SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Isocyanate MDI-I “A” Component

Company: Specialty Products, Inc. (SPI)
2410 - 104th St Ct S, Ste D
Lakewood, WA 98499

Phone: 253.588.7101
Toll Free: 800.627.0773
Fax: 253.588.7196

EMERGENCY CONTACT: For Spills, Leaks, Fire or Exposure call CHEMTREC
Toll Free: 800.424.9300
International Calls: 703.527.3887
Fax: 913.321.1490

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS#</th>
<th>% W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymeric Diphenylmethane</td>
<td>9016-87-9</td>
<td>&gt;55</td>
</tr>
<tr>
<td>Methylene Diphenylisocyanate</td>
<td>101-68-8</td>
<td>&gt;45</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

Physical State: Dark brown liquid.
Odor: Slightly musty odor.
OSHA/HCS status: This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency Overview: WARNING Irritating to eyes, respiratory system and skin. Inhalation at levels above the occupational exposure limit could cause respiratory sensitization. May cause risk of serious damage to respiratory system. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons. Sensitized persons should not be exposed to any mixture containing unreacted MDI.

General Information: Read the entire MSDS for a more thorough evaluation of the hazards.

SECTION 4: FIRST AID MEASURES

Eye Contact: Can cause eye irritation. Symptoms include stinging, tearing, redness and swelling of eyes. Prolonged exposure may cause temporary corneal injury. If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin Contact: Can cause skin irritation. Symptoms may include redness and burning of skin, and other skin

Specialty Products, Inc.
damage. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects) Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. Launder clothing before reuse.

Ingestion:
Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury. Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation:
At room temperature vapor concentrations are low due to the low volatility of this material and are not likely to cause harmful effects. At concentrations above the TLV or PEL, vapors may cause respiratory irritation or other adverse effects. Symptoms may include runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function. Acute exposure may result in irritation of the upper respiratory tract and lungs and cause pulmonary edema (fluid in the lungs). Some individuals may become permanently sensitized to this material and experience asthma-like symptoms even at levels well below recommended exposure guidelines. These effects may be delayed and may be life threatening. Overexposure may result in fibrosis and permanent decreased lung function. If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen. Monitor individual for the development of asthmatic symptoms, which may be immediate or develop after several hours.

Notes to Physician:
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: irritation (nose, throat, airways), allergic reaction (causes narrowing of the air passages of the lungs, sweating, flushing, hives, rapid heart rate and lowered blood pressure). This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3-Swallowing) when deciding whether to induce vomiting. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: respiratory tract, skin, lung (for example, asthma-like conditions).

General
In case of accident or if you feel unwell, seek medical advice IMMEDIATELY (show the MSDS where possible).

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**SECTION 5: FIRE-FIGHTING MEASURES**

**Flash Point:** 446°F (230°C)
**Auto Ignition Temperature:** No Data
**Combustion Products:** May form: carbon dioxide and carbon monoxide, hydrogen cyanide, nitrogen compounds and various hydrocarbons.

**Extinguishing Media**
Dry chemical; Carbon Dioxide; Foam; Water spray for large fires.

**Special Fire Fighting Procedures:** Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. (See Stability and Reactivity). At temperatures greater than 400°F (204°C), polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fire-exposed containers.

**Unusual Hazards:** Containers may burst under intense heat. Due to reaction with water, a hazardous build-up of pressure could result if contaminated containers are re-sealed.

**Physical Hazards:** Reacts slowly with water to product carbon dioxide, which may rupture closed containers. This
Explosive Hazard: Reaction accelerates at higher temperatures. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill or Release Procedures: Evacuate and ventilate the spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during clean-up. (See Employee Protection Recommendations).

Major Spill: If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, container for disposal.

Minor Spill: Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well ventilated area (outside) and treat with neutralizing solution: mixture of water (80%), with non-ionic surfactant Tergitol TMN-10 (20%), or; Water (90%), concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO2 escape.

