MSDS Name	**Structural Adhesive - Urethane (1 minute)**
Manufacturer Name	Saint-Gobain Abrasives, Inc.
Stock No.	04615
Kit MSDS Revision Date	07/01/2013

Components	
	Structural Adhesive - Urethane (1 minute) Part 1
	Structural Adhesive - Urethane (1 minute) Part 2
Saint-Gobain Abrasives, Inc. Product Code : 04615	

SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name:	**Structural Adhesive - Urethane (1 minute) Part 1**
Product Code:	04615A
MSDS Manufacturer Number:	04615A
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:	08/09/2010
MSDS Revision Date:	07/01/2013

NFPA

HMIS

Health Hazard	2
Fire Hazard	1
Reactivity	1
Personal Protection	1

* Chronic Health Effects

SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Talc (no asbestos)	14807-96-6	5 - 10 by weight
4,4 DiPhenylmeth.DiIsocyanate	101-68-8	30 - 40 by weight
Colloidal Silica	68611-44-9	3 - 7 by weight
Urethane Prepolymer	Trade secret	20 - 30 by weight
MDI Homopolymer	25686-28-6	10 - 15 by weight
Aluminum oxide	1344-28-1	1 - 3 by weight
Sodium oxide	1333-59-3	1 - 3 by weight
Silicon dioxide	7631-86.9	1 - 5 by weight
Calcium monoxide	1305-78-8	1 - 3 by weight

SECTION 3 : HAZARDS IDENTIFICATION

Emergency Overview:	WARNING! Potential Sensitizer. Irritant.
Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	
Eye:	Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury..
Skin:	Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.
Inhalation:	Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.
Ingestion:	Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

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 immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. 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.

SECTION 5 : FIRE FIGHTING MEASURES

Flash Point:	200 °F (93.3 °C)
Flash Point Method:	SETA
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
Unsuitable Media:	Water or foam may cause frothing.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA Ratings:

NFPA Flammability:	1
NFPA Health:	2
NFPA Reactivity:	1

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Spill Cleanup Measures:	Absorb spill with inert material (e,g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in section 8.
Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Other Precautions:	Pump or shovel to storage/salvage vessels.

SECTION 7 : HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.
Special Handling Procedures:	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

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:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
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 and a deluge shower safety station.

EXPOSURE GUIDELINES

Talc (no asbestos):

Guideline ACGIH:	2 mg/m3 TLV-TWA: 1 mg/m3 Respirable fraction (R) TLV-TWA: 2 mg/m3 Respirable fraction (R)
Guideline OSHA:	20 mppcf PEL-TWA: 20 mppcf

4,4 DiPhenylmeth.DiIsocyanate:

Guideline ACGIH:	0.005 ppm TLV-TWA: 0.005 ppm
Guideline OSHA:	PEL-Ceiling/Peak: 0.02 ppm

Aluminum oxide:

Guideline ACGIH:	TLV-TWA: 10 mg/m3
Guideline OSHA:	PEL-TWA: 5 mg/m3 Respirable fraction (R) PEL-TWA: 15 mg/m3 Total particulate/dust (T)

Calcium monoxide:

Guideline ACGIH:	TLV-TWA: 2 mg/m3
Guideline OSHA:	PEL-TWA: 5 mg/m3

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

Color:	No Data
Odor:	No Data
Boiling Point:	Not determined.
Melting Point:	Not determined.
Specific Gravity:	1.288 @70 °F
Vapor Pressure:	<0.010 mmHg @ 77 °F
Percent Volatile:	Not determined.
Evaporation Rate:	Slower than ethyl ether.
Flash Point:	200 °F (93.3 °C)
Flash Point Method:	SETA
Auto Ignition Temperature:	Not determined.
VOC Content:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Hazardous Polymerization:	Not reported.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions.
Incompatible Materials:	Oxidizers, acids, and chlorinated organic compounds. Reactive metals (e.g. sodium, calcium, zinc). Sodium/calcium hypochlorite. Nitrous acid/ oxide, nitrites. Peroxides. Materials reactive with hydroxyl compounds.

SECTION 11 : TOXICOLOGICAL INFORMATION

RTECS Number:	WW2710000

4,4 DiPhenylmeth.DiIsocyanate:

RTECS Number:	NQ9350000
Eye:	Eye - Rabbit Standard Draize test.: 100 mg
Skin:	Oral - Rat LD50: 9200 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Nutritional and Gross Metabolic - Body temperature decrease] Oral - Mouse LD50: 2200 mg/kg [Details of toxic effects not reported other than lethal dose value]
Inhalation:	Inhalation - Rat LC50: 178 mg/m3 [Details of toxic effects not reported other than lethal dose value]
Ingestion:	Oral - Rat LD50: 9200 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Nutritional and Gross Metabolic - Body temperature decrease] Oral - Mouse LD50: 2200 mg/kg [Details of toxic effects not reported other than lethal dose value]

Aluminum oxide:

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)
RTECS Number:	EW3100000

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:	No ecotoxicity data was found for the product.
Environmental Fate:	No environmental information found for this product.

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.
RCRA Number:	None.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name:	Non regulated.
DOT UN Number:	Non regulated.
IATA Shipping Name:	Non regulated.
IATA UN Number:	Non regulated.

