



## Safety Data Sheet

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### Section 1 – Chemical Product and Company Identification

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**1.1 Product identifier:**

Product Name: GSP 1502T-2 Part A  
Product Code: 1502T2A  
Effective Date: 6/17/2015  
Revision Date: -

**1.2 Recommended use and restrictions on use:**

Product Use: Component of polyurethane polymer system  
Restrictions: For evaluation only

**1.3 Name, address, and telephone number of the chemical manufacturer:**

GS Polymers, Inc.  
3687-B Grapevine Street  
Mira Loma, CA 91752  
(951) 360-0607

**1.4 Emergency telephone number:**

24 Hr. Emergency CHEMTREC # 1-800-424-9300

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### Section 2 – Hazards Identification

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**2.1 Classification according to 29 CFR §1910.1200 (d):**

**Classification:** Acute toxicity (inhalation) - Category 4  
Skin corrosion/irritation - Category 2  
Eye damage/irritation - Category 2A  
Respiratory sensitization - Category 1  
Skin sensitization - Category 1  
Specific target organ toxicity - single exposure - Category 3 - (respiratory tract)  
Specific target organ toxicity - repeat exposure - Category 2 - (respiratory tract)

**2.2 Label elements according to 29 CFR §1910.1200 (f):****Hazard Symbols:**

**Signal Words:** Danger

**Hazard Statements:** Harmful if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.  
 May cause respiratory irritation.  
 May cause damage to organs (respiratory tract) through prolonged or repeated exposure.

**Precautionary Statements:**

**Prevention:** Do not breathe mist/ vapors/spray.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 Wear respiratory protection.  
 Wash exposed areas thoroughly after handling.  
 Contaminated work clothing must not be allowed out of the workplace.

**Response:** Get medical advice/attention if you feel unwell.

If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 Call a poison center/doctor if you feel unwell.

If on skin: Wash with plenty of soap and water.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 Take off contaminated clothing and wash it before reuse.  
 Wash contaminated clothing before reuse.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 If eye irritation persists: Get medical advice/attention.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.  
 If experiencing respiratory symptoms: Call a poison center/doctor.  
 If on skin: Wash with plenty of soap and water.

**Storage:** Store in a well-ventilated place. Keep container tightly closed.  
 Store locked up.

**Disposal:** Dispose of contents/container in accordance with local, regional, national and international regulations.

**2.3 Hazards not otherwise classified in the classification process:**

None known

**2.4 Ingredients (Present at ≥ 1%) of unknown toxicity:**

None

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Section 3 – Composition/Information on Ingredients

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**3.1.1 Hazardous ingredients(s)**

Chemical Name	CAS NO.	% (by wt.)
Polymeric diphenylmethane Diisocyanate	9016-87-9	40 – 50 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	30 – 40 %
Methylenediphenyl diisocyanate (MDI)	26447-40-5	15 – 25 %

**3.1.2 Non-hazardous ingredient(s)**

Remaining components are non-hazardous and/or present at amounts below reportable limits.

**3.2 Trade secrets (if applicable):**

\* Designates a specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

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**Section 4 – First Aid Measures**

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**4.1 Description of first aid measures**

- Eyes:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.
- Skin:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.
- Inhalation:** Move victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention if victim feels unwell. If victim is unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie belt or waistband.
- Ingestion:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

**4.2 Most important symptoms and effects, both acute and delayed:**

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**4.3 Indication of any immediate medical attention and special treatment needed:**

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Cholinesterase inhibition has been noted in human exposure but is not of benefit in determining exposure and is not correlated with signs of exposure. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

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**Section 5 – Fire-Fighting Measures**

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**5.1 Suitable extinguishing media:**

Use dry chemical, CO<sub>2</sub>, fine water spray (fog) or foam. Alcohol resistant foams (ATC type) are preferred.