Clean Up Decontaminate floor with decontamination solution letting stand for at least 15 minutes

SECTION 7: HANDLING AND STORAGE

Storage Temperature: Ideal storage temperature is 20°C – 25°C (68°F – 77°F)

Shelf Life: Twelve months

Handling: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage: Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This material can produce asthmatic sensitization upon either a single inhalation exposure to relatively high concentrations or repeated exposures to low concentrations. Exposure to vapors of heated MDI can be extremely dangerous.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local exhaust should be used to maintain levels below the TLV whenever MDI is processed, heated or spray applied. Standard reference sources regarding industrial ventilation (i.e., ACGIH Industrial Ventilation) should be consulted for guidance about adequate ventilation.

Eye/Face Protection: Liquid chemical goggles. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be used in combination with a full face-shield.

Skin Protection: Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum.

Respiratory Protection: Concentrations greater than the TLV can occur when MDI is sprayed, heated or used in poorly ventilated area. In such cases, or whenever concentrations of MDI exceed the TLV or are not known, respiratory protection must be worn. A supplied air respirator (either positive pressure or continuous flow type) is required. In an emergency situation, a self contained breathing apparatus may be used. MDI has poor warning properties, since the concentration at which MDI can be smelled is substantially

Preventive Measures: Isocyanate exposure levels must be monitored. Monitoring of airborne isocyanates in the breathing zone of individuals should become part of the overall employee exposure characterization program. Monitoring techniques have been developed by NIOSH, and OSHA.

Exposure Guidelines: Medical supervision of all employees who handle or come in contact with respiratory sensitizers is recommended. Persons with respiratory problems including asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or skin allergies should be evaluated for their suitability of working with this product. Once a person is diagnosed as sensitized, no further exposure to the material that caused the sensitization should be permitted. Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

General Information
Physical State: Dark brown liquid
Odor: Slightly musty odor

Important Health, Safety and Environmental Information
Boiling Point: Not Available
Melting/Freezing Point: Not Available
Solubility (water): Not soluble. Reacts slowly with water to liberate CO₂ gas.
Specific Gravity: 1.25 @ 77°F (25°C)
Vapor Pressure: 10⁻⁴ MAX mm Hg/40° C
Viscosity: 200±50 mPas

Other Information
Volatile Organic Compounds (VOC): 0 grams/liter

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: This is a stable material under recommended storage conditions
Conditions to avoid: Contamination with water and high temperatures (greater than 400°F, 204°C)
Hazardous Decomposition Products: By high heat and fire: carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors or aerosols.
Hazardous Polymerization: May occur; Contact with moisture, other materials will react with isocyanates, or temperatures above 400°F (204°C) may cause polymerization.
Incompatibilities with Other Substances: Water, amines, strong bases, alcohols and polyols will react with MDI generating heat and possible off-gasses (carbon dioxide, in the case of water). If allowed to continue, these reactions may become increasingly exothermic and cause closed-container rupture. Avoid contact with metals such as copper alloys, tin, zinc and aluminum: corrosion may result.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral Toxicity
LD₅₀ (Rats) > 5,000 mg/kg

Skin Irritation:
LD₅₀ (Rabbit) > 5,000 mg/kg

Inhalation Toxicity:
LC₅₀ (rat) = 490 mg/m³/4 hours (respirable aerosol) In a two-year inhalation study in rats, exposure to polymeric methylene bisphenylisocyanate (MDI) aerosol caused a significant increase in benign

Specialty Products, Inc.
(non-carcinogenic) lung tumors, along with a single carcinogenic lung tumor, at the highest dose only (6 mg/m³). The tumors occurred along with irritation of the respiratory tract and the accumulation of a yellow material in the lungs. There was irritation only at 1.0 mg/m³ and no effect at 0.2 mg/m³. MDI is not listed as carcinogenic by IARC, NTP or OSHA.

