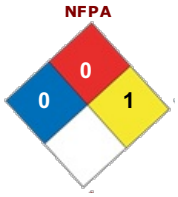
SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION



HMIS	
Health Hazard	1
Fire Hazard	0
Reactivity	1
Personal Protection	X

Product Name:	**Abrasive Product**
MSDS Manufacturer Number:	TW_All
Manufacturer Name:	Saint-Gobain Abrasives, Inc.
Address:	1 New Bond Street Worcester, MA 01615
General Phone Number:	508-795-5000
Emergency Phone Number:	508-795-5000
Website:	www.Nortonabrasives.com
MSDS Creation Date:	August 15, 2009
MSDS Revision Date:	October 30, 2014

SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Fiberglass	65997-17-3	1 - 5 by weight	266-046-0
Zirconium dioxide	1314-23-4	10 - 30 by weight	215-227-2
Silicon carbide	409-21-2	5 - 10 by weight	206-991-8
Phenol formaldehyde polymer	9003-35-4	10 - 30 by weight	
Sulfates/Sulfides	No Data	5 - 10 by weight	
Inorganic fluorides	Not Applicable	1 - 5 by weight	
Aluminum Oxide, Non-fibrous	1344-28-1	30 - 60 by weight	215-691-6
Amorphous Silica, Fused	60676-86-0	10 - 30 by weight	262-373-8
Titanium dioxide	13463-67-7	0 - 1 by weight	236-675-5

SECTION 3 : HAZARDS IDENTIFICATION

Potential Health Effects:

Eye:	Dust may cause slight irritation.
Skin:	Dust from this product may cause temporary mechanical irritation.
Inhalation:	Dusts from this product may cause mechanical irritation of the nose, throat and respiratory tract.
Ingestion:	Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.
Chronic Health Effects:	Chronic health effects are not expected as long as good hygiene and proper safety precautions are practiced.

Fiberglass

Inhalation:	Fiberglass contained in wheels have fiber diameters greater than 10 um, therefore considered non-respirable.

Phenol formaldehyde polymer

Chronic Health Effects:	Dust generated from intended use may contain trace amounts of phenol and formaldehyde which under excessive exposure may cause skin sensitization and airway obstruction.

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. 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 dust from cutting or drilling is inhaled, remove the affected person to fresh air. If symptoms persist, get medical attention.
Ingestion:	Accidental ingestion of this material is unlikely. If this does occur, watch person for several days to make sure intestinal blockage does not occur. If symptoms persist, call a physician.
Note to Physicians:	No information available.

SECTION 5 : FIRE FIGHTING MEASURES

Flammable Properties:	Non Flammable.
Flash Point:	Does not apply.
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not available.
Upper Flammable/Explosive Limit:	Not available.
Extinguishing Media:	Use any extinguishing media appropriate for the surrounding fires.
Unsuitable Media:	None.
Protective Equipment:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA Ratings:

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

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Methods for containment:	Containment of this material should not be necessary.
Methods for cleanup:	Shovel or sweep up for re-use or disposal. Avoid creating dusty conditions. Evaluate residue to determine if it is a hazardous waste by characteristic. Dispose of in accordance with Local, State, Federal and Provincial regulations.

SECTION 7 : HANDLING and STORAGE

Handling:	Always HANDLE AND STORE wheels in a CAREFUL manner. Always VISUALLY INSPECT all wheels before mounting. Always CHECK MACHINE SPEED against the established maximum safe operating speed MARKED ON THE WHEEL. Always CHECK MOUNTING FLANGES for equal and correct diameter. Always USE MOUNTING BLOTTERS. Always be sure WORK REST is properly adjusted. Always USE A SAFETY GUARD covering at least one-half of the grinding wheel. Always allow NEWLY MOUNTED WHEELS to run at operating speed, with guard in place, for at least one minute before grinding. Always TURN OFF COOLANT before stopping wheel to avoid creating an out-of-balance wheel.
Storage:	No special storage conditions required.
Hygiene Practices:	Wear suitable gloves and eye/face protection.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	General dilution ventilation and/or local exhaust ventilation should be provided as necessary to maintain exposures below occupational exposure limits.
Eye/Face Protection:	Always WEAR SAFETY GLASSES or some type of eye protection when grinding.
Skin Protection Description:	Protective gloves. Long sleeved shirt and long pants.
Respiratory Protection:	When workers are facing airborne particulate/dust concentrations above the exposure limit they must use appropriate certified respirators. A properly fitted NIOSH approved disposable N 95 type dust respirator or better is recommended.
Other Protective:	Use of this product may create elevated sound levels. Hearing protection should be worn where required (see OSHA 29 CFR 1910.134 and other applicable regulations).
General Hygiene Considerations:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Avoid getting dust into boots and gloves through wrist bands and pant tucks.