**5.2 Specific hazards arising from the product:**

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen cyanide. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Material reacts slowly with water, releasing carbon dioxide which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

### 5.3 Special protective equipment and precautions for fire-fighters:

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out. Contain fire water run-off if possible. Fire water runoff, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (includes fire-fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire-fighting operations. If contact is likely, change to full chemical resistant fire-fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

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## Section 6 – Accidental Release Measures

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### 6.1 Personal precautions, protective equipment and emergency procedures:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. If available, use foam to smother or suppress. Refer to section 7, Handling, for additional precautionary measures. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

### 6.2 Methods and materials for containment and cleaning up:

Contain spilled material if possible. Absorb with materials such as: Vermiculite. Dirt. Sand. Clay. Do NOT use absorbent materials such as: Cement powder (Note: may generate heat). Collect in suitable and properly labeled open containers. Do not place in sealed containers. Suitable containers include: Metal drums. Plastic drums. Polylined fiber pacs. Wash the spill site with large quantities of water. Attempt to neutralize by adding suitable decontaminant solution: Formulation 1: sodium carbonate 5 - 10%; liquid detergent 0.2 - 2%; water to make up to 100%, OR Formulation 2: concentrated ammonia solution 3 - 8%; liquid detergent 0.2 - 2%; water to make up to 100%. If ammonia is used, use good ventilation to prevent vapor exposure. Contact your supplier for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

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## Section 7 – Handling and Storage

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### 7.1 Precautions for safe handling:

Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Use with adequate ventilation. Wash thoroughly after handling. Keep container tightly closed. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION. Spills of these organic materials on

hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

## 7.2 Conditions for safe storage, including any incompatibilities:

Protect from temperatures below: 50 °F (10 °C)

Protect from temperatures above: 86 °F (30 °C)

Store in a dry place. Protect from atmospheric moisture. Do not store product contaminated with water to prevent potential hazardous reaction. See Section 10 for more specific information. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.

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## Section 8 – Exposure Controls/Personal Protection

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### 8.1 Exposure Limits:

Chemical Name	CAS NO.	OSHA (ACGIH) TLV
4,4' -Methylenediphenyl diisocyanate	101-68-8	0.005 ppm TWA 0.02 mg/m <sup>3</sup> CLV
Methylenediphenyl diisocyanate (MDI)	26447-40-5	Not Established
Methylenediphenyl diisocyanate, homopolymer	39310-05-9	Not Established

### 8.2 Engineering Controls:

Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure.

### 8.3 Personal Protective Equipment:

**Eye Protection:** Use chemical goggles.

**Skin Protection:** **Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respirators:** Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

**Hygienic Practices:** Wash hands before eating, smoking or using toilet facilities. Do not smoke in any chemical handling and storage areas. Food or beverages should not be consumed near where this product is stored. Remove and wash contaminated clothing before

reuse. Ensure that eyewash stations and safety showers are close to the workstation location.

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## Section 9 – Physical and Chemical Properties

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<b>Appearance</b> .....	Liquid
<b>Color</b> .....	Dark Amber
<b>Odor</b> .....	Musty
<b>Odor Threshold</b> .....	0.4 ppm (Odor is inadequate warning of excessive exposure)
<b>pH</b> .....	Not Established
<b>Melting Point/Freezing Point</b> .....	Not Established
<b>Boiling Point</b> .....	Not Established
<b>Flash Point</b> .....	>351°F (>177°C)
<b>Evaporation Rate</b> .....	Not Established
<b>Upper/Lower flammability or explosive limits</b> .....	Not Established
<b>Vapor Pressure</b> .....	< 0.0001 mmHg at 77°F
<b>Vapor Density</b> .....	Not Established
<b>Relative Density</b> .....	Not Established
<b>Specific Gravity</b> .....	1.24
<b>Bulk Density (lbs./gal)</b> .....	10.34
<b>Solubility</b> .....	Insoluble, Reacts with Water
<b>Partition Coefficient; n-octanol/water</b> .....	Not Established
<b>Auto-ignition temperature</b> .....	Not Established
<b>Viscosity</b> .....	Not Established

Note: Physical data presented above are typical values and should not be construed as a specification.

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## Section 10 – Stability and Reactivity

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### 10.1 Reactivity:

Diisocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the diisocyanate. Contact is increased by stirring or if the other material acts as a solvent. Products based on diisocyanates such as TDI and MDI are not soluble in water and will sink to the bottom, but react slowly at the interface. Reaction with water will generate carbon dioxide and heat.

### 10.2 Chemical Stability:

Stable under recommended storage conditions. See Storage, Section 7.

### 10.3 Possibility of Hazardous Reactions:

Can occur. Exposure to elevated temperatures can cause product to decompose and generate gas. This can cause pressure build-up and/or rupturing of closed containers. Polymerization can be catalyzed by: Strong bases. Water.

