1. Identification of Substance:

Product Name: BAYSEAL ISO Series (83375540, 83375613, 85413598, 81220825, 82871773, 87168698, 85861728, 87068340, 87068332, 81220663, 85559886, 87122689, 87089356, 85543718, 84109925, 84125947, 8559908, 82616617, 85376811)

Supplier Identification:
Accella Polyurethane Systems

Address:
2400 Spring Stuebner Rd.
Spring, TX 77389

Product Use: Polyurethane isocyanate component

2. Hazards Identification

GHS Ratings:

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation Toxicity</td>
<td>Acute Tox. 4</td>
<td>Gases: &gt;2500+ &lt;=5000 ppm, Vapors: &gt;10+ &lt;=20 mg/l, Dusts &amp; mists: &gt;1+ &lt;=5 mg/l</td>
</tr>
<tr>
<td>Skin corrosive</td>
<td>2</td>
<td>Reversible adverse effects in dermal tissue, Draize score: &gt;= 2.3 &lt; 4.0 or persistent inflammation</td>
</tr>
<tr>
<td>Eye corrosive</td>
<td>2A</td>
<td>Eye irritant: Subcategory 2A, Reversible in 21 days</td>
</tr>
<tr>
<td>Respiratory sensitizer</td>
<td>1</td>
<td>Respiratory sensitizer</td>
</tr>
<tr>
<td>Skin sensitizer</td>
<td>1</td>
<td>Skin sensitizer</td>
</tr>
<tr>
<td>Carcinogen</td>
<td>2</td>
<td>Limited evidence of human or animal carcinogenicity</td>
</tr>
<tr>
<td>Organ toxin single exposure</td>
<td>3</td>
<td>Transient target organ effects- Narcotic effects- Respiratory tract irritation</td>
</tr>
<tr>
<td>Organ toxin repeated exposure</td>
<td>1</td>
<td>Significant toxicity in humans; Reliable, good quality human case studies or epidemiological studies Presumed significant toxicity in humans- Animal studies with significant and/or severe toxic effects relevant to humans at generally low exposure</td>
</tr>
</tbody>
</table>

GHS Hazards

- H315: Causes skin irritation
- H317: May cause an allergic skin reaction
- H319: Causes serious eye irritation
- H332: Harmful if inhaled
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H335: May cause respiratory irritation
- H336: May cause drowsiness or dizziness
- H351: Suspected of causing cancer
- H372: Causes damage to organs through prolonged or repeated exposure

GHS Precautions

- P201: Obtain special instructions before use
- P202: Do not handle until all safety precautions have been read and understood
- P260: Do not breathe dust/fume/gas/mist/vapours/spray
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray
- P264: Wash hands thoroughly after handling
- P270: Do not eat, drink or smoke when using this product
- P271: Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves/protective clothing/eye protection/face protection

Use personal protective equipment as required

In case of inadequate ventilation wear respiratory protection

Call a POISON CENTER or doctor/physician if you feel unwell

Get Medical advice/attention if you feel unwell

Specific treatment is urgent (see Section 4 First Aid measures)

Take off contaminated clothing and wash before reuse

Wash contaminated clothing before reuse

IF ON SKIN: Wash with soap and water

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing

IF exposed or concerned: Get medical advice/attention

If skin irritation occurs: Get medical advice/attention

If skin irritation or a rash occurs: Get medical advice/attention

Get medical advice/attention

Call a POISON CENTER or doctor/physician

Store locked up

Store in a well ventilated place. Keep container tightly closed

Dispose of contents/container in accordance with Section 13

Signal Word: Danger

Acute Health Effects:
Eyes: Severe irritation, tearing, swelling, and possible damage to cornea.
Skin: Irritation, redness, swelling, skin sensitization, rash, scaling, and blistering.
Inhalation: Mucous membrane and respiratory tract irritation, tightness of chest, isocyanate sensitization.
Ingestion: Irritating and corrosive to mouth, stomach, and digestive tract.

Conditions Aggravated by Exposure: Asthma, respiratory disorders, skin
Chronic Health Effects: Isocyanates may cause skin and respiratory sensitivity in some individuals. Sensitized individuals may react to very low levels diisocyanates below the PEL. Sensitized people who continue to work with diisocyanates may develop symptoms sooner after each exposure. Limited evidence of possible carcinogenic effects.

### 3. Composition/Data on Components:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS number</th>
<th>Weight Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isocyanic acid, polymethylenepolyphenylene ester</td>
<td>9016-87-9</td>
<td>50.00-60.00%</td>
</tr>
<tr>
<td>4,4'-Methylene diphenyl diisocyanate</td>
<td>101-68-8</td>
<td>30.00-40.00%</td>
</tr>
<tr>
<td>Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-</td>
<td>5873-54-1</td>
<td>5.00-10.00%</td>
</tr>
</tbody>
</table>
4. First Aid Measures:

After Inhalation: May cause severe irritation to upper respiratory tract and lungs, respiratory sensitization, decreased lung capacity.

