

PETROTHENE® LR734001

SECTION 1: IDENTIFICATION

Product Name: PETROTHENE® LR734001
Product Number: 000000000000504302
Internal ID: CBO0003, 1999A, CBO0002
Chemical Family: Polyethylene copolymer
CAS Number: 25213-02-9
Chemical Name: 1-Hexene,polymer with ethene
Synonyms: Polyethylene; PE; Ethylene/Hexene Copolymer

Manufacturer	Business Contact
Equistar Chemicals, LP	Customer Service
One Houston Center, Suite 700	888 777-0232
1221 McKinney St.	Product Safety
P.O. Box 2583	800 700-0946
Houston Texas 77252-2583	

24 Hour Emergency Contact
 CHEMTREC 800 424-9300
 EQUISTAR 800-245-4532

SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS #</u>	<u>EU Inventory</u>	<u>Concentration Wt.%*</u>	<u>Risk</u>	<u>Symbol</u>
1-Hexene, polymer with ethene	25213-02-9	Monomers are EINECS listed	98.0 <= 100.0		
Proprietary Additives	Mixture	Additives are EINECS listed	<= 2.0	None	None

* Concentration of gaseous products or materials is given in Mole %
 Compositions given are typical values not specifications.

SECTION 3: HAZARD IDENTIFICATION

Emergency Overview

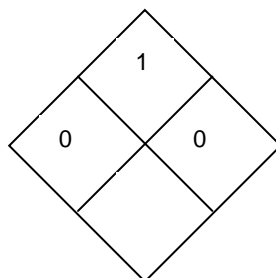
This material is NOT HAZARDOUS by OSHA Hazard Communication definition. Trade secret chemical identities will be revealed to treating physicians in an emergency, or to purchasers after execution of a secrecy agreement.

Signal Word
 CAUTION!

Hazards
 Molten polymer may cause thermal burns. At process temperatures irritating fumes may be produced. Dust may form explosive mixtures with air.

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NFPA®



HMIS®

Health	0
Flammability	1
Reactivity	0

Physical State

Solid

Color

Translucent to white.

Odor

Faint, mild hydrocarbon odor.

Odor Threshold

No value available.

Potential Health Effects**Routes of Exposure**

Eye Inhalation Skin.

Signs and Symptoms of Acute Exposure

See component summary.

- *1-Hexene, polymer with ethene 25213-02-9*

Hot material may cause thermal burns. At process temperatures, irritating fumes may cause soreness in the nose and throat; coughing may result. Mechanical irritation is possible.

Skin

Molten polymer may cause thermal burns.

Inhalation

Inhalation of process fumes and vapors may cause soreness in the nose and throat and coughing. "Nuisance dust" such as polymer dust typically exhibit no significant health effect when they are reasonably controlled. Exposure to high concentrations of dust may cause slight irritation by mechanical action.

Eye

Mechanical irritation is possible.

Ingestion

Ingestion not a likely route of exposure.

Chronic Health Effects

See component summary.

- *1-Hexene, polymer with ethene 25213-02-9*

No known chronic health effects.

PETROTHENE® LR734001**Conditions Aggravated by Exposure**

No known conditions are aggravated by this material.

SECTION 4: FIRST AID MEASURES

General

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. For specific information refer to the Emergency Overview in Section 3 of this MSDS.

Skin

If molten material contacts the skin, immediately flush with large amounts of water to cool the affected tissue and polymer. Do not attempt to peel polymer from skin. Obtain immediate emergency medical attention if burn is deep or extensive.

Inhalation

If symptoms are experienced, move victim to fresh air. Seek medical attention if discomfort persists.

Eye

Wash eyes with clean low-pressure water. Seek medical attention if discomfort persists.

Ingestion

Adverse health effects due to ingestion are not anticipated.

Note to Physician

There is no specific antidote; treatment of overexposure should be directed at control of symptoms and the clinical condition of the patient. Treat burns or allergic reactions conventionally after decontamination.

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties**Classification**

Not Classified. Polymer will burn but does not easily ignite.

Flash Point:

Not applicable.

Auto-Ignition Temperature

343 °C (649.4 °F)

Lower Flammable Limit

Not applicable.

Upper Flammable Limit

Not applicable.

Extinguishing Media

Suitable: SMALL FIRE: Use dry chemical, CO₂, water spray or regular foam LARGE FIRES: Use large quantities of water spray.

Protection of Firefighters

Protective Equipment/Clothing: Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear.