### 10.4 Conditions to Avoid:

Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid moisture. Material reacts slowly with water, releasing carbon dioxide which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction.

### 10.5 Incompatible Materials:

Avoid contact with: Acids. Alcohols. Amines. Water. Ammonia. Bases. Metal compounds. Moist air. Strong oxidizers. Diisocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the diisocyanate. Diisocyanates are not soluble in water and sink to the bottom, but react

slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Reaction with water will generate carbon dioxide and heat. Avoid contact with metals such as: Aluminum. Zinc. Brass. Tin. Copper. Galvanized metals. Avoid contact with absorbent materials such as: Moist organic absorbents. Avoid unintended contact with polyols. The reaction of polyols and isocyanates generate heat.

#### **10.6 Hazardous Decomposition Products:**

Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition.

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### Section 11 – Toxicological Information

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#### **11.1 Information on the likely routes of exposure:**

Inhalation, skin contact.

#### **11.2 Symptoms related to the physical, chemical and toxicological characteristics:**

##### **Skin corrosion/irritation**

Prolonged contact may cause moderate skin irritation with local redness.  
Material may stick to skin causing irritation upon removal.  
May stain skin.

##### **Serious eye damage/eye irritation**

May cause moderate eye irritation.  
May cause slight temporary corneal injury.

##### **Sensitization**

Skin contact may cause an allergic skin reaction.  
Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.  
May cause allergic respiratory reaction.  
MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized.  
Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest.  
Occasionally, breathing difficulties may be life threatening.

##### **Specific Target Organ Systemic Toxicity (Single Exposure)**

May cause respiratory irritation.  
Route of Exposure: Inhalation  
Target Organs: Respiratory system

##### **Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.  
Contains a component which is reported to be a weak organophosphate-type cholinesterase inhibitor.  
Excessive exposure may produce organophosphate type cholinesterase inhibition.  
Signs and symptoms of excessive exposure may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions.

##### **Carcinogenicity**

Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m<sup>3</sup>) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

##### **Teratogenicity**

In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

**Mutagenicity**

Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative. Animal genetic toxicity studies were negative in some cases and positive in other cases.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

**11.3 Delayed and immediate effects and also chronic effects from short and long term exposure:**

No data available

**11.4 Numerical Measure of toxicity (Acute toxicity estimates)****Acute Toxicity Data:**

Toxicity data for polymeric MDI

LD50 Oral	Rat	> 2000 mg/kg
LD50 Dermal	Rabbit	>9400 mg/kg
LC50 Inhalation	Rat	0.49 mg/l 4 hour

Toxicity data for MDI (4,4'-Diphenylmethane Diisocyanate)

LD50 Oral	Rat	> 7616 mg/kg
LD50 Dermal	Rabbit	>9400 mg/kg
LC50 Inhalation	Rat	0.368 mg/l 4 hour

**11.5 Carcinogenicity:**

No carcinogenic substances as defined by IARC, NTP and/or OSHA

## Section 12 – Ecological Information

**12.1 Ecotoxicity:**

Based on information for polymeric MDI or similar material:

**Acute toxicity to fish:**

Material is practically non-toxic to aquatic organisms on an acute basis.

(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC50, activated sludge, static test, 3 Hour, Respiration rates. > 100 mg/l

**Toxicity to soil-dwelling organisms**

EC50, Eisenia fetida (earthworms), Based on information for a similar material: 14 d, > 1,000 mg/kg

**Toxicity to terrestrial plants**

EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l

EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

**12.2 Persistence and Degradability:**



In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

**12.3 Bioaccumulative Potential:**

Bioconcentration potential is low based on information for similar material.

**12.4 Mobility in Soil:**

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

**12.5 Other Adverse Effects:**

Not Available

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**Section 13 – Disposal Considerations**

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**13.1 Information on waste and methods of disposal**

Dispose of contents in accordance with all local, regional, national and international regulations.

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**Section 14 – Transportation Information**

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**14.1 Transportation information****Land Transportation (DOT):**

When in individual containers of less than the Reportable Quantity (5000 lbs. MDI) this material ships as non-regulated.

**Sea Transportation (IMDG):**

Not regulated for transportation

**Air Transportation (IATA):**

Not regulated for transportation

**14.2 Transportation in bulk according to Annex II of Marpol 73/78 and the IBC Code:**

This product is not intended to be transported in bulk containers.