Remove from exposure area to fresh air. Administer oxygen or artificial respiration as needed. Obtain medical attention.

After Eye Contact: Rinse opened eye for at least 15 minutes under running water. Remove contact lenses if present and easy to do so, and continue rinsing. If irritation persists contact physician.

After Skin Contact: Remove contaminated clothing. Clean affected area with soap and plenty of water. Call a physician if irritation or rash develops.

After Swallowing: Do not induce vomiting. If conscious, give 1 to 2 cups of milk or water to drink. Consult a physician at once.

Notes to Physician: Treat symptomatically. Following severe exposure the patient should be kept under medical observation for at least 48 hours.

5. Fire Fighting Measures:

Flash Point: 230 C (446 F)

LEL: UEL: Upper and Lower Explosive Limits listed if known.

Suitable Extinguishing Agents: Water spray, CO2, Foam, Dry chemical

Information about Protection against Explosions and Fires: Closed containers may rupture when exposed to extreme heat.

Dangerous Products of Decomposition: Oxides of carbon, oxides of nitrogen, and traces of HCN.

Protective Equipment: Full emergency equipment with self contained breathing apparatus and full protective clothing should be worn by firefighters.

6. Accidental Release Measures:

Person-Related Safety Precautions: Use appropriate personal protective equipment during clean up. Evacuate and keep unnecessary people out of spill area. Avoid contact with skin and eyes. Do not breathe aerosols or vapors.

Measures for Environmental Protection: Cover and contain spill with absorbent material. Place waste in open container. Remove to well ventilated area and dilute with ammonia solution (water 90%, concentrated ammonia 8%, detergent 2%). Collect for proper disposal according to local, state, and federal regulations.

Large Spills: Implement site emergency response plan. Evacuate non-emergency personnel. The magnitude of the evacuation depends upon the quantity released, site conditions, and the ambient temperature. Isolate the area and prevent access of unauthorized personnel. Notify management. Call CHEMTREC at 1-800-424-9300 for assistance and advice.

7. Handling and Storage:

Information for Safe Handling: Do not breathe fumes, vapors or mists. Use only with adequate ventilation. Avoid contact with skin or eyes. Immediately report spills or leaks.

Storage Requirements: Store in dry, well ventilated area. Keep containers tightly closed. Store
between 60°F-100°F.

**Regulatory Requirements:** Store according to all local, state, and federal regulations.

### 8. Exposure Controls and Personal Protection:

<table>
<thead>
<tr>
<th>Chemical Name / CAS No.</th>
<th>OSHA Exposure Limits</th>
<th>ACGIH Exposure Limits</th>
<th>Other Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isocyanic acid, polymethylene polyphenylene ester 9016-87-9</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>4,4'-Methylenediphenyl diisocyanate 101-68-8</td>
<td>0.005 ppm TWA 0.02 ppm STEL</td>
<td>0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))</td>
<td>NIOSH: 0.005 ppm TWA (listed under Methylene bisphenyl isocyanate); 0.05 mg/m3 TWA 0.020 ppm Ceiling (10 min); 0.2 mg/m3 Ceiling (10 min)</td>
</tr>
<tr>
<td>Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-5873-54-1</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
</tbody>
</table>

**Engineering Controls:** Use local exhaust ventilation to maintain airborne concentrations below the TLV, especially if heating or spraying. Use only in a well ventilated area to keep vapors below exposure limits. Use local exhaust ventilation if necessary.

**General Protective and Hygienic Measures:** Usual precautionary measures should be adhered to when handling chemicals.

**Personal Protective Equipment:**

**Respiratory Protection:** Do not inhale vapors. Use NIOSH approved respiratory protection if TLV/PEL is exceeded. Do not enter storage area unless adequately ventilated.

**Hand Protection:** Protective butyl rubber or nitrile rubber gloves.

**Eye Protection:** Chemical safety goggles.

**Body Protection:** Impervious protective work clothing. Launder separately.

### 9. Physical and Chemical Properties:

Physical properties listed where known.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Amber liquid</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>N/A</td>
</tr>
<tr>
<td>Density</td>
<td>1.23</td>
</tr>
<tr>
<td>Freezing point</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling range</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Explosive Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>240 °C</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting point</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash point</td>
<td>446°F, 230°C</td>
</tr>
<tr>
<td>Flammability</td>
<td>N/A</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>N/A</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>N/A</td>
</tr>
</tbody>
</table>
10. Stability and Reactivity:

Chemical Incompatible Materials: Avoid contact with water, amines, strong bases, and alcohols.

Hazardous Polymerization: Not expected to occur under normal conditions.