EXPOSURE GUIDELINES

Ingredient	Guideline OSHA	Guideline NIOSH	Guideline ACGIH	Quebec Canada	Ontario Canada
Fiberglass	PEL-TWA: 1 f/cc as Continuous filament glass		TLV-TWA: 1 f/cc as Continuous filament glass TLV-TWA: 5 mg/m3 as Continuous filament glass		
Zirconium dioxide			TLV-TWA: 10 mg/m3 as zirconium compounds		
Silicon carbide	PEL-TWA: 15 mg/m3 Total particulate/dust (T) PEL-TWA: 5 mg/m3 Respirable fraction (R)		TLV-TWA: 10 mg/m3 Inhalable fraction (I) TLV-TWA: 3 mg/m3 Respirable fraction (R) TLV-TWA: 0.1 f/cc Respirable fraction (R)	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T) OEL-TWAEV: 3 mg/m3 Respirable fraction (R) OEL-TWAEV: 10 mg/m3 Inhalable fraction (I) OEL-TWAEV: 0.1 f/cc Respirable fraction (R)
Inorganic fluorides	PEL-TWA 2.5 mg/m3	REL-TWA 2.5 mg/m3	TLV-TWA 2.5 mg/m3		
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		
Silicon carbide	OEL-TWA: 10 mg/m3	LMPE-PPT: 10 mg/m3 LMPE-CT: 20 mg/m3	OEL-TWA: 10 mg/m3 Inhalable fraction (I) OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-TWA: 0.1 f/cc Respirable fraction (R)		
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.

Odor: Odorless.

Flash Point: Does not apply.

Auto Ignition Temperature: Not determined.

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability: Stable under normal conditions.

Hazardous Polymerization: Hazardous polymerization does not occur.

Special Decomposition Products: In use, dust and decomposing odors may be generated. In most cases, the material removed from the workplace will be significantly greater than the grinding wheel components. Coolants may produce other decomposition products.

SECTION 11 : TOXICOLOGICAL INFORMATION

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

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

		carcinogen					
Titanium dioxide	No Data	No Data	No Data	No Data	No Data		

Fiberglass :

RTECS Number: LK3651000

Zirconium dioxide :

RTECS Number: ZH8800000

Silicon carbide :

RTECS Number: VW0450000

Inhalation: No Data

Phenol formaldehyde polymer :

RTECS Number: SM8542500

Skin: Administration onto the skin - Rat LD50 : >2 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 : >5 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

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

Biodegradation: Vitrified products do not appreciably decay.

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal: Use standard landfill methods consistent with applicable Federal, State, Provincial and local laws.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Not regulated as hazardous material for transportation.

DOT UN Number: Not regulated as hazardous material for transportation.

IATA Shipping Name: Not regulated as hazardous material for transportation.

Canadian Shipping Name: This product is Not Regulated under the Transportation of Dangerous Goods Act. (CAN).

SECTION 15 : REGULATORY INFORMATION

Fiberglass :

TSCA Inventory Status: Listed

Canada DSL: Listed

EC Number: 266-046-0

Zirconium dioxide :

TSCA Inventory Status: Listed

Massachusetts: Listed

Canada DSL: Listed

EC Number:	215-227-2
Silicon carbide :	
TSCA Inventory Status:	Listed
Massachusetts:	Listed
Pennsylvania:	Listed
Canada DSL:	Listed
EC Number:	206-991-8
Phenol formaldehyde polymer :	
TSCA Inventory Status:	Listed
Canada DSL:	Listed
Aluminum Oxide, Non-fibrous :	
TSCA Inventory Status:	Listed
EINECS Number:	262-373-8
New Jersey:	Listed: NJ Hazardous List; Substance Number: 2891
Massachusetts:	Listed
Pennsylvania:	Listed
Minnesota:	Listed
Illinois:	No Data
Rhode Island:	Listed
Canada DSL:	Listed
Canada IDL:	Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.50(1298)
EC Number:	215-691-6
Amorphous Silica, Fused :	
TSCA Inventory Status:	Listed
EINECS Number:	262-373-8
Massachusetts:	Listed
Rhode Island:	Listed
Canada DSL:	Listed
Canada IDL:	Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.1404(1487)
EC Number:	262-373-8
Titanium dioxide :	
TSCA Inventory Status:	Listed
New Jersey:	No Data
Massachusetts:	Listed
Pennsylvania:	Listed
Minnesota:	Listed
Illinois:	No Data
Rhode Island:	Listed
Canada DSL:	Listed
EC Number:	236-675-5

SECTION 16 : ADDITIONAL INFORMATION

MSDS Creation Date:	August 15, 2009
MSDS Revision Date:	October 30, 2014