SAFETY DATA SHEET  
(according to (EC) 1907/2006)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier  Copolymer 186-85  
Synonyms: None  

1.2. Relevant identified uses of the substance or mixture and uses advised against  
Resin intermediate

1.3. Details of the supplier of the safety data sheet  
Manufacturer Information: Vertellus LLC  
201 North Illinois Street, Suite 1800,  
Indianapolis, IN 46204  
Non-Emergency Phone Number: 336-292-1781

Non-Emergency Fax Number: 336-854-4058  
E-Mail Address: msds@vertellus.com

1.4. Emergency telephone number  
Vertellus: 336-292-1781  
CHEMTREC (USA): (800) 424-9300  
(collect calls accepted)  
(Int'l): (703) 527-3887  
(collect calls accepted; 011 prefix not needed)

SECTION 2: Hazards identification

HMIS Rating

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

2.1. Classification of the substance or mixture  
(According to Regulation (EC) No 1272/2008)  
Not classified as hazardous under this directive.

Signal Word:  
Not required.

Hazard Precautions:  
Not classified as hazardous under this directive.

2.2. Label elements

Prevention Precautions:
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Note: These precautionary statements are not prescribed by directive 1272/2008 as this product is not classified as hazardous under this directive. Wash hands thoroughly after handling with soap and water. Wear protective gloves, protective clothing, eye protection and face protection. If swallowed, in eyes, on skin or inhaled call a poison center or doctor/physician if you feel unwell. If inhaled, remove victim to fresh air and keep at rest in a comfortable position for breathing. Take off contaminated clothing before reuse. Store in a well-ventilated place. Keep container tightly closed.

First Aid Precautions:
Not required.

Storage Precautions:
Not required.

Disposal Precautions:
Not required.

Single Exposure Target Organs:
Not applicable

Repeated Exposure Target Organs:
Not applicable

(According to Directive 67/548/EEC)
Symbol: Not classified as hazardous under this directive.
Risk Phrases: Not classified as hazardous under this directive.
Safety Phrases: Not classified as hazardous under this directive.

2.3. Other hazards

Signs and Symptoms of Potential Overexposure: Have a trained medical professional induce vomiting immediately. Never give anything by mouth to an unconscious person. May cause sneezing, burning or itching of the nose and throat when inhaled; pain, redness and tearing when exposed to the eyes; itching or burning For the specific components: Carbon tetrachloride can cause central nervous system depression.

Primary Route(s) of Exposure: Skin contact and absorption, eye contact, ingestion, inhalation.

Medical Conditions Aggravated by Exposure: May cause irritation in eyes and skin. Prolonged or repeated skin contact may cause skin irritation in some individuals.

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Concentration (%)</th>
<th>EINECS / ELINCS</th>
<th>EU Symbol</th>
<th>Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dehydrated castor oil based polymer</td>
<td>68989-46-8</td>
<td>85</td>
<td>Not Listed</td>
<td>N/A</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Mineral Spirits</td>
<td>8052-41-3</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: See Section 8 of this MSDS for exposure limit data for these ingredients. See Section 15 of this MSDS for trade secret information (where applicable). See Section 16 of this MSDS for the full text of the R-phrases above.
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SECTION 4: First aid measures

4.1. Description of first aid measures

Skin Contact: Wash thoroughly after skin contact. Wash with soap and water. Get medical attention if irritation develops or persists.

Eye Contact: Immediately flush the eyes with plenty of water for at least 15 minutes. Call a physician. Rinse eyes immediately with large amounts of water for at least 15 minutes, occasionally lifting the eyelids. GET MEDICAL ATTENTION.

Inhalation: Remove from exposure. If not breathing, give artificial respiration and call a physician. Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately. Get medical attention immediately.

Ingestion: If swallowed, do not induce vomiting. Get prompt medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Acute: Have a trained medical professional induce vomiting immediately. Never give anything by mouth to an unconscious person. May cause sneezing, burning or itching of the nose and throat when inhaled; pain, redness and tearing when exposed to the eyes; itching or burning. For the specific components: Carbon tetrachloride can cause central nervous system depression.

