SAFETY DATA SHEET

1.0 IDENTIFICATION

1.1 GHS product identifier: Spartite SP-2000 Part A

1.2 Other means of identification: Polyurethane Prepolymer

1.3 Recommended use of the chemical and restrictions on use: N/A

1.4 Supplier's details: CASS POLYMERS OF MICHIGAN, INC.
31200 STEPHENSON HWY
MADISON HEIGHTS MI 48071 USA
INFORMATION PHONE NUMBER: (248) 588-2270

1.5 Emergency phone number: (703) 527-3887(Call Collect)

2.0 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture: Eye irritation 1B, Skin sensitizer 1, Respiratory sensitizer 1

2.2 GHS label elements:

Signal Word: Warning
Hazard Statement: Harmful if inhaled
Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.
Response: If inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

Signal Word: Warning
Hazard Statement: Causes skin irritation
Prevention: Wash hands thoroughly after handling. Wear protective gloves.
Response: If on skin: wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention. Take off contaminated clothing and wash before reuse.

Signal Word: Warning
Hazard Statement: May cause respiratory irritation
Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.
Response: If inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal: Preferred method of disposal includes incineration under controlled conditions in accordance with all local and national laws and regulations.

Signal Word: Warning
Hazard Statement: Causes eye irritation
Prevention: Flush eyes thoroughly after eye contact.
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 advice/attention.

2.3 Other hazards which do not result in classification: Flammable Liquid

2.4 Hazards Material Information System (United States):

Health	**3**
Flammability	**1**
Physical Hazard	**0**

Hazard Codes: 0=Chronic Hazard 0=Minimal Hazard, 1=Slight Hazard, 2=Moderate Hazard, 3=Serious Hazard, 4=Severe Hazard

3.0 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

Chemical Identity	CAS No.	Concentration
Dicyclohexylmethane Diisocyanate	5124-30-1	40% - 50%
Polyether Polyol	9003-11-6	40% - 50%
DibutylPhthalate	87-74-2	1% - 10%

4.0 FIRST-AID MEASURES

4.1 **Inhalation:** Move effected persons to fresh air; if effects occur, consult a physician.
Skin Contact: Wash hands thoroughly after handling. Wash clothing before reuse.
Eye Contact: Wash immediately and continuously with flowing water for at least 15 minutes. Seek medical advice
Ingestion: Do not induce vomiting. Give one glass (ca. 2.5 dL) of water or milk if available and transport to medical facility. Do not give anything by mouth to an unconscious person.

5.0 FIRE-FIGHTING MEASURES

5.1 **Suitable extinguishing media:** Water fog or fine spray. Carbon dioxide. Alcohol resistant foam. Dry chemical fire extinguishers.

5.2 **Specific hazards arising from the chemical:** Flash Point: 392ºF; 200ºC. Closed container may forcibly rupture under extreme heat or when contents are contaminated with water. Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture.

5.3 **Special protective actions for fire-fighters:** Firefighters should wear NFPA compliant structural firefighting protective equipment including self-contained breathing apparatus.

6.0 ACCIDENTAL RELEASE MEASURES

6.1 **Personal precautions, protective equipment and emergency procedures:** Wear adequate personal protective gloves and clothing.

6.2 Methods and materials for containment and clean up: Cover spill area with absorbent material and disposed of properly.

7.0 HANDLING AND STORAGE

7.1 **Precautions for safe handling:** Keep container dry. Do not ingest. Do not breathe gas/fumes/dust/spray/dust. Use adequate ventilation. Individuals with lung problems or previous sensitization must not be exposed to vapor or spray mist. Avoid contact with skin and eyes. Wear appropriate skin and eye protection. Wash thoroughly after handling. Avoid breathing smoke or mist created from overheating or burning this material.

7.2 **Conditions for safe storage, including any incompatibilities:** Store in tightly sealed containers under a blanket of dry, inert gas. Do not reseal containers of moisture contamination is suspected. Storage Temperature and Shelf Life: Store between 10ºC and 27ºC for maximum shelf life.

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 **Control parameters**

Component	CAS No.	Percent	Exposure Limits	Source
Dicyclohexylmethane Diisocyanate	5124-30-1	40% - 50%	0.115 ppm TWA TLV	ACGIH
DibutylPhthalate	87-74-2	1% - 10%	5 mg/m^3 TWA 5 mg/m^3 8 hr PEL	ACGIH OSHA

8.2 **Appropriate engineering controls:** Use of local exhaust is highly recommended.

8.3 **Individual protection measures, such as personal protective equipment:**
Respiratory Protection: Use only outdoors or in a well-ventilated area.
Skin Protection: Wear impermeable protective clothing, preferably of the type that can be disposed of after use. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.
Hand protection: Use of gloves is required.
Eye/Face Protection: Use chemical goggles.