SECTION 15 : REGULATORY INFORMATION

Talc (no asbestos) :

TSCA Inventory Status:	Listed
Canada DSL:	Listed

4,4 DiPhenylmeth.DiIsocyanate :

TSCA Inventory Status:	Listed
SARA:	EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.
Canada DSL:	Listed
EC Number:	615-005-00-9

Aluminum oxide :

TSCA Inventory Status:	Listed
Canada DSL:	Listed
EC Number:	215-691-6

Calcium monoxide :

TSCA Inventory Status:	Listed
Canada DSL:	Listed
EC Number:	215-138-9
Canada WHMIS:	WHMIS Hazard Class(es): D2B This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

SECTION 16 : ADDITIONAL INFORMATION

HMIS Fire Hazard:	1
HMIS Health Hazard:	2
HMIS Reactivity:	1
HMIS Personal Protection:	1
MSDS Creation Date:	08/09/2010
MSDS Revision Date:	07/01/2013

SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name:	**Structural Adhesive - Urethane (1 minute) Part 2**
Product Code:	04615B
MSDS Manufacturer Number:	04615B
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:	08/09/2010
MSDS Revision Date:	07/01/2013

NFPA

HMIS

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	1

* Chronic Health Effects

SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent

Urethane prepolymer	Proprietary	5 - 15 by weight
Polyether Polyol	Not Available	30 - 40 by weight
Talc	14807-96-6	20 - 30 by weight
Oxirane, methyl-, polymer with	9082-00-2	18 - 21 by weight
Amorphous silica	68909-20-6	1 - 5 by weight
Clay	71011-26-2	1 - 3 by weight
Carbon black	1333-86-4	0.1 - 1.0 by weight

SECTION 3 : HAZARDS IDENTIFICATION

Emergency Overview:	WARNING! Potential Sensitizer. Irritant.
Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	
Eye:	Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury..
Skin:	Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.
Inhalation:	Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.
Ingestion:	Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

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 immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. 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.

SECTION 5 : FIRE FIGHTING MEASURES

Flash Point:	200 °F (93.3 °C)
Flash Point Method:	SETA
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
Unsuitable Media:	Water or foam may cause frothing.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA Ratings:

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

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Spill Cleanup Measures:	Absorb spill with inert material (e,g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in section 8.
Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Other Precautions:	Pump or shovel to storage/salvage vessels.

SECTION 7 : HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.
Special Handling Procedures:	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

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:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
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 and a deluge shower safety station.

EXPOSURE GUIDELINES

Talc:

Guideline ACGIH:	2 mg/m3 TLV-TWA: 1 mg/m3 Respirable fraction (R) TLV-TWA: 2 mg/m3 Respirable fraction (R)
Guideline OSHA:	20 mppcf PEL-TWA: 20 mppcf

Carbon black:

Guideline ACGIH:	3.5 mg/m3 TLV-TWA: 3.5 mg/m3

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

Color:	Black.
Odor:	No Data
Boiling Point:	Not determined.
Melting Point:	Not determined.
Specific Gravity:	1.288 @77 °F
Vapor Pressure:	Not determined.
Percent Volatile:	Not determined.
Evaporation Rate:	Not determined.
Flash Point:	200 °F (93.3 °C)
Flash Point Method:	SETA
Auto Ignition Temperature:	Not determined.
VOC Content:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Hazardous Polymerization:	Not reported.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions.
Incompatible Materials:	Oxidizers, acids, and chlorinated organic compounds. Reactive metals (e.g. sodium, calcium, zinc). Sodium/calcium hypochlorite. Nitrous acid/ oxide, nitrites. Peroxides. Materials reactive with hydroxyl compounds.

SECTION 11 : TOXICOLOGICAL INFORMATION

RTECS Number:	WW2710000

Oxirane, methyl-, polymer with:

RTECS Number:	TQ8180000

Skin:	Oral - Rat LD50 : >10 gm/kg [Details of toxic effects not reported other than lethal dose value] Administration onto the skin - Rabbit LD50 : >30 gm/kg [Details of toxic effects not reported other than lethal dose value]
Ingestion:	Oral - Rat LD50 : >10 gm/kg [Details of toxic effects not reported other than lethal dose value]
Carbon black:	
RTECS Number:	FF5800000
Skin:	Oral - Rat LD50: >15400 mg/kg [Behavioral - Somnolence (general depressed activity)] Administration onto the skin - Rabbit LD50: >3 gm/kg [Details of toxic effects not reported other than lethal dose value]
Ingestion:	Oral - Rat LD50: >15400 mg/kg [Behavioral - Somnolence (general depressed activity)]

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:	No ecotoxicity data was found for the product.
Environmental Fate:	No environmental information found for this product.

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.
RCRA Number:	None.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name:	Non regulated.
DOT UN Number:	Non regulated.
IATA Shipping Name:	Non regulated.
IATA UN Number:	Non regulated.

SECTION 15 : REGULATORY INFORMATION

Talc :	
TSCA Inventory Status:	Listed
Canada DSL:	Listed
Oxirane, methyl-, polymer with :	
TSCA Inventory Status:	Listed
Canada DSL:	Listed
Carbon black :	
TSCA Inventory Status:	Listed
California PROP 65:	Listed: cancer.
Canada DSL:	Listed
Canada WHMIS:	WHMIS Hazard Class(es): D2B This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

SECTION 16 : ADDITIONAL INFORMATION

HMIS Fire Hazard:	1
HMIS Health Hazard:	1
HMIS Reactivity:	0
HMIS Personal Protection:	1
MSDS Creation Date:	08/09/2010
MSDS Revision Date:	07/01/2013