Fire Fighting Guidance: Polyolefin dust particles in the atmosphere are combustible and may be explosive. Keep away from heat, sparks, flame and all other ignition sources. Keep container closed. Prevent dust accumulations and dust clouds.

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Hazardous Combustion Products: Carbon monoxide, olefinic and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes and alcohols may be formed.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Release Response

Avoid generating dust. Potential dust explosion hazard. Use only non-sparking tools. Material creates dangerous slipping hazard on hard surfaces. Pick up and retain for recycle or disposal.

SECTION 7: HANDLING AND STORAGE

Handling

Keep away from heat, sparks, open flame, or any ignition source. Use with adequate ventilation. Material can make walking hazardous, potentially causing falls and serious injury. After handling, always wash hands thoroughly with soap and water.

Storage

Keep container dry. Store away from excessive heat and away from strong oxidizing agents. Keep container closed to prevent contamination.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls

Ventilate area to prevent accumulation of dust or vapors.

Personal Protection

Inhalation A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Use appropriate respiratory protection where atmosphere exceeds recommended limits.

Skin Use chemical resistant gloves appropriate to conditions of use. Wear heat protective gloves and clothing if there is a potential for contact with heated material. Protective clothing such as long sleeves or a lab coat should be worn.

Eye Dust service goggles should be worn to prevent mechanical injury or other irritation to eyes due to airborne particles which may result from handling this product. Safety glasses are required as minimum requirements.

Additional Remarks

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing/wash thoroughly before reuse. Material spilled on hard surface can be a serious slipping/falling hazard. Use care in walking on spilled material.

Occupational Exposure Limits

Component Name	Source / Date	Value	Type	Notation
1-Hexene, polymer with ethene	US (ACGIH) / 2003	N/L		
	US (OSHA) / 2003	N/L		
Proprietary Additives	US (ACGIH) / 2003	N/L		
	US (OSHA) / 2003	N/L		

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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Appearance: Solid Translucent to white.

Odor: Faint, mild hydrocarbon odor.

Odor Threshold: No value available.

pH: Not applicable.

Boiling Point/Boiling Range: Not applicable.

Freezing Point/Melting Point: 136 °C (276.8 °F)

Flash Point: Not applicable.

Auto-ignition: 343 °C (649.4 °F)

Flammability: Not Classified. Polymer will burn but does not easily ignite.

Lower Flammable Limit: Not applicable.

Upper Flammable Limit: Not applicable.

Explosive Properties: No Data Available.

Oxidizing Properties: No Data Available.

Vapor Pressure: Not applicable.

Evaporation Rate: Not applicable.

Relative Density: 0.92 - 0.98 (water=1)

Relative Vapor Density: Not applicable.

Viscosity: Not applicable.

Solubility (Water): Insoluble.

Partition Coefficient (Kow): Specific data not available.

Additional Physical and Chemical Properties: No additional information available.

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability

The product is stable.

Conditions to Avoid

Avoid contact with strong oxidizers, excessive heat, sparks or open flame.

Substances to Avoid

Material may be softened by some hydrocarbons.

Decomposition Products

Dependent on process conditions (>392°F, pressure, time, O₂) hazardous decomposition products may be generated.

Hazardous Polymerization

Not likely.

PETROTHENE® LR734001**Reactions with Air and Water**

Does not react with air, water or other common materials.

SECTION 11: TOXICOLOGICAL INFORMATION

PRODUCT INFORMATION

Product Summary

See component summary.

COMPONENT INFORMATION

- *1-Hexene, polymer with ethene 25213-02-9*

Acute Toxicity - Effects

Inhalation Rats inhaling polyethylene dust developed mild inflammatory changes in the lungs. Prolonged inhalation of thermal degradation products from polyethylene caused neurological effects in rats.

Ingestion No adverse health effects were noted on the digestive system of test animals when fed up to 20% polyethylene.

Irritation

Skin No adverse effects are expected.

Repeated Dose Toxicity

Subchronic, 50-90 day, feeding studies conducted on rats, dogs and swine showed no effects from dietary levels of 1-20% powdered and shredded polyethylene.

Carcinogenicity

Not listed by IARC, NTP, or OSHA.

- *Proprietary Additives*

Repeated Dose Toxicity

No known chronic health effects.

Carcinogenicity

Not listed by IARC, NTP, or OSHA.