**14.3 Special precautions for transportation:**

No data available

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**Section 15 – Regulatory Information**

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**15.1 Safety, health and environmental regulations specific for the product in question.**

This regulatory information is not intended to be comprehensive. Other regulations may apply to this material. To determine applicability or effects of any law or regulation with respect to the product, user should seek legal advice or consult with the appropriate government agency. GS Polymers, Inc. does not undertake to furnish advice on regulatory matters.

**United States Federal Regulations:****US EPA CERCLA Hazardous Substances (40 CFR 302):**

Not Evaluated

**SARA Section 311/312 Hazard Categories:**

Acute Health Hazard

Chronic Health Hazard

**US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III**

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):

Not Evaluated

**US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III**

Section 313 Toxic Chemicals (40 CFR 372.65) – Supplier Notification Required:

Polymeric Diphenylmethane Diisocyanate (pMDI)

4,4' -Methylenediphenyl diisocyanate (MDI)

**State Right-To-Know Information:**

For details of your regulatory requirements you should contact the appropriate agency in your state.

**Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:**

Polymeric Diphenylmethane Diisocyanate (pMDI) 9016-87-9 (MA, NJ)

4,4' -Methylenediphenyl diisocyanate 101-68-8 (MA, NJ, PA)

Methylenediphenyl diisocyanate (MDI) 26447-40-5 (MA)

**California Prop. 65:** This product contains the chemicals listed below, which the State of California has found to cause cancer, birth defects or reproductive harm.

None

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Section 16 – Other Information

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**16.1 Date of preparation or last revision:**

Company: GS Polymers, Inc.

Rev Date: 6/17/2015

Rev By: BN

**Reason for Change:**

This revision updates SDS formatting according to OSHA Hazard Communications Standard (HCS) promulgated on March 20, 2012.

**16.2 Additional information:**

**HMIS Ratings:**

Health: 2\*

Flammability: 1

Physical Hazard: 1

The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication as part of GS Polymers' product safety program. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

To determine applicability or effects of any law or regulation with respect to the product, user should seek legal advice or consult with the appropriate government agency. GS Polymers, Inc. does not undertake to furnish advice on such matters.



## Safety Data Sheet

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### Section 1 – Chemical Product and Company Identification

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**1.1 Product identifier:**

Product Name: GSP 1502T-2 Part B  
Product Code: 1502T-2B  
Effective Date: 6/18/2015  
Revision Dates: -

**1.2 Recommended use and restrictions on use:**

Product Use: Component of polyurethane polymer system  
Restrictions: Not available

**1.3 Name, address, and telephone number of the chemical manufacturer:**

GS Polymers, Inc.  
3687-B Grapevine Street  
Mira Loma, CA 91752  
(951) 360-0607

**1.4 Emergency telephone number:**

24 Hr. Emergency CHEMTREC # 1-800-424-9300

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### Section 2 – Hazards Identification

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**2.1 Classification according to 29 CFR §1910.1200 (d):**

**Classification:** Eye Irritation Category 2A

**2.2 Label elements according to 29 CFR §1910.1200 (f):****Hazard Symbols:**

**Signal Words:** Warning

**Hazard Statements:** Causes serious eye irritation.

**Precautionary Statements:**

**Prevention:** Wash exposed areas thoroughly after handling.

**Response:** IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical attention.

**Storage:** No Statement required.

**Disposal:** No Statements required.

**2.3 Hazards not otherwise classified in the classification process:**

None known

**2.4 Ingredients (Present at  $\geq 1\%$ ) of unknown toxicity:**

None

Section 3 – Composition/Information on Ingredients

**3.1.1 Hazardous ingredients(s)**

<b>Chemical Name</b>	<b>CAS NO.</b>	<b>% (by wt.)</b>
Polyether polyol	*	40 - 50 %
Propylene carbonate	108-32-7	1 - 5%

**3.1.2 Non-hazardous ingredient(s)**

Remaining components are non-hazardous and/or present at amounts below reportable limits.

**3.2 Trade secrets (if applicable):**

\* Designates a specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4 – First Aid Measures

**4.1 Description of first aid measures**

**Eyes:** Immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of entire eye surface and lids with water. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.