Delayed Effects: None known.

4.3. Indication of any immediate medical attention and special treatment needed

Thermal Exposure: Not applicable.

Note to Physician: No additional first aid information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Appropriate Extinguishing Media: Carbon dioxide Dry chemical Alcohol foam Water spray

5.2. Special hazards arising from the substance or mixture

Hazardous Products of Combustion: None Known

Potential for Dust Explosion: Not available

Special Flammability Hazards: Material may burn, but does not ignite readily. Avoid high temperature.

5.3. Advice for firefighters

Basic Fire Fighting Guidance: Evacuate area and fight fire from a safe distance. As in any fire, wear pressure-demand self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.

Flammability Classification (OSHA): Not applicable.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuation Procedures: Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Special Instructions: Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded.

6.2. Environmental precautions
Prevent releases to soils, drains, sewers, and waterways.

6.3. Methods and material for containment and cleaning up
Containment Techniques and Clean-up Procedures: Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Remove all ignition sources. Ventilate the area of spill or leak. Wear protective equipment during clean-up. For small spills, use suitable absorbent material and collect for later disposal. For large spills, the area may require diking to contain the spill. Material can then be collected (e.g., suction) for later disposal. After collection of material, flush area with water. Dispose of the material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Contain spilled liquid with sand clay. DO NOT use combustible materials such as sawdust. LARGE SPILLS: Shut off leak if safe to do so. Retain all contaminated water for treatment.

Special Reporting Requirements: Not applicable.

6.4. Reference to other sections
Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for Unique Hazards: Not applicable.
Practices to Minimize Risk: Wear appropriate protective equipment when performing maintenance on contaminated equipment. Wash hands thoroughly before eating or smoking after handling this material.
Special Handling Equipment: Not applicable.

7.2. Conditions for safe storage, including any incompatibilities
Storage Precautions & Recommendations: This product should be stored at ambient temperature in a dry, well-ventilated location. Keep container closed when not in use. Inside storage should be in standard flammable liquids storage
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room or cabinet. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. To reduce the risk of dust explosion, the recommendations for facility and process design, control of ignition sources and fugitive dust, fire protection, training and maintenance outlined in "NFPA 654: Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids" should be followed. Implementing a housekeeping program to control the accumulation of dust on work surfaces is critical to reducing the risk of catastrophic secondary dust explosions.

Dangerous Incompatibility Reactions: Can react vigorously with oxidizing materials.

Incompatibilities with Materials of Construction: none known

7.3. Specific end use(s)

If a chemical safety assessment has been completed an exposure scenario is attached as an annex to this Safety Data Sheet. Refer to this annex for the specific exposure scenario control parameters for uses identified in subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits (United States): OSHA PEL: Not established ACGIH TLV: Not established

8.2. Exposure controls

Also see the annex to this SDS (if applicable) for specific exposure scenario controls.

Personal Protective Equipment: Safety glasses or chemical goggles. Chemical goggles; face shields if necessary.


Ventilation: All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided. Local exhaust ventilation is recommended when generating excessive levels of vapors from handling or thermal processing.

Other Engineering Controls: All appropriate engineering controls should be used to minimize exposure potential. Use exhaust ventilation to keep airborne concentrations below exposure limits.

Thermal Hazards: Not applicable.

Additive or Synergistic Effects: None known.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Formula:</td>
<td>Not available</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>&lt; 1 (Butyl Acetate = 1)</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density (air = 1):</td>
<td>09VDEN020</td>
</tr>
<tr>
<td>Freezing / Melting Point:</td>
<td>Not available. Not available.</td>
</tr>
</tbody>
</table>
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Solubility in Water: Insoluble
pH: Not available.
Viscosity: -77 F
Flash Point and Method: 150°F
150 deg F (66°C) (PMCC (FEO and LCOR) TCC (Crude Nap Oil))

