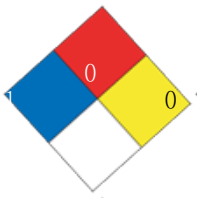
SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product Name:	**Vitrified Bonded WHEEL**
Product Code:	Bonded Abrasives
UPC Number:	05539509937
SDS Manufacturer Number:	BA_Vit
Product Use/Restriction:	Abrasive Product.
Manufacturer Name:	Saint-Gobain Abrasives, Inc.
Address:	1 New Bond Street Worcester, MA 01615
Website:	www.Nortonabrasives.com
General Phone Number:	508-795-5000
Emergency Phone Number:	508-795-5000
SDS Creation Date:	August 15, 2009
SDS Revision Date:	March 31, 2015
(M)SDS Format:	

NFPA



HMIS

Health Hazard	**1**
Fire Hazard	**1**
Reactivity	**0**
Personal Protection	

SECTION 2 : HAZARD(S) IDENTIFICATION

Signal Word:	Not applicable.
GHS Class:	Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200
Hazard Statements:	Not applicable.
Precautionary Statements:	Not applicable.

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Eye:	Causes eye irritation.
Skin:	Causes skin irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed. May cause vomiting.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation.
Signs/Symptoms:	Overexposure may cause headaches and dizziness.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Aggravation of Pre-Existing Conditions:	None generally recognized.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Aluminum Oxide, Non-fibrous	1344-28-1	60 - 100 by weight	215-691-6
Amorphous Silica, Fused	60676-86-0	5 - 10 by weight	262-373-8
Titanium dioxide	13463-67-7	1 - 5 by weight	236-675-5

Notes : Actual grinding tests with wheels known to contain Crystalline Silica did not produce any detectable amount of respirable free Crystalline Silica.

SECTION 4 : FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Remove contacts if present and easy to do. Continue rinsing. Get medical attention, if irritation or symptoms of overexposure persists.

Skin Contact: Immediately wash skin with soap and plenty of water.
Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Note to Physicians: Not applicable.

Other First Aid: Not applicable.

SECTION 5 : FIRE FIGHTING MEASURES

Flash Point: None.

Auto Ignition Temperature: Not applicable.

Lower Flammable/Explosive Limit: Not applicable.

Upper Flammable/Explosive Limit: Not applicable.

Fire Fighting Instructions: Not applicable.

Extinguishing Media: Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.

Unsuitable Media: Not applicable.

Protective Equipment: As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

Unusual Fire Hazards: Not applicable.

Hazardous Combustion Byproducts: Not applicable.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	0
NFPA Reactivity:	0

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in section 8.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Spill Cleanup Measures:	Not applicable.
Methods for containment:	Contain spills with an inert absorbent material such as soil or sand. Prevent from spreading by covering, diking or other means. Provide ventilation.
Methods for cleanup:	Clean up spills immediately observing precautions in the protective equipment section. Place into a suitable container for disposal. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.
Other Precautions:	Not applicable.

SECTION 7 : HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, and incompatible substances. Keep container tightly closed when not in use.
Hygiene Practices:	Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
PPE Pictograms:	

EXPOSURE GUIDELINES

Ingredient	**Guideline OSHA**	**Guideline NIOSH**	**Guideline ACGIH**	**Quebec Canada**	**Ontario Canada**
Aluminum Oxide, Non-fibrous	PEL-TWA: 5 mg/m3 Respirable fraction (R) PEL-TWA: 15 mg/m3 Total particulate/dust (T)		TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)
Amorphous Silica, Fused	OSHA PEL-TWA 0.1 mg/m3	REL-TWA: 0.05 mg/m3 (Respirable)	ACGIH TLV-TWA 0.1 mg/m3	VEMP-TWA: 0.1 mg/m3 Respirable fraction (R)	OEL-TWAEV: 0.1 mg/m3 Respirable fraction (R)
Titanium dioxide			TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)

Ingredient	**Alberta Canada**	**Mexico**	**British Columbia Canada**		

Aluminum Oxide, Non-fibrous	OEL-TWA: 10 mg/m3	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-TWA: 10 mg/m3 OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		
Amorphous Silica, Fused	OEL-TWA: 0.1 mg/m3 Respirable fraction (R)	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)			
Titanium dioxide	OEL-TWA: 10 mg/m3 Total particulate/dust (T)	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-TWA: 3 mg/m3 Respirable fraction (R)		

