local, state and federal regulations.

7. HANDLING AND STORAGE

Recommended Work Practices: Use only with adequate ventilation. Avoid breathing dust. Wash thoroughly after handling and use, especially before eating, drinking or smoking. Refer to ANSI B7.1, Safety Requirements for the Use, Care and Protection of Abrasive Wheels for additional information. Consider potential exposure to components of the base materials or coatings being ground. Refer to OSHA's substance specific standards for additional work practice requirements where applicable.
Storage: Store in accordance with ANSI B7.1. Protect abrasive wheels from damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Hazardous Component	OSHA PEL	ACGIH TLV
Aluminum Oxide	5 mg/m^3 (Respirable fraction) 15 mg/m^3 (total dust)	1 mg/m^3 (respirable) (as Al metal)
Silicon Carbide	None Established	10 mg/m^3 (inhalable) 3 mg/m^3 (respirable)
Zirconium Oxide (as zircomium compounds)	5 mg/m^3	5 mg/m^3 10 mg/m^3 STEL
Cured Phenolic Resin	None Established	None Established
Nitrile Compounds	None Established	None Established
Fluoride Compounds	2.5 mg/m^3	2.5 mg/m^3
Iron Pyrite	None Established	None Established
Woven Fiberglass	5 mg/m^3 (Respirable fraction) 15 mg/m^3 (total dust)	5 mg/m^3 (Inhalable) 1 f/cc
Calcium Compounds	None Established	None Established
Sulfur	None Established	None Established
Calcium Oxide	5 mg/m^3	2 mg/m^3
Cryolite (as fluorides)	2.5 mg/m^3	2.5 mg/m^3

Cured epoxy resin	None Established	None Established
Titanium Dioxide	15 mg/m^3 (total dust)	10 mg/m^3
Calcium Carbonate	5 mg/m^3 (Respirable fraction) 15 mg/m^3 (total dust)	None Established
Aluminum Potassium Fluoride (as Al metal)	5 mg/m^3 (Respirable fraction) 15 mg/m^3 (total dust)	1 mg/m^3 (respirable)
Aluminum Potassium Fluoride (as fluorides)	2.5 mg/m^3	2.5 mg/m^3
Iron Oxide	10 mg/m^3 (fume)	5 mg/m^3 (respirable)
Graphite	15 mppcf	2 mg/m^3 (respirable)
Potassium Fluoroborate (as fluorides)	2.5 mg/m^3	2.5 mg/m^3

Note: Consider also components of base materials and coatings being ground.

Ventilation: Use local exhaust or general ventilation as required to minimize exposure to dust and maintain the concentration of contaminants below the TLVs.
Respiratory Protection: Use NIOSH approved respirator if exposure limits are exceeded or where dust exposures are excessive. Consider the potential for exposure to components of the coatings or base material being ground in selecting proper respiratory protection. Refer to OSHA's specific standards for lead, cadmium, etc. where appropriate. Selection of respiratory protection depends on the contaminant type, form and concentration. Select and use respirators in accordance with OSHA 1910.134 and good industrial hygiene practice.
Gloves: Cloth or leather gloves recommended.
Eye Protection: Safety goggles or face shield over safety glasses with side shields.
Other: Protective clothing as needed to prevent contamination of personal clothing. Hearing protection may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: Not Applicable
Solubility in Water: Insoluble
Specific Gravity: Not Applicable
Melting Point: Not Applicable
Vapor Pressure: (mm Hg) Not Applicable
Vapor Density: (Air = 1) Not Applicable
Evaporation Rate: Not Applicable
Flash Point: Non-Combustible
Flammable Limits: **LEL**: Not Applicable **UEL**: Not Applicable
Appearance and Odor: Black, brown or reddish colored solid wheel with no odor.

10. STABILITY AND REACTIVITY

Stability: Stable
Incompatibility: None known.
Hazardous Decomposition Products: Dust from grinding could contain ingredients listed in Section 3 and other, potentially more hazardous components of the base material being ground or coatings applied to the base material.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:

Ingestion: None expected under normal use conditions. Swallowing large pieces may cause obstruction of the gastrointestinal tract.
Inhalation: Dust may cause respiratory irritation.
Eye: Dust may cause eye irritation. Dust particles may cause abrasive injury to the eyes.

Skin: None expected under normal use conditions. Rubbing product across the skin may cause mechanical irritation or abrasions.
Sensitization: This material is not known to cause sensitization.
Chronic: Long-term overexposure to respirable dust may cause lung damage (fibrosis) with symptoms of coughing, shortness of breath and diminished breathing capacity. Chronic effects may be aggravated by smoking. Prolonged overexposure to fluorides may cause a bone condition, fluorosis. Prolonged exposure to elevated noise levels during operations may affect hearing. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being ground. Most of the dust generated during grinding is from the base material being ground and the potential hazard from this exposure must be evaluated.
Carcinogenicity: Titanium Dioxide is listed by IARC as a group 2B Carcinogen (suspected human carcinogen). None of the other components is listed as a carcinogen or potential carcinogen by OSHA, NTP or IARC.
Medical Conditions Aggravated by Exposure: Employees with pre-existing respiratory disease may be at risk from exposure.
Acute Toxicity Values:
This product and its components are not acutely toxic. The only acute toxicity data available for the components are listed below.
Aluminum Oxide: Oral rat LD50 >5,000 mg/kg
Cryolite: Oral rat LD50 >5,000 mg/kg

12. ECOLOGICAL INFORMATION

No ecological data is available for this product. No hazards to the environment are expected from this product. However, consideration must be given to potential environment effects of the base material being processed.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable local, state/provincial and federal regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

14. TRANSPORT INFORMATION

DOT Hazardous Materials Description:
Proper Shipping Name: Not Regulated
UN Number: None
Hazard Class/Packing Group: None
Labels Required: None

15. REGULATORY INFORMATION

SARA Section 311/312 Hazard Categories: Not Applicable (manufactured articles)

SARA Section 313: Some products contain the following toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Toxic Chemical Release Reporting): None

California Proposition 65: WARNING You create dust when you cut, sand, drill or grind materials such as wood, paint, cement, masonry or metal. This dust often contains chemicals known to cause cancer, birth defects or other reproductive harm.

Canadian WHMIS Classification: Not a controlled product. This product meets the definition of a "manufactured article" under the WHMIS regulations.
This product has been classified under the CPR and this MSDS discloses information elements required by the CPR.

16. OTHER INFORMATION

NFPA Hazard Rating: **Health:** 1
Fire: 0
Reactivity: 0

Date Previous Revision: 12/1/09
Date This Revision: 8/24/12
Revision Summary: Section 3 Updated Composition, Section 8 Updated exposure limits, Section 11 Updated Acute toxicity values.
Prepared By: IH&SC Inc., Shelton, CT 06484

The preceding information is believed to be correct and current as of the date of preparation of this Material Safety Data Sheet. Since the use of this information and the conditions of use of this product are not within the control of United Abrasives, Inc., it is the user's obligation to assure safe use of this product.