

MODERN ABRASIVES
Safety Data Sheet

1. IDENTIFICATION

Product identifier: Vitrified Bonded Abrasive Products
Trade Name: Grinding Wheels or Stones

Manufacturer: Modern Abrasive Corp.
2855 Route 12
Spring Grove, IL 60081

Phone Number: (815) 675-2352
Emergency Number: (815) 676-2352

Revision date: 5/18/15

2. HAZARD(S) IDENTIFICATION

Classification:

Physical	Health	Environment
Not Hazardous	Not Hazardous	Not Hazardous

Labelling:
None required.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Aluminum oxide	1344-28-1	50-98%
Silicon Carbide	409-21-2	50-98%
Glass	65997-17-3	0-15%
Fledspar	68476-25-5	0-5%
Slip clay	1332-58-7	0-5%
Talc	14807-96-6	0-5%
Quartz*	14808-60-7	0-5%

The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

* Quartz in this product is inextricably bound in a manner that no exposure occurs during normal use and handling. Therefore this product is not classified as a carcinogen.

4. FIRST-AID MEASURES

Inhalation: No first aid required.
Skin contact: No first aid required.
Eye contact: Flush with water. Seek medical attention if irritation persists.
Ingestion: No first aid required.

Most important symptoms/effects, acute and delayed: No adverse effects expected.

Indication of immediate medical attention and special treatment, if necessary: No immediate medical attention is normally required.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Use any media that is suitable for the surrounding fire.

Specific hazards arising from the chemical: Combustion may yield oxides of carbon and aluminum. Dust generated by the abrasive products may be explosive in the correct air/dust mixture.

Special protective equipment and precautions for fire-fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: No special precautions required.

Methods and materials for containment and cleaning up: Pick up or sweep up and place in a container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Store in a dry location. Protect from physical damage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Aluminum oxide	5 mg/m ³ ACGIH TLV (respirable fraction) (as Al metal) 15 mg/m ³ TWA OSHA PEL (total dust), 5 mg/m ³ TWA (respirable fraction)
Silicon Carbide	3 mg/m ³ TWA ACGIH TLV (respirable fraction), 10 mg/m ³ TWA (inhalable fraction) 15 mg/m ³ TWA OSHA PEL (total dust), 5 mg/m ³ TWA (respirable fraction)
Glass	None Established
Fledspar	None Established
Slip clay	2 mg/m ³ TWA ACGIH TLV (respirable) 15 mg/m ³ TWA OSHA PEL (total dust), 5 mg/m ³ TWA (respirable fraction)
Talc	2 mg/m ³ TWA ACGIH TLV (respirable) 20 mppcf OSHA PEL (containing <1% Quartz)
Quartz	10 mg/m ³ (respirable) OSHA PEL % Silica + 2
	30 mg/m ³ (total dust) OSHA PEL % Silica + 2 0.025 mg/m ³ TWA ACGIH TLV

Appropriate engineering controls: Use local exhaust or general ventilation as required to minimize exposure and maintain the concentration of contaminants below the TLVs.

Individual protection measures, such as personal protective equipment:

Respiratory protection: Use NIOSH approved respirator if exposure limits are exceeded. 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.

Skin protection: 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

Appearance (physical state, color, etc.): Any solid abrasive form.

Odor: No Odor

Odor threshold: Not applicable	pH: Not applicable
Melting point/freezing point: Not applicable	Initial boiling point and boiling range: Not applicable
Flash point: Non-Combustible	Evaporation rate: Not applicable
Flammability (solid, gas): Not applicable	UEL: Not applicable
Flammable limits: LEL: Not applicable	Vapor density:
Vapor pressure: Not applicable	Solubility(ies): Not applicable
Relative density: Not available.	Auto-ignition temperature: Not applicable
Partition coefficient: n-ctanol/water: Not applicable	Viscosity: Not applicable
Decomposition temperature: Not applicable	

10. STABILITY AND REACTIVITY

Reactivity: Not reactive

Chemical stability: Stable

Possibility of hazardous reactions: Will not occur.

Conditions to avoid: None known

Incompatible materials: Strong acids and bases

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. Dust generated by the abrasive products may be explosive in the correct air/dust mixture.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure:

Inhalation: Dust may cause respiratory irritation.

Ingestion: None expected under normal use conditions. Swallowing large pieces may cause obstruction of the gastrointestinal tract.

Skin contact: None expected under normal use conditions. Rubbing product across the skin may cause mechanical irritation or abrasions.

Eye contact: Dust may cause serious eye irritation. Dust particles may cause abrasive injury to the eyes.

Chronic effects from short- and long-term exposure: 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 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.

Numerical measures of toxicity:

Aluminum oxide: LD50 Oral rat >5,000 mg/kg, Inhalation rat LC50 >7.6 mg/L/1 hr

Silicon Carbide: Oral rat LD50 >2000 mg/kg, Dermal rat LD50 >2000 mg/kg

Glass: No data available

Fledspar: No data available

Slip clay: No data available

Talc: No data available

Quartz: No data available

Carcinogenicity: Crystalline silica quartz is listed as "Carcinogenic to Humans" (Group 1) by IARC and "Known to be a Human Carcinogen" by NTP. The crystalline silica is inextricably bound in a manner that no exposure occurs during normal use and handling. None of the other components are listed as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Aluminum Oxide: 96 hr LC50 Pimephales promelas 35 mg/L

Glass: Danio Rerio LC50 > 1000 mg/L/96hr

Persistence and degradability: Biodegradation is not applicable to inorganic compounds.**Bioaccumulative potential:** No data available**Mobility in soil:** No data available.**Other adverse effects:** No data available.

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

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	None	Not Regulated	None	None	None
TDG	None	Not Regulated	None	None	None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None identified.

15. REGULATORY INFORMATION

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

SARA Section 313: This product contains 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):

Components	C.A.S. #	WT %
Aluminum Oxide (fibrous forms)	1344-28-1	0-98%

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.

16. OTHER INFORMATION

NFPA Rating: Health = 1 Flammability = 0 Instability = 0
HMIS Rating: Health = 1 Flammability = 0 Physical Hazard = 0

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Revision History: Updated GHS format. All section revised

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