Dangerous Products of Decomposition: Oxides of carbon, oxides of nitrogen, hydrocarbons, isocyanates, and traces of HCN.

11. Toxicological Information:

Mixture Toxicity
Inhalation Toxicity LC50: 1mg/L

Component Toxicity
9016-87-9 Isocyanic acid, polymethylenepolyphenylene ester
   Dermal LD50: 490 mg/L (Rat) Inhalation LC50: 490 mg/m3 (Rat)

101-68-8 4,4’-Methylenediphenyl diisocyanate
   Dermal LD50: 1 mg/L (Rat) Inhalation LC50: 369 mg/m3 (Rat)

Individual Toxicity Values Listed if Known

Acute Toxicity:
Eyes: Irritating to eyes
Skin: Harmful in contact with skin
Inhalation: Not expected to be a route of exposure
Ingestion: Harmful if swallowed. Consult physician

Chronic Effects: Possible harmful target organ effects

Routes of Entry: Ingestion, skin contact, eye contact.
Target Organs: Respiratory tract, eyes, skin.

Chemicals with Known or Possible Carcinogenic Effects:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Description</th>
<th>% Weight</th>
<th>Carcinogen Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-68-8</td>
<td>4,4’-Methylenediphenyl diisocyanate</td>
<td>30.00-40.00%</td>
<td>4,4’-Methylenediphenyl diisocyanate:</td>
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<td>Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-</td>
<td>5.00-10.00%</td>
<td>Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-:</td>
</tr>
</tbody>
</table>

12. Ecological Information:

General Information: Based on experience, no adverse effects are to be expected if correct disposal procedures have been followed as indicated in section 13. Individual component ecotoxicity listed if known.

Component Ecotoxicity
4,4’-Methylenediphenyl diisocyanate
   24 Hr LC50 Brachydanio rerio: >500 mg/L
   24 Hr EC50 Daphnia magna: >500 mg/L

13. Disposal Considerations:

Recommendation: Observe local requirements. Dispose of in accordance with local/state/federal regulations.

Empty Container Precautions: Empty containers retain product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container
is to be disposed, ensure all product residues are removed and container is empty prior to disposal. Contact the Reusable Industrial Packaging Association (RIPA) at 301-577-3786 to find a drum reconditioner in North America (www.reusablepackaging.org).

14. **Transport Information:**

**DOT Regulated Components:**

4,4’ Methylene Diphenyl Diisocyanate  
Reportable Quantity: 5000 lbs

When in individual containers of less than the substance RQ, this material ships as non-regulated. Containers above RQ ship as:

<table>
<thead>
<tr>
<th>Agency</th>
<th>Proper Shipping Name</th>
<th>UN Number</th>
<th>Packing Group</th>
<th>Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>Environmentally Hazardous Substance, N.O.S. (Contains Diphenylmethane Diisocyanate)</td>
<td>3082</td>
<td>III</td>
<td>9</td>
</tr>
</tbody>
</table>

15. **Regulatory Information:**

**OSHA HAZARD COMMUNICATION STANDARD:** This material is classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

**SARA 311/312 Hazard Categories:** Acute health hazard, chronic health hazard

**California Proposition 65**  
*(Safe Drinking Water and Toxic Enforcement Act of 1986)*

This product contains no substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute unless otherwise listed:

**Warning:** This product contains chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm:  
- None

**Massachusetts Right To Know List:**  
4,4’-Methylene diphenyl diisocyanate  101-68-8  30.00-40.00 %

**New Jersey Right To Know List:**  
isocyanic acid, polymethylene polyphenylene ester  9016-87-9  50.00-60.00 %

**Pennsylvania Right To Know List:**  
4,4’-Methylene diphenyl diisocyanate  101-68-8  30.00-40.00 %

**SARA 302 Extremely Hazardous Substances:**  
- None

**Chemicals subject to SARA 313 Reporting:**  
4,4’-Methylene diphenyl diisocyanate  101-68-8  30.00-40.00 %  
isocyanic acid, polymethylene polyphenylene ester  9016-87-9  50.00-60.00 %

**This product contains the following REACh listed Substances of Very High Concern (SVHC):**  
- None
<table>
<thead>
<tr>
<th>Country</th>
<th>Regulation</th>
<th>All Components Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Canada DSL</td>
<td>Yes</td>
</tr>
<tr>
<td>US</td>
<td>Toxic Substances Control Act</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- None

**16. Other Information:**

Safety Data Sheet issued by Product Safety Department

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Accella Polyurethane Systems. The data on these sheets relates only to the specific material designated herein. Accella Polyurethane Systems assumes no legal responsibility for use or reliance upon this data. It is the user's responsibility to ensure that their activities comply with federal, state, or local laws.

Date revised: 2017-03-28
Date Prepared: 3/28/2017

Reviewer Revision 0