SECTION 12: ECOLOGICAL INFORMATION

No Data

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method.

Empty Container Precautions Empty containers must be handled with care due to product residue. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. Do NOT HEAT OR CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH. (See Fire Fighting Measures and Stability and Reactivity). Gases may be highly toxic.

SECTION 14: TRANSPORTATION INFORMATION

EMERGENCY CONTACT: For Spills, Leaks, Fire or Exposure call CHEMTREC
Toll Free: 800.424.9300
International Calls: 703.527.3887

DOT Non-Bulk
Not Regulated

Land Transportation (DOT):
Proper Shipping Name: Other regulated substances, liquid, n.o.s. (contains 4,4'-diphenylmethane diisocyanate (MDI))
Hazard Class or division: 9
UN/NA Number: NA3082
Packaging Group: III
Hazard Label(s): Class 9

IMDG
Proper Shipping Name: Environmentally Hazardous Substances, Liquid, NOS
Technical Name: MDI
Hazard Class: 9 ID number: UN3082 Packing Group: PG III
EMS Number: F-A, S-F
Marine pollutant: No

ICAO/IATA
Not Regulated

Additional Information
Reportable Quantity: 5,000 lb

SECTION 15: REGULATORY INFORMATION

Specialty Products, Inc.
United States
This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA STATUS:
This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS:
TSCA (United States) The intentional ingredients of this product are listed.

SARA TITLE III:
SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES:  NONE

SECTION 311/312 HAZARD CATEGORIES:
Acute Health Hazard; Chronic Health Hazard

SECTION 313 TOXIC CHEMICALS:
Polymeric Diphenylmethane Diisocyanate, CAS# 9016-87-9, 100% Contained in this polymeric MDI product is 4,4'- Diphenylmethane Diisocyanate, CAS# 101-68-8; Upper Bound 45%

EPA ACCIDENTAL RELEASE PREVENTION 40 CFR 68:
None Listed

STATE RIGHT-TO-KNOW INFORMATION:
Massachusetts, New Jersey or Pennsylvania Right-to-Know Substance Lists:

<table>
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<tr>
<th>Weight %</th>
<th>Components</th>
<th>CAS-No.</th>
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<tbody>
<tr>
<td>40-55%</td>
<td>Polymeric Diphenylmethane Diisocyanate (Polymeric MDI)</td>
<td>9016-87-9</td>
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<tr>
<td>35-45%</td>
<td>4,4'-Diphenylmethane Diisocyanate (MDI)</td>
<td>101-68-8</td>
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<td>1-15%</td>
<td>Diphenylmethane Diisocyanate (MDI)</td>
<td>26447-40-5</td>
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INTERNATIONAL REGULATIONS INVENTORY STATUS:
DSL (Canada) The intentional ingredients of this product are listed.

State Regulatory Information:
Massachusetts Right-To-Know
Pennsylvania Right-To-Know
New Jersey Right-To-Know

Canada
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulations) and the MSDS (Material Safety Data Sheet) contains all the information required by the CPR.

Specialty Products, Inc.
SECTION 16: OTHER INFORMATION

Label requirements: Causes damage to the following organs: Lungs, Respiratory Tract, Skin, Eyes. May be harmful if inhaled, may cause respiratory tract, eye and skin irritation, may cause allergic respiratory and skin reaction.

HAZARDOUS MATERIAL INFORMATION SYSTEM (U.S.A.)

| Health | 2 |
| Fire Hazard | 1 |
| Reactivity | 0 |

For Your Protection: The information and recommendations in this publication is to the best of our knowledge, reliable. The toxicity and risk characteristics of products made by SPI will necessarily differ from the toxicity and risk characteristics that occur when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors. The user is responsible to comply with all applicable federal, provincial or municipal laws and regulations. SPI MAKES NO WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Preparation Information: This MSDS supersedes ALL previous MSDS versions.