



Address: Sterigenics International, Inc.
Advanced Applications
75 Tilbury Road
Salem, NJ 08079

Effective Date: August 2007

24-Hour Emergency Assistance: (856) 935-1400

Raprex R-301-For Experimental Use Only

SECTION 1 - CHEMICAL PRODUCT IDENTIFICATION

- | | | |
|-----|------------------------|---------------------------------------|
| 1a. | Trade Name | Raprex R-301 |
| 1b. | Chemical Name/Synonyms | Polyethylene with Product Stabilizers |
-

SECTION 2 - COMPOSITION INFORMATION

INGREDIENTS

	Ingredient Name	CAS Number	%
2a.	Ethylene Polymer	Trade Secret	> 95%
	Product Stabilizer	Trade Secret	< 5.0%

Confidential formula information will be available to a treating physician.

SECTION 3 - HAZARD INFORMATION

CAUTION! PLASTIC BAG OR LINER MAY CAUSE STATIC IGNITION HAZARD. DO NOT HANDLE BAGS OR LINERS IN THE PRESENCE OF FLAMMABLE VAPOR. EXPOSURE TO DUST AND PROCESSING FUMES MAY CAUSE IRRITATION OF SKIN, EYES, AND RESPIRATORY TRACT. IT MAY CAUSE SKIN SENSITIZATION. POLYMER FINES CAN PRESENT AN EXPLOSION HAZARD WHEN EXPOSED TO HEAT, SPARKS OR FLAMES. ALWAYS GROUND THIS CONTAINER WHEN EMPTYING. USE APPROPRIATE SAFETY EQUIPMENT WHEN HANDLING.

THIS PRODUCT IS NOT INTENDED FOR PROLONGED CONTACT WITH MUCOUS MEMBRANES, ABRADED SKIN, BODY FLUIDS, OR IMPLANTATION WITHIN THE HUMAN BODY UNLESS IT HAS BEEN SAFETY TESTED.

- 3a. Effects of acute over exposure: May cause eye and respiratory irritation when heated. One of the components has been determined to be a possible skin sensitizer. Use PPE when handling.
- 3b. Effects of chronic over exposure: Low order of toxicity;
- 3c. OSHA permissible exposure limit: 5 mg/m³ respirable dust
15 mg/m³ total dust
ACGIH TLV 3 mg/m³
- 3d. Carcinogen potential:
- | | |
|------------------------------|------------|
| OSHA: | Not Listed |
| National Toxicology Program: | Not Listed |
| I.A.R.C. Monograms: | Not Listed |
-

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

- 4a. Inhalation: Move to fresh air if inhaled. In case of irritation of respiratory system or mucous membranes, seek medical attention. If effected person feels unwell, seek medical advice. In case of prolonged exposure, seek medical attention.
- 4b. Eyes: Immediately flush from eyes with water for at least 15 minutes; get medical attention.
- 4c. Skin: Wash off with soap and water. Do not use organic solvents. Cool skin rapidly if contacted with molten polymer. Obtain medical attention for thermal burns.
- 4d. Ingestion: Immediately give plenty (>500 cc) of water. In case of spontaneous vomiting be sure that vomitus can freely drain due to danger of suffocation. Give water repeatedly. Artificial induction of vomiting should be restricted to first aid staff. Give nothing by mouth in case of unconsciousness or convulsion. Seek medical advice.
-

SECTION 5 - FIRE AND EXPLOSION DATA

- 5a. Flash point: Not determined
- 5b. Upper Explosive Limit: Not determined
- 5c. Lower explosive Limit: Not determined
- 5d. Auto ignition temperature: Not determined
- 5e. Extinguishing media: Dry chemical, water fog, foam, carbon dioxide
- 5f. Special fire and explosion hazards: Dense smoke emitted when burned without sufficient oxygen. Possible dust explosion if polymer fines accumulate. Be careful of possible static explosion. Wear standard fire fighting attire.

SECTION 6 - SPILLS AND DISPOSAL

- 6a. Land Spill: Spilled material should be swept up and discarded. Use care as the pellets are extremely slippery. Comply with applicable federal, state or local regulations.
- 6b. Water Spill: Advise local authorities if spilled in waterway or sewer. Skim from surface of water if possible.
- 6c. Waste disposal: Dispose in accordance with local and federal regulations
-

SECTION 7 - STORAGE AND HANDLING

Inspect handling system regularly for possible accumulation of polymer fines. Polymer fines can present an explosion hazard when exposed to heat, sparks or flames. Ventilate before unloading to prevent possible explosion hazard. Use proper grounding procedures. Do not store next to oxidizing agents.