**Skin:** Remove contaminated clothing. Wipe off excess material from exposed area. Flush exposed area with water. Wash area with soap and water. Continue to rinse for at least 15 minutes. If skin irritation or rash occurs, get medical attention. Do not reuse clothing until clean. Contaminated leather articles including shoes cannot be cleaned and should be discarded.

**Inhalation:** Move victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if victim feels unwell. If victim is unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie belt or waistband.

**Ingestion:** Wash mouth out with water. If victim is conscious, give small quantities of water to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep victim's head low so that vomit does not enter the lungs. Call Poison Center or get medical attention immediately.

**4.2 Most important symptoms and effects, both acute and delayed:**

Eye irritation

**4.3 Indication of any immediate medical attention and special treatment needed:**

No data available

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**Section 5 – Fire-Fighting Measures**

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**5.1 Suitable extinguishing media:**

Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**5.2 Specific hazards arising from the product:**

If heated, a pressure increase will occur and the container may burst.

**5.3 Special protective equipment and precautions for fire-fighters:**

Use standard fire-fighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture.

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**Section 6 – Accidental Release Measures**

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**6.1 Personal precautions, protective equipment and emergency procedures:**

No action should be taken involving any personal risk or by personnel without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.2 Methods and materials for containment and cleaning up:**

**Small spill:** Stop leak if it is possible to do without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of waste with a licensed waste disposal contractor.

**Large spill:** Stop leak if it is possible to do without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

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**Section 7 – Handling and Storage**

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**7.1 Precautions for safe handling:**

Put on appropriate personal protective equipment (see section 8 of SDS). Individuals with a history of skin sensitization should not be employed in any process in which this product is used. Do not get in eyes, on skin or on clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material. Keep container tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities:**

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8 – Exposure Controls/Personal Protection

**8.1 Exposure Limits:**

OSHA PEL Chemical Name	CAS NO.	OSHA (ACGIH) TLV
Polyether Polyol	*	Not Established
Propylene carbonate	108-32-7	Not Established

**8.2 Engineering Controls:**

**Ventilation:** Good general mechanical ventilation and local exhaust.

**8.3 Personal Protective Equipment:**

**Eye Protection:** Wear splash resistant safety goggles.  
**Skin Protection:** Wear impervious gloves and other clothing to prevent contact.  
**Respirators:** Organic vapor respirator if adequate ventilation is not present. (National Institute for Occupational Safety and Health (NIOSH) approved for organic vapors recommended.)  
**Hygienic Practices:** Wash hands before eating, smoking or using toilet facilities. Do not smoke in any chemical handling and storage areas. Food or beverages should not be consumed near where this product is stored. Remove and wash contaminated clothing before reuse. Ensure that eyewash stations and safety showers are close to the workstation location.

## Section 9 – Physical and Chemical Properties

<b>Appearance</b> .....	Viscous Liquid
<b>Color</b> .....	Off-White
<b>Odor</b> .....	Slight, Ether-like
<b>Odor Threshold</b> .....	Not Established
<b>pH</b> .....	Not Established
<b>Melting Point/Freezing Point</b> .....	Not Established
<b>Boiling Point</b> .....	Not Established
<b>Flash Point</b> .....	>200°F (>93.33°C)
<b>Evaporation Rate</b> .....	Not Established
<b>Upper/Lower flammability or explosive limits</b> .....	Not Established
<b>Vapor Pressure</b> .....	Not Established
<b>Vapor Density</b> .....	Not Established
<b>Relative Density</b> .....	Not Established
<b>Specific Gravity</b> .....	1.52
<b>Bulk Density (lbs./gal)</b> .....	12.71
<b>Solubility</b> .....	Slightly Soluble
<b>Partition Coefficient; n-octanol/water</b> .....	Not Established
<b>Auto-ignition temperature</b> .....	Not Established
<b>Viscosity (cps)</b> .....	~7,200

Note: Physical data presented above are typical values and should not be construed as a specification.

## Section 10 – Stability and Reactivity

**10.1 Reactivity:** Stable under normal conditions.

- 10.2 Chemical Stability:** Product is stable.
- 10.3 Possibility of Hazardous Reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to Avoid:** Extremes of temperature and direct sunlight.
- 10.5 Incompatible Materials:** Strong oxidizers
- 10.6 Hazardous Decomposition Products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- 10.7 Other Hazards:** Reacts with heat release with some diisocyanates.

