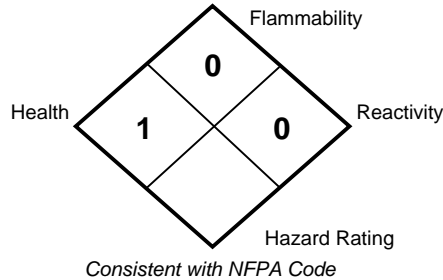


MATERIAL SAFETY DATA SHEET

TYROLIT Wickman Inc.



Section I - Identification

Name and Address

Tyrolit Wickman Inc.
10325 Capital Avenue
Oak Park, MI 48237

Emergency Telephone Number

(800) 366-4431

Information Telephone Number

(800) 366-4431

Contact Person

EH&S Manager

Revision Date

5/22/2003

Chemical Name and Synonyms

Vitrified Bond: Silicon Carbide or
Aluminum Oxide Abrasive Products

Trade Name & Synonyms

Vitrified (V Bond): A or C Abrasive
Grinding Wheels, Sticks or Hones

Chemical Family

Oxide

Carbide

Glass

Formula

Aluminum Oxide (Al_2O_3), Titanium

Dioxide (TiO_2)

Silicon Carbide (SiC)

Silicate Base Oxide Glass

Section II - Hazardous Ingredients

Ingredient	CAS #	WGT %	OSHA TWA (mg/m^3)	ACGIH TWA (mg/m^3)	CARCIN.	SARA 313
Aluminum Oxide	1344-28-1	80-90	10 Total 5 Respirable	10 Total	No	No
Glass	65997-17-3A	10-22	15 Total 5 Respirable	10 Total**	No	No
Titanium Dioxide	13463-67-7	0-3	10 Total 5 Respirable	10	No	No
May contain one or more of the following as solid treatments:						
Graphite	7782-42-5	0-1	2.5	2.5	No	No
Sulfur	7704-34-9	15-45	15 Total** 5 Respirable	10 Total**	No	No
Paraffin or wax	8802-74-2	0-1	2(fume)	2(fume)	No	No
Sodium Silicate	1344-09-8	1%	15 Total** 5 Respirable	10 Total**	No	No

**Particulates not otherwise designated

Section III - Physical Data

Boiling Point (deg F):	NAIF	Specific gravity (H₂O=1):	2 - 3.5
Vapor Pressure (mm Hg):	NAIF	% Volatiles by Vol (%):	NAIF
Vapor Density (Air=1):	NA	Evaporation Rate:	NA
Solubility in Water:	Slight	Melting Point:	

Appearance and Odor:

Solid red, pink, brown, blue, gray or white

No odor except treated wheels when in use. May have a waxy or sulfur odor.

NL = not listed; NAIF = no available information found; NA = not applicable

Bond softens at <1000 deg F

Sulfur Treat at <246 deg F

Paraffin at >128 deg F

Section IV - Fire & Explosion Hazard Data

Flash Point:	NA	Flammability Limits:	LEL: NA	UEL: NA
Extinguishing Media:	Water	Special Fire Fighting Procedures:	None	
Unusual Fire & Explosion Hazard:	None			

Section V - Health Hazard Data

Primary Routes of Entry	Acute and Chronic Health Effects	First Aid & Medical Information
Inhalation (dust)	Pulmonary effects such as coughing, shortness of breath and loss of breathing capacity.	Fresh air, artificial respiration. Seek medical assistance.
Eye (dust and particles)	Dust may irritate eyes. Particles may cut, burn or otherwise damage eyes.	Wash with large amounts of water. Seek medical attention.
Skin (dust and particles)	Hot particles from grinding may produce minor burns. Dust may irritate skin.	Clean with soap and water. Obtain medical assistance.
Ingestion	NAIF	Seek medical assistance.
Other Health Risks	Grinding may create sound and vibration levels that could affect hearing and	Obtain medical evaluation and use proper protection.

Section VI - Reactivity Data**Stability:** (X) Stable () Unstable**Polymerization:** () May occur (X) May not Occur**Incompatibility (materials to avoid):** None known**Decomposition Products:**

Unknown, but dusts and fumes are generated during the grinding process. These are produced from the abrasive product, the workpiece and coolant (if used).

Conditions to be Avoided:

Exposure to extremes of temperatures and moisture

Section VII - Spill or Leak Procedures**Storage and Handling:**

See ANSI Standard B7.1 Safety Requirements for the Use, Care and Protection of Abrasive Wheels.

Steps to be Taken in Case of Leaks or Spills:

Collect the material in the most convenient and safe manner possible for reclamation or disposal.

Waste Disposal Method:

Secured sanitary landfill in accordance with federal, state and local regulations and laws.

Section VIII - Personal Protection Information**Respirator Protection (specify type):**

As required. See OSHA regulation 29 CFR 1910.94 for approved dust respirators.

Ventilation Local & General:

Recommended. See OSHA 29 CFR 1910.94 for ventilation and OSHA 29 CFR 1910.1000 for air contaminants.

Other:

As required to keep dusts and fumes below TLV.

Eye Protection:

Required. Refer to OSHA 29 CFR 1910.133

Protective Gloves:

As needed in most operations. Recommended in portable grinding operations or in operations where substantial vibrations are transmitted to the hands or arms. Special protective gloves shall be used in the latter case.

Hearing:

As needed except in operations with noise level exceeding statutory limits. See OSHA 29 CFR 1910.95 for hearing protection.