SECTION 8 - PROTECTIVE MEASURES

Wear safety glasses, face shield or chemical goggles to avoid getting material in the eyes during handling.

Wear protective sleeves and face shield when processing material at elevated temperatures to minimize possibility of thermal burns.

Adequate ventilation is recommended to minimize accumulation of polymer fines or vapors during processing and handling. Temperatures above the melting temperature will cause the material to decompose. It will release fumes that can contain carbon dioxide, carbon monoxide, ketones, acrolein, formaldehyde, aldehydes, and other unidentified organic compounds. Make sure there is adequate ventilation in the area. An approved NIOSH respirator may be needed in areas with a high accumulation of fines or organic fumes.

SECTION 9 - PHYSICAL DATA

- | | |
|--------------------------|--------------------------------------|
| 9a. Appearance and Odor: | Odorless/off-white pellets |
| 9b. Boiling Point: | Not applicable |
| 9c. Solubility: | Insoluble in Water |
| 9d. Evaporation: | Not applicable |
| 9e. Specific Gravity | 0.890-0.980 g/cm ³ @23° C |
| 9f. Vapor Pressure: | Not Applicable |
| 9g. Melting Point: | Not determined |
| 9h. Vapor Density: | Not Applicable |
| 9i. Percent Volatile: | Negligible |

SECTION 10 - REACTIVITY

- 10a. Stability: The material is stable.
- 10b. Hazardous Polymerization: Hazardous Polymerization will not occur.
- 10c. Conditions to avoid: Avoid temperatures over 650° F. Avoid storage or contact with strong oxidizing agents
- 10d. Combustion Products: The following combustion products may be generated: carbon dioxide, carbon monoxide, water vapor, and trace volatile organic compounds.

SECTION 11 - ADDITIONAL REGULATORY INFORMATION

This material is not regulated by US Department of Transportation.

TSCA Classification: Is currently unknown. This material is for research and development uses only. Contact Sterigenics International Regulatory Affairs for guidance. Phone 630-928-1724

This material is not subject to Section 12(b)-US Export Notification.

This material is not subject to specific CERCLA reporting requirements.

This material is not subject to SARA 313 reporting requirements.

This material is not subject to California Safe Drinking Water and Toxic Enforcement Act (Proposition 65) reporting.

SECTION 12 - MISCELLANEOUS INFORMATION

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. NEITHER STERIGENICS NOR ANY OF ITS AFFILIATES MAKES ANY WARRANTY, EXPRESS OR IMPLIED, OR ACCEPTS ANY LIABILITY IN CONNECTION WITH THIS INFORMATION OR ITS USE. THIS INFORMATION IS FOR USE BY QUALIFIED EXPERTS AT THEIR OWN DISCRETION AND RISK AND DOES NOT RELATE TO THE USE OF THIS PRODUCT IN COMBINATION WITH ANY OTHER SUBSTANCE OR ANY OTHER PROCESS. THIS IS NOT A LICENSE UNDER ANY PATENT OR OTHER PROPRIETARY RIGHT. THE USER MUST DETERMINE SUITABILITY OF ANY INFORMATION OR MATERIAL FOR ANY CONTEMPLATED USE, THE MANNER OF USE AND WHETHER ANY PATENTS ARE INFRINGED. NO SPECIFICATION FOR THE MATERIALS SHALL BE A WARRANTY, EXPRESS OR IMPLIED, AGAINST ANY CLAIMS FOR INFRINGEMENT OF PATENTS, COPYRIGHTS, TRADEMARKS, OR SIMILAR MATTERS. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THE MATERIALS SOLD. STERIGENICS MAKES NO WARRANTY THAT THE MATERIALS SOLD SHALL BE MERCHANTABLE OR FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY OF ANY KIND, IMPLIED OR EXPRESS, IS GIVEN BY STERIGENICS, AND SPECIFICALLY THAT NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE IS GIVEN. IN NO EVENT SHALL STERIGENICS BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR OTHER SIMILAR DAMAGES, INCLUDING BUT NOT LIMITED TO DAMAGES ARISING FROM DEATH, BODILY INJURY, PROPERTY DAMAGE, LOSS OF PROFITS OR REVENUE OR LOSS OF USE OF THE MATERIALS.