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## SAFETY DATA SHEET

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### SECTION 1 : IDENTIFICATION

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Product identifier used on the label:

**Product Name:** Vitrified Bonded WHEEL  
**Product Code:** Bonded Abrasives  
**UPC Number:** 07660788275

Other means of identification:

Recommended use of the chemical and restrictions on use:

**Product Use/Restriction:** Abrasive Product.

Chemical manufacturer address and telephone number:

**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:

**Emergency Phone Number:** 508-795-5000

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### SECTION 2 : HAZARD(S) IDENTIFICATION

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Classification of the chemical in accordance with CFR 1910.1200(d)(f):

**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.

Hazards not otherwise classified that have been identified during the classification process:

**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.

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### SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

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Mixtures:

| 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 | 10 - 30 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.

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### SECTION 4 : FIRST AID MEASURES

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Description of necessary 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.

Most important symptoms/effects, acute and delayed:

**Other First Aid:** Not applicable.

Indication of immediate medical attention and special treatment needed:

**Note to Physicians:** Not applicable.

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### SECTION 5 : FIRE FIGHTING MEASURES

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Suitable and unsuitable extinguishing media:

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

**Unsuitable extinguishing media:** Not applicable.

Specific hazards arising from the chemical:

Hazardous Combustion Byproducts: Not applicable.

Unusual Fire Hazards: Not applicable.

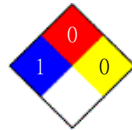
Special protective equipment and precautions for fire-fighters:

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

Fire Fighting Instructions: Not applicable.

**NFPA Ratings:**

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



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## SECTION 6 : ACCIDENTAL RELEASE MEASURES

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Personal precautions, protective equipment and emergency procedures:

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:

Environmental Precautions: Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Spill Cleanup Measures: Not applicable.

Methods and materials for containment and cleaning up:

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.

Reference to other sections:

Other Precautions: Not applicable.

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## SECTION 7 : HANDLING and STORAGE

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Precautions for safe handling:

Handling: Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.

Hygiene Practices: Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

Conditions for safe storage, including any incompatibilities:

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.

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## SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

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EXPOSURE GUIDELINES:

| Ingredient                  | Guideline OSHA   | Guideline NIOSH                               | Guideline ACGIH   | Quebec Canada                                    | Ontario Canada                                    |
|-----------------------------|--|---|---|--|---|
| Aluminum Oxide, Non-fibrous | PEL-TWA: 5 mg/m3<br>Respirable fraction (R)<br>PEL-TWA: 15 mg/m3<br>Total particulate/dust (T) |   | TLV-TWA: 10 mg/m3   | VEMP-TWA: 10 mg/m3 Total<br>particulate/dust (T) | OEL-TWAEV: 10 mg/m3 Total<br>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<br>particulate/dust (T) | OEL-TWAEV: 10 mg/m3 Total<br>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<br>Respirable fraction (R) | OEL-TWA: 3 mg/m3<br>Respirable fraction (R)<br>OEL-TWA: 10 mg/m3<br>OEL-TWA: 10 mg/m3<br>Total particulate/dust (T)<br>OEL-STEL: 20 mg/m3<br>Total particulate/dust (T) |  |   |
| Amorphous Silica, Fused     | OEL-TWA: 0.1 mg/m3<br>Respirable fraction (R)  | MPE-PPT: 0.1 mg/m3<br>Respirable fraction (R) |   |  |   |
| Titanium dioxide            | OEL-TWA: 10 mg/m3<br>Total particulate/dust (T)  | MPE-PPT: 0.1 mg/m3<br>Respirable fraction (R) | OEL-TWA: 10 mg/m3<br>Total particulate/dust (T)<br>OEL-TWA: 3 mg/m3<br>Respirable fraction (R)  |  |   |

Appropriate engineering controls:

**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.

Individual protection measures:

**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:**



## SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

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.

Lower Flammable/Explosive Limit: Not applicable.

Upper Flammable/Explosive Limit: Not applicable.

Auto Ignition Temperature: Not applicable.

Explosive Properties: Excessive dust accumulation could present a potential combustible dust hazard.

VOC Content: Not determined.

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## SECTION 10 : STABILITY and REACTIVITY

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Reactivity:

Reactivity: Not applicable.

Chemical Stability:

Chemical Stability: Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization: Not reported.

Conditions To Avoid:

Conditions to Avoid: Heat, flames, incompatible materials, and freezing or temperatures below 32 deg. F.

Incompatible Materials:

Incompatible Materials: Oxidizing agents. Strong acids and alkalis.

Hazardous Decomposition Products:

Special Decomposition Products: Not applicable.

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## SECTION 11 : TOXICOLOGICAL INFORMATION

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TOXICOLOGICAL INFORMATION:

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

| <b>Carcinogens:</b>                | <b>ACGIH</b>                              | <b>NIOSH</b> | <b>OSHA</b> | <b>IARC</b> | <b>NTP</b> | <b>MEXICO</b>                             |
|------------------------------------|---|--------------|-------------|-------------|------------|---|
| <b>Aluminum Oxide, Non-fibrous</b> | A4 Not Classifiable as a Human Carcinogen | No Data      | No Data     | No Data     | No Data    | A4 Not Classifiable as a Human Carcinogen |

|                                |         |                  |         |         |         |         |   |
|--------------------------------|---------|------------------|---------|---------|---------|---------|---|
| <b>Amorphous Silica, Fused</b> | No Data | NIOSH carcinogen | No Data | No Data | No Data | No Data | No Data                                   |
| <b>Titanium dioxide</b>        | 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/m<sup>3</sup>/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/m<sup>3</sup>/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:**

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

**SECTION 13 : DISPOSAL CONSIDERATIONS**

**Description of waste:**

**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**

**UN number:** Not regulated as hazardous material for transportation.

**UN proper shipping name:** Not regulated as hazardous material for transportation.

**Transport hazard class(es):** Not regulated as hazardous material for transportation.

**Packing group:** Not regulated as hazardous material for transportation.

**Environmental hazards:** Not regulated as hazardous material for transportation.

**Special precautions for user:** Not regulated as hazardous material for transportation.

**SECTION 15 : REGULATORY INFORMATION**

Safety, health and environmental regulations specific for the product:

**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   |  |  |  |  |

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## SECTION 16 : ADDITIONAL INFORMATION

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HMIS Ratings:

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

|                            |          |
|----------------------------|----------|
| <b>Health Hazard</b>       | <b>1</b> |
| <b>Fire Hazard</b>         | <b>1</b> |
| <b>Reactivity</b>          | <b>0</b> |
| <b>Personal Protection</b> |          |

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MSDS Revision Notes: GHS Update

SDS Format:

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