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Solid article.
Color:	Not determined.
Odor:	Odorless.
Odor Threshold:	Not determined.
Boiling Point:	Not determined.
Melting Point:	Not determined.
Density:	Not determined.
Solubility:	Not determined.
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Evaporation Rate:	Not determined.
pH:	Not determined.
Viscosity:	Not determined.
Coefficient of Water/Oil Distribution:	Not determined.
Flammability:	Not determined.
Flash Point:	None.
Auto Ignition Temperature:	Not applicable.
Explosive Properties:	Excessive dust accumulation could present a potential combustible dust hazard.
VOC Content:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Reactivity:	Not applicable.
Hazardous Polymerization:	Not reported.
Conditions to Avoid:	Heat, flames, incompatible materials, and freezing or temperatures below 32 deg. F.
Incompatible Materials:	Oxidizing agents. Strong acids and alkalis.
Special Decomposition Products:	Not applicable.

SECTION 11 : TOXICOLOGICAL INFORMATION

Acute Toxicity: This product has not been tested for its toxicity.

Carcinogens:							
	ACGIH	NIOSH	OSHA	IARC	NTP		MEXICO
Aluminum Oxide, Non-fibrous	A4 Not Classifiable as a Human Carcinogen	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen
Amorphous Silica, Fused	No Data	NIOSH carcinogen	No Data	No Data	No Data		No Data
Titanium dioxide	No Data	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen

Aluminum Oxide, Non-fibrous :

RTECS Number: BD1200000

Inhalation: Inhalation - Rat TCLo: 200 mg/m3/5H/28W (Intermittent) [Lungs, Thorax, or Respiration - Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration - Chronic pulmonary edema; Related to Chronic Data - death] (RTECS)

Amorphous Silica, Fused :

RTECS Number: "VV7328000"

Inhalation: Inhalation - Rat TCLo: 197 mg/m3/6H/26W (Intermittent) [Lungs, Thorax, !or Respiration - Changes in lung weight] (RTECS)

Titanium dioxide :

RTECS Number: "XR2275000"

Skin: Skin - Human Standard Draize test. : 300 ug/3D-I - [mild] (RTECS)

Inhalation: Inhalation - Rat TCLo - Lowest published toxic concentration: 1 mg/kg - [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (Intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)

Ingestion: Oral - Rodent rat TDLo - Lowest published toxic dose: 60 gm/kg - [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity: Please contact the phone number or address of the manufacturer listed in Section 1 for information on ecotoxicity.

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14 : TRANSPORT INFORMATION

SECTION 15 : REGULATORY INFORMATION

Inventory Status

	Japan ENCS	EINECS Number	South Korea KECL	Australia AICS	Canada DSL
Aluminum Oxide, Non-fibrous	(1) -23	262-373-8	KE-01012	Listed	Listed
Amorphous Silica, Fused		262-373-8			Listed
Titanium dioxide	(1)-558		KE-33900	Listed	Listed

	TSCA Inventory Status				
Aluminum Oxide, Non-fibrous	Listed				
Amorphous Silica, Fused	Listed				
Titanium dioxide	Listed				

Aluminum Oxide, Non-fibrous :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.50(1298)

Amorphous Silica, Fused :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.1404(1487)

Aluminum Oxide, Non-fibrous :

EC Number: 215-691-6

Amorphous Silica, Fused :

EC Number: 262-373-8

Titanium dioxide :

EC Number: 236-675-5

State Right To Know

	RI	MN	IL	PA	MA
Aluminum Oxide, Non-fibrous	Listed	Listed	No Data	Listed	Listed
Amorphous Silica, Fused	Listed				Listed
Titanium dioxide	Listed	Listed	No Data	Listed	Listed

	NJ				
Aluminum Oxide, Non-fibrous	Listed: NJ Hazardous List; Substance Number: 2891				
Titanium dioxide	No Data				

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard:	1
HMIS Fire Hazard:	1
HMIS Reactivity:	0

SDS Creation Date:	August 15, 2009
SDS Revision Date:	March 31, 2015
MSDS Revision Notes:	GHS Update
SDS Format:	