Safety Data Sheet
In accordance with the requirements of US 29 CFR 1910.1200

SECTION 1. Identification of Substance/Mixture and Supplier
1.1 Product Identifier
   1.1.1 Product Name: Ethyl Cellulose Plastic Pellets
   1.1.2 Synonyms, Trade Names: EC, Ethyl Cellulose

1.2 Recommended Use
   Plastic consumer goods.

1.3 Uses Advised Against
   Structural materials, food products.

1.4 Safety Data Sheet Supplier Details
   Manufacturer/Supplier
   Rotuba Extruders, Inc.
   1401 Park Avenue South
   Linden, NJ 07036
   (908) 486 - 1000

   Visit our website at www.ROTUBA.com.

1.5 Emergency Telephone Number
   ChemTel, Inc.
   Within the United States, Canada, Puerto Rico, and the U.S. Virgin Islands: (800) 255-3924
   Within Mexico: 01-800-099-0731
   Within China: 400-120-0751
   All other international locations: 01-813-248-0585

SECTION 2. Hazards Identification
   CAUTION!
   MOLTEN MATERIAL WILL CAUSE THERMAL BURNS

SECTION 3. Composition/Information on Ingredients
   Components
<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Concentration [%]</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Cellulose Polymer</td>
<td>&gt; 74.0</td>
<td>9004-57-3</td>
</tr>
<tr>
<td>Di-Phenyl Ether</td>
<td>14.0 – 26.0</td>
<td>61702-88-3</td>
</tr>
</tbody>
</table>

This is a general range of formulations. Specific certificates of analysis are available upon request.
SECTION 4. First Aid Measures

4.1 Description of First Aid Measures

General Advice  
Consult a physician.

Inhalation  
Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Eye Contact  
Any material that contacts the eye should be washed out immediately with ample water. Remove contact lenses, if present and easy to do. If molten material contacts the eye, immediately flush with ample water for at least 15 minutes. Seek medical attention immediately.

Skin Contact  
Wash with soap and water. If symptoms occur seek medical attention. If burned by contact with molten material, immediately use water to cool any molten material that has adhered to the skin. Do not attempt to remove any molten material that has adhered to skin. Seek medical attention immediately.

Ingestion  
Consult a physician.

4.2 Most Important Symptoms/Effects, Acute and Delayed

Burns should be treated as thermal burns.

4.3 Indication of Any Immediate Medical Attention and Special Treatment

Hazards  
Contact with molten material may cause severe burns to skin and eyes.

Treatment  
Treat symptomatically.

SECTION 5. Firefighting Measures

5.1 Extinguishing Media

<table>
<thead>
<tr>
<th>Suitable</th>
<th>Water spray. Dry chemical.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsuitable</td>
<td>None known.</td>
</tr>
</tbody>
</table>

5.2 Unusual Fire & Explosion Hazards  
None known.

5.3 Special Firefighting Procedures  
None known.

5.4 Special Firefighting Protective Equipment for Firefighters  
Self-contained breathing apparatus and full protective gear must be worn.
SECTION 6. Accidental Release Measures
6.1 Personal Precautions, Protective Equipment, and Emergency Procedures
Use protective personal equipment as required. Spilled pellets can cause unsafe walking conditions.

6.2 Environmental Precautions
Not considered dangerous to the environment.

6.3 Methods and Materials for Containment and Cleanup
Sweep or scoop up any spilled pellets. Place spilled pellets in a clearly labeled container for salvage or disposal. Observe all Federal, State, and local laws concerning health and environment.

SECTION 7. Handling and Storage
7.1 Precautions for Safe Handling
Avoid contact with molten material. Avoid prolonged breathing of vapors produced by heated material. Process material in adequately ventilated spaces only.

7.2 Conditions for Safe Storage
Hold material in a tightly closed container and store in a dry and well-ventilated area.

SECTION 8. Exposure Controls/Personal Protection
8.1 Control Parameters, Occupational Exposure Limits
If exposure limits have not been established, maintain airborne levels to acceptable level.

8.2 Appropriate Engineering Controls
Good general ventilation, 10 air changes per hour, should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

8.3 Individual Protection Measures, Personal Protective Equipment
General Information
Eye bath. Washing facilities.

Eye/Face Protection
Minimize eye/face contact. Wear approved safety glasses when working with room temperature pellets. Wear an approved face shield when working with molten material.

Skin Protection
Minimize skin contact. When working with molten material wear approved gloves, long sleeves, long pants, and full coverage shoes.

Respiratory Protection
If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with and appropriate government approved (where applicable), air-purifying filter, cartridge, or canister. Contact EHS professional or manufacturer for specific information.
SECTION 9. Physical and Chemical Properties

Appearance

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Pellet</td>
</tr>
<tr>
<td>Color</td>
<td>Varies with formulation</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable, combustible solid</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability, Upper Limit (%)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability, Lower Limit (%)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>&gt; 1 (estimated)</td>
</tr>
<tr>
<td>Solubility</td>
<td></td>
</tr>
<tr>
<td>In Water</td>
<td>Negligible</td>
</tr>
<tr>
<td>In Other</td>
<td>No data available</td>
</tr>
<tr>
<td>Partial Coefficient (n-octanol/water)</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Thermal stability not tested. Low stability hazard expected at normal operating temperatures.</td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 10. Stability and Reactivity

10.1 Chemical Stability

Stable

10.2 Possibility of Hazardous Reactions

None known.

10.3 Conditions to Avoid

None at ambient temperatures.

10.4 Incompatible Materials

Material can react with strong oxidizing agents.

10.5 Hazardous Decomposition Products

Carbon dioxide, carbon monoxide.
SECTION 11. Toxicological Information
11.1 Information on Likely Routes of Exposure
Inhalation None known.
Ingestion None known.
Skin Contact Molten material will produce thermal burns.
Eye Contact Molten material will produce thermal burns.

11.2 Short-Term Exposure
Oral No data available.
Dermal No data available.

11.3 Long-Term Exposure
No ingredients or components contained within this product at greater than 0.1% are classified as carcinogenic.

SECTION 12. Ecological Information
12.1 Ecotoxicity
Not reported.

12.2 Persistence and Degradability
Not reported.

12.3 Bioaccumulative Potential
Not reported.

12.4 Mobility in Soil
Not reported.

12.5 Other Adverse Effects
Not reported.

SECTION 13. Disposal Considerations
Dispose of in accordance with local, state, and federal regulations.

SECTION 14. Transportation Information
Transportation of this product is not regulated by DOT 49CFR, IMDG, or IATA.

SECTION 15. Regulatory Information
Only relevant information is reported.
SECTION 16. Other Information

HMIS® Hazard Rating
Heath - 1, Flammability - 1, Chemical Reactivity - 0

Product is sold in pellet form. Processing by the user will require melting at high temperatures, thereby exposing workers to potential thermal burns. Appropriate personal protective equipment is required.

Revision Information  Rev 1
Issue Date  4 February 2015

Disclaimer
This information is provided without warranty. The information is believed to be accurate to the best of Rotuba’s knowledge as of the date of this document.

This information should be used to make an independent determination of the methods to safeguard workers and the environment.