SECTION 12: ECOLOGICAL INFORMATION

PRODUCT INFORMATION

Ecotoxicity

See component summary.

Environmental Fate and Pathway

See component summary.

Persistence and Degradability

Biodegradation: This material is not expected to be readily biodegradable.

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COMPONENT INFORMATION

- *1-Hexene, polymer with ethene 25213-02-9*

Ecotoxicity

Ecotoxicity is expected to be minimal based on the low water solubility of polymers.

Environmental Fate and Pathway

Persistence and Degradability

Biodegradation: This material is not expected to be readily biodegradable.

Bioaccumulation: This material is not expected to bioaccumulate.

- *Proprietary Additives*

Ecotoxicity

No Data Available.

Environmental Fate and Pathway

No Data Available.

SECTION 13: DISPOSAL CONSIDERATIONS

Use only licensed transporters and permitted facilities for waste disposal. Comply with federal, state, or local regulations for disposal. Recycle if possible.

SECTION 14: TRANSPORT INFORMATION

Special Requirements

If you reformulate or further process this material, you should consider re-evaluation of the regulatory status of the components listed in the composition section of this sheet, based on final composition of your product.

Proper Shipping Name POLYETHYLENE, OTHER THAN LIQUID

SECTION 15: REGULATORY INFORMATION

Regulatory Status

Country	Inventory	
Australia	AICS	X
Canada	DSL	X
Canada	NDSL	
China	IECS	X
European Union	EINECS	X
European Union	ELINCS	
European Union	NLP	

X = All components are included or are otherwise exempt from inclusion on this inventory.

C = Contact Lyondell/Equistar by e-mail at product.safety@lyondell.com or

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Japan	ENCS	X	product.safety@equistarchem.com for additional information.
Korea	ECL	X	
Philippines	PICCS	X	
United States	TSCA	X	

If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

SARA 302/304

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA.

SARA 311/312

Based upon available information, this material is not classified as a health and/or physical hazard according to Section 311 & 312.

SARA 313

This material does not contain chemical components with known CAS numbers that exceed the De Minimus reporting levels established by SARA Title III, Section 313 and 40 CFR 372. The Section 313 regulatory status of the remaining components in this material for which CAS numbers have not been established, has not been determined.

<u>Component</u>	<u>Reporting Threshold</u>
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SECTION 16: OTHER INFORMATION

Latest Revision(s)

Conversion to SAP template. April 26 2004 Logo change. Date of Revision: February 23 2006

DISCLAIMER OF RESPONSIBILITY

CAUTION DO NOT USE EQUISTAR MATERIALS IN APPLICATIONS INVOLVING IMPLANTATION WITHIN THE BODY; DIRECT OR INDIRECT CONTACT WITH THE BLOOD PATHWAY; CONTACT WITH BONE, TISSUE, TISSUE FLUID, OR BLOOD; OR PROLONGED CONTACT WITH MUCOUS MEMBRANES. EQUISTAR MATERIALS ARE NOT DESIGNED OR MANUFACTURED FOR USE IN IMPLANTATION IN THE HUMAN BODY OR IN CONTACT WITH INTERNAL BODY FLUIDS OR TISSUES. EQUISTAR WILL NOT PROVIDE TO CUSTOMERS MAKING DEVICES FOR SUCH APPLICATIONS ANY NOTICE, CERTIFICATION OR INFORMATION NECESSARY FOR SUCH MEDICAL DEVICE USE REQUIRED BY FDA REGULATION OR ANY OTHER STATUTE. EQUISTAR MAKES NO REPRESENTATION, PROMISE, EXPRESS WARRANTY OR IMPLIED WARRANTY CONCERNING THE SUITABILITY OF THESE MATERIALS FOR USE IN IMPLANTATION IN THE HUMAN BODY OR IN CONTACT WITH INTERNAL BODY TISSUES OR FLUIDS. The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this MSDS information may not be applicable.

Numerical Data Presentation

The presentation of numerical data, such as that used for physical and chemical properties and toxicological values, is

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expressed using a comma (,) to separate digits into groups of three and a period (.) as the decimal marker. For example, 1,234.56 mg/kg = 1 234,56 mg/kg

Language Translations

The information presented in this document has been translated from English by a vendor Lyondell believes to be reliable. Lyondell and its vendor have made a good-faith effort to verify the accuracy of the translation, but assume no responsibility for any errors that may have occurred. Please refer to our web sites (www.lyondell.com and www.equistarchem.com) for the original document written in English.

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