## Section 11 – Toxicological Information

### 11.1 Information on the likely routes of exposure:

Eye contact

### 11.2 Symptoms related to the physical, chemical and toxicological characteristics:

<b>Acute Toxicity:</b>	Not classified
<b>Skin Corrosion/Irritation:</b>	Not classified
<b>Serious Eye Damage/Irritation:</b>	Causes serious eye irritation
<b>Respiratory or Skin Sensitization:</b>	Not classified
<b>Germ Cell Mutagenicity:</b>	Not classified
<b>Carcinogenicity:</b>	Not classified
<b>Reproductive Toxicity:</b>	Not classified
<b>Specific Target Organ Toxicity (Single Exposure):</b>	Not classified
<b>Specific Target Organ Toxicity (Repeated Exposure):</b>	Not classified
<b>Aspiration Hazard:</b>	Not classified

### 11.3 Delayed and immediate effects and also chronic effects from short and long term exposure:

#### Short term exposure:

<b>Eye Contact:</b>	Causes serious eye irritation.
<b>Inhalation:</b>	Not Available
<b>Skin Contact:</b>	Not Available
<b>Ingestion:</b>	If a large quantity has been ingested: May cause nausea, vomiting and diarrhea.

**Long term exposure:** Not Available

**Chronic effects:** Not Available

### 11.4 Numerical Measure of toxicity (Acute toxicity estimates)

Not Available

### 11.5 Carcinogenicity:

Not Available

## Section 12 – Ecological Information

- 12.1 Ecotoxicity:** Not Available
- 12.2 Persistence and Degradability:** Not Available

<b>12.3 Bioaccumulative Potential:</b>	Not Available
<b>12.4 Mobility in Soil:</b>	Not Available
<b>12.5 Other Adverse Effects:</b>	Not Available

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**Section 13 – Disposal Considerations**

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**13.1 Information on waste and methods of disposal**

Dispose of contents in accordance with all local, regional, national and international regulations.

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**Section 14 – Transportation Information**

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**14.1 Transportation information**

<b>Land Transportation (DOT):</b>	Not Regulated in Non-Bulk Containers
<b>Sea Transportation (IMDG):</b>	Not Regulated in Non-Bulk Containers
<b>Air Transportation (IATA):</b>	Not Regulated in Non-Bulk Containers

**14.2 Transportation in bulk according to Annex II of Marpol 73/78 and the IBC Code:**

This product is not intended to be transported in bulk containers.

**14.3 Special precautions for transportation:**

No data available

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**Section 15 – Regulatory Information**

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**15.1 Safety, health and environmental regulations specific for the product in question.**

This regulatory information is not intended to be comprehensive. Other regulations may apply to this material. To determine applicability or effects of any law or regulation with respect to the product, user should seek legal advice or consult with the appropriate government agency. GS Polymers, Inc. does not undertake to furnish advice on regulatory matters.

**United States Federal Regulations:****US EPA CERCLA Hazardous Substances (40 CFR 302):**

Not Evaluated

**SARA Section 311/312 Hazard Categories:**

Not Evaluated

**US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III**

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):

Not Evaluated

**US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III**

Section 313 Toxic Chemicals (40 CFR 372.65) – Supplier Notification Required:

None

**State Right-To-Know Information:**

For details of your regulatory requirements you should contact the appropriate agency in your state.

**Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:**

Not Evaluated



**California Prop. 65:** This product contains the chemicals listed below, which the State of California has found to cause cancer, birth defects or reproductive harm.

N-Methylpyrrolidone < 1.0% (reproduction)

Propylene oxide < 0.01% (cancer)

Ethylbenzene < 0.1% (reproduction)

Toluene < 0.01% (reproduction)

Benzene < 0.01% (cancer, reproduction)

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## Section 16 – Other Information

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### 16.1 Date of preparation or last revision:

Company: GS Polymers, Inc.

Rev Date: 6/18/2015

Rev By: BN

#### Reason for Change:

This revision updates SDS formatting according to OSHA Hazard Communications Standard (HCS) promulgated on March 20, 2012.

### 16.2 Additional information:

#### HMIS Ratings:

Health: 2

Flammability: 1

Physical Hazard: 0

The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication as part of GS Polymers' product safety program. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

To determine applicability or effects of any law or regulation with respect to the product, user should seek legal advice or consult with the appropriate government agency. GS Polymers, Inc. does not undertake to furnish advice on such matters.