9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 **Appearance (physical state, color, etc.):** Viscous Liquid, Water-Clear

9.2 **Odor:** None

9.3 **Odor threshold:** N/A

9.4 **pH:** Not Determined

9.5 **Melting point/freezing point:** Not Determined

9.6 **Initial boiling point and boiling range:** Not Determined

9.7 **Flash Point:** 392ºF; 200ºC

9.8 **Evaporation rate:** N/A

9.9 **Flammability (solid, gas):** N/A

9.10 **Upper/lower flammability or explosive limits:** LFL-Not Determined; UFL-Not Determined

9.11 Vapor pressure: Not Determined
9.12 Vapor Density: N/A
9.13 Relative density (Specific Gravity): 1.00 – 1.10
9.14 Solubility(ies): Slightly Soluble in Water
9.15 Partition coefficient; n-octanol/water: N/A
9.16 Auto-ignition temperature: N/A
9.17 Decomposition temperature: N/A
9.18 Viscosity: N/A
9.19 %Volatile (VOC): 0g/L

10.0 STABILITY AND REACTIVITY

10.1 Reactivity: N/A
10.2 Chemical stability: Stable under normal handling and storage conditions
10.3 Possibility of hazardous reactions: N/A
10.4 Conditions to avoid: N/A
10.5 Incompatible materials: Avoid water, amines, strong bases, alcohols, copper alloys, aluminum or temperatures above 350ºF (177ºC) in combination with isocyanates, these materials will result in a temperature and/or pressure increase or polymerization.
10.6 Hazardous decomposition products: N/A

11.0 TOXICOLOGICAL INFORMATION

11.1 Likely routes of exposure: N/A
11.2 Symptoms related to the physical, chemical and toxicological characteristics: N/A
11.3 Delayed and immediate effects and also chronic effects from short and long term exposure:
Respiratory: Repeated overexposures or single large dose may result in development of a sensitization to isocyanates with asthma or asthma-like symptoms.
Eye: Prolonged vapor contact may cause conjunctivitis.
Skin: Repeated skin contact may cause a persistent irritation or dermatitis.

Ingredient Name	CAS No.	%	Test	Result	Route	Species
Dicyclohexylmethane Diisocyanate	5124-30-1	40% - 50%	LD50 LD50	>11,000 mg/kg 434 mg/m3	Oral Inhalation	Rat Rat
DibutylPhthalate	87-74-2	1% - 10%	LD50 LC50 LD50 LD50	8,000 mg/kg 4,250 mg/m3 3,050 µL/kg >20 mL/kg	Oral Inhalation Interaperitoneal Dermal	Rat Rat Rat Rabbit

12.0 ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

Component	CAS No.	%	Test	Result	Species
Dicyclohexylmethane Diisocyanate	5124-30-1	40% - 50%	LC50, 96 hrs LC50, 48 hrs	1.2 mg/L >5 mg/L	Zebra Fish Green Algae
DIBUTYL PHTHALATE	84-74-2	1% - 10%	LC50, 96 hrs EC50	0.92 mg/L 3.4 mg.L	Fathead Minnow Daphnid

12.2 Persistence and degradability: The material contains components that show little or no evidence of biodegradability.
12.3 Bioaccumulative potential: N/A
12.4 Mobility in soil: N/A
12.5 Other adverse effects: N/A

13.0 DISPOSAL CONSIDERATIONS

13.1 Disposal methods: Preferred method of disposal includes incineration under controlled conditions in accordance with all local and national laws and regulations.

14.0 TRANSPORT INFORMATION

14.1 UN number: N/A
14.2 UN proper shipping name: Liquid Plastic, NOI (not regulated)

14.3 Transport hazard class(es): N/A

14.4 Packing group, if applicable: N/A

14.5 Environmental hazards: N/A

14.6 Transport in bulk: N/A

14.7 Special precautions for user: N/A

15.0 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations:

OSHA Hazcom Standard Rating: Hazardous

Toxic Substances Control Act (TSCA) 12(b) Components: DIBUTYL PHTHALATE (CAS#84-74-8)

OSHA Hazard Communication Standard (29CFR1910.1200) hazard class(es): Acute health hazard, Chronic health hazard.

EPA SARA Title III section 302 (40CFR370) Extremely Hazardous Substances: None Known

EPA SARA Title III section 313 (40 CFR 372) Toxic Chemicals above "de minimus" levels:
Dicyclohexylmethane-4,4'-Diisocyanate (CAS# 5124-30-1) DIBUTYL PHTHALATE (CAS#84-74-8) 8%

CALIFORNIA PROPOSITION 65: SUBSTANCES (component (s) know to the State of California to cause cancer and/or reproductive and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986") DIBUTYL PHTHALATE (CAS#84-74-8) 8%

CANADA REGULATIONS

WHMIS Classification: D2B- Very Toxic Material Causing Other Toxic Effects

WHMIS Symbol(s):

DSL: Components of this product have been reported to Environment Canada in accordance with subsection 25 of the Canadian Environmental Protection Act and are included on the Domestic Substances List.

16.0 OTHER INFORMATION

16.1 Date of Preparation: 03/21/2013

To the best of our knowledge, the information contained herein is accurate. Final determination of the suitability of any material is the sole responsibility of the users. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.