9.2. Other information
Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity
Not classified as dangerously reactive.

10.2. Chemical stability
Stable

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur

10.4. Conditions to avoid
Oxidizing materials

10.5. Incompatible materials
Can react vigorously with oxidizing materials.

10.6. Hazardous decomposition products
Products of incomplete combustion may include CO, CO2, NOx, and dense smoke.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute Oral LD50: Oral LD50 (rat) > 5500 mg/kg
Acute Dermal LD50: Dermal LD50 (rabbit) > 3000 mg/kg
Acute Inhalation LC50: LD50 (rat) > 5000 mg/m3/4-hr
Skin Irritation: No data available.
Skin Sensitization: No data available.
Eye Irritation: Moderately irritating to eyes.
Target Organs: No data available.
Carcinogenicity: No data available.
Teratogenicity: No data available.
Reproduction: No data available.
Neurotoxicity: No data available.
Mutagenicity: No data available.
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SECTION 12: Ecological information

12.1. Toxicity
Not available.

12.2. Persistence and degradability
No data No data available.

12.3. Bioaccumulative potential
No data

12.4. Mobility in soil
No data

12.5. Results of PBT and vPvB assessment
Not available.

12.6. Other adverse effects
No data available. Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
US EPA Waste Number: Not applicable

Waste Classification: (per US regulations)
The waste may be classified as "special" or hazardous per State regulations. NOTE: Generator is responsible for proper waste characterization. State (USA) hazardous waste regulations may differ substantially from federal (USA) regulations.

Waste Disposal: Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable international, national, regional, state or local laws. Do NOT dump into any sewers, on the ground, or into any body of water. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: Transport information

14.1. UN number
Not applicable

14.2. UN proper shipping name
Chemicals, n.o.s. (Copolymer 186-85)

14.3. Transport hazard class(es)
Not applicable

14.4. Packing group
Not applicable

14.5. Environmental hazards
Not applicable

14.6. Special precautions for user
Not available.

NA Emergency Guidebook Numbers: Not applicable IMDG EMS: Not applicable

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

SECTION 15: Regulatory information
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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

OSHA Hazards: Irritant. Combustible Liquid.

WHMIS Classification: None

Chemical Inventory Lists: Status
- TSCA: 15TSCA040
- EINECS: Not Listed
- Canada(DSL/NDSL): Not Listed
- Japan: Not Listed
- Korea: Not Listed
- Australia: Not Listed
- New Zealand: Not Listed
- China: Not Listed
- Philippines: Not Listed
- Switzerland: Not Listed

New Zealand GHS Classification: Non classificato da questo paese.
Japan GHS Classification: Non classificato da questo paese.
Korea (MOL) GHS Classification: Non classificato da questo paese.
Australia GHS Classification: Non classificato da questo paese.
Taiwan GHS Classification: Non classificato da questo paese.
Indonesia GHS Classification: Non classificato da questo paese.

SARA 313:
- 15SARAH030
- 15SARAH020
- 15SARAP020
- 15SARAP030

15.2. Chemical safety assessment

Not applicable.

SECTION 16: Other information

Full text of R phrases in Section 3: Not applicable
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Legend of abbreviations:

ACGIH = American Conference on Governmental Industrial Hygienists.
CAS = Chemical Abstracts Service.
DSL/NDSL = Domestic Substances List/Non-Domestic Substances List.
EC = European Community.
EEC = European Economic Community.
EINECS = European Inventory of Existing Commercial Chemical Substances.
ELINCS = European List of Notified Chemical Substances.
EU = European Union.
GHS = Globally Harmonized System.
LC = Lethal concentration.
LD = Lethal dose.
MOL = Ministry of Labor.
NEMA = National Emergency Management Agency.
NIOSH = National Institute of Occupational Safety and Health.
NTP = National Toxicological Program.
OSHA = Occupational Safety and Health Administration.
PEL = Permissible exposure limit.
RQ = Reportable quantity.
TLV = Threshold limit value.
WHMIS = Workplace Hazardous Materials Information System.

Precautionary Statement: Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

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Revision Details: Revised in all sections to GHS format.