

STARFLEX(TM) GM1810BE

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: STARFLEX(TM) GM1810BE

Number: 00000000000014124

Chemical characterization: Polyethylene copolymer

CAS-No.: 25213-02-9

Chemical Name: 1-Hexene,polymer with ethene

Synonyms: Polyethylene; PE; Ethylene/Hexene Copolymer

Company Address

Equistar Chemicals, LP
One Houston Center, Suite 700
1221 McKinney St.
P.O. Box 2583
Houston Texas 77252-2583

Company Telephone

Customer Service
888 777-0232
Product Safety
800 700-0946
product.safety@lyondellbasell.com

Emergency telephone

CHEMTREC USA 800-424-9300
EQUISTAR 800-245-4532

2. HAZARDS 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.

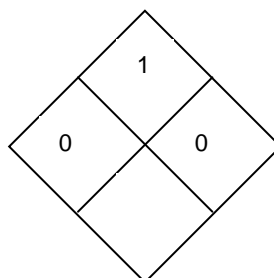
Signal Word

CAUTION.

Hazards

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

NFPA®



HMIS®

Health	0
Flammability	1
Physical Hazard	0

Physical state

solid

Color

translucent to white

Odor

Faint, mild hydrocarbon odor.

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Odor Threshold

No value available.

Potential health effects**Routes of exposure**

Eye. Inhalation. Skin.

Acute effects

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.

- *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.

- *Additives Mixture*

No known acute health effects.

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.

Eyes

Mechanical irritation is possible.

Ingestion

Ingestion not a likely route of exposure.

Chronic effects

No known chronic health effects.

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

No known chronic health effects.

- *Additives Mixture*

No known chronic health effects.

Aggravated Medical Condition

No known conditions are aggravated by this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS-No.</u>	<u>EC-No.</u>	<u>Weight %</u>
1-Hexene, polymer with ethene	25213-02-9	Monomers are EINECS listed	98.0 <= 100.0
Additives	Mixture	Additives are EINECS listed	0.0 <= 2.0

Typical composition

STARFLEX(TM) GM1810BE**4. FIRST AID MEASURES**

General advice

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 2 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.

Eyes

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

Ingestion

Adverse health effects due to ingestion are not anticipated.

Notes to physician

Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Treat burns or allergic reactions conventionally after decontamination.

5. FIRE-FIGHTING MEASURES

Flammable properties**Classification**

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

Flash point

Not applicable.

Autoignition temperature

343 °C (649.4 °F)

Lower explosion limit

Not applicable.

Upper explosion limit

Not applicable.

Extinguishing Media**Suitable extinguishing media**

SMALL FIRE: Use DRY chemicals, CO2, water spray LARGE FIRES: Use large quantities of water spray.

Unsuitable extinguishing media

No additional information available.

Protective equipment and precautions for firefighters**Protective equipment and precautions for firefighters**

Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

Precautions for fire-fighting

STARFLEX(TM) GM1810BE**Precautions for fire-fighting**

Dust may form explosive mixtures with air. Use flooding quantities of water until well after fire is extinguished.

Hazardous combustion products

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

6. ACCIDENTAL RELEASE MEASURES

Spills and leaks

Avoid generating dust. Potential dust explosion hazard. Use only non-sparking tools. Round cylinder shape causes dangerous walking or standing on hard, smooth surface. Pick up and retain for recycle or disposal.

7. HANDLING AND STORAGE

Handling

Keep material off walking surfaces, it may create a slipping hazard. Polymer dust may form explosive mixtures with air. Avoid accumulation of dust in enclosed space. Use in well-ventilated area. Ground and bond equipment to prevent electrostatic charge when transferring product. Control spilled material to prevent runoff to the sewers and the environment.

Storage

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Personal protective equipmentInhalation

Use appropriate respiratory protection where atmosphere exceeds recommended limits.

Skin

Wear chemical resistant gloves such as: PVC. If handling hot material, wear thermal resistant gloves. Wear suitable protective clothing.

Eyes

Safety glasses. 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.

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. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use care in walking on spilled material. Material spilled on hard surface can be a serious slipping/falling hazard. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities.

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Occupational Exposure Limits

Consult local authorities for acceptable exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: solid translucent, to, white

Odor: Faint, mild hydrocarbon odor.

Odor Threshold: No value available.

pH: Not applicable.

Boiling point/boiling range: Not applicable.

Melting/freezing point: 136 °C (276.8 °F)

Flash point: Not applicable.

Autoignition temperature: 343 °C (649.4 °F)

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

Lower explosion limit: Not applicable.

Upper explosion limit: Not applicable.

Explosive properties: No Data Available.

Oxidizing properties: No Data Available.

Vapor pressure: Not applicable.

Evaporation rate: Not applicable.

Relative density: 0.910 - 0.930(Water = 1)

Relative vapor density: Not applicable.

Viscosity: Not applicable.

Water solubility: Insoluble.

Partition coefficient: n-octanol/water: Specific data not available.

Other physico-chemical properties: No additional information available.

10. STABILITY AND REACTIVITY

Chemical stability

The product is stable.

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Conditions to avoid

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

Materials to avoid

Material may be softened by some hydrocarbons.

Hazardous decomposition products

Not expected to decompose under normal conditions.

Hazardous polymerization

Not likely.

Reactions with Air and Water

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

11. TOXICOLOGICAL INFORMATION

Product information

Product Summary

See components summary.

COMPONENT INFORMATION

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

Acute 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, OSHA or EPA.

- *Additives Mixture*

Repeated dose toxicity

No known chronic health effects.

Carcinogenicity

Not listed by IARC, NTP, OSHA or EPA.

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12. ECOLOGICAL INFORMATION

Product information

Ecotoxicity

See componentsummary.

Environmental fate and pathways

See componentsummary.

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 pathways

Persistence and degradability

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

Bioaccumulation: This material is not expected to bioaccumulate.

- *Additives Mixture*

Ecotoxicity

No Data Available.

Environmental fate and pathways

No Data Available.

13. DISPOSAL CONSIDERATIONS

Dispose of as hazardous waste in compliance with local and national regulations. Comply with federal, state, or local regulations for disposal. Recycle if possible.

14. TRANSPORT INFORMATION

Special Provisions

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.

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Proper shipping name POLYETHYLENE, OTHER THAN LIQUID, not regulated

15. REGULATORY INFORMATION

Notification status

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
Philippines	PICCS
United States of America	TSCA
New Zealand	NZIoC

Contact product.safety@lyondellbasell.com for additional global inventory information.

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

SARA 302/304

This product contains no known chemicals regulated under SARA 302/304.

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 product contains no known chemicals regulated under SARA 313.

State Reporting

This product contains no known chemicals regulated by California's Proposition 65.

This product contains no known chemicals regulated by New Jersey's Worker and Community Right to Know Act.

No components are subject to the Massachusetts Right to Know Act.

This product contains no known chemicals regulated by Pennsylvania's Right to Know Act.

16. OTHER INFORMATION

Material safety datasheet sections which have been updated:

Revised Section(s): 9 January 14 2010

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Disclaimer

CAUTION DO NOT USE EQUISTAR CHEMICALS, LP 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 CHEMICALS, LP MATERIALS ARE NOT DESIGNED OR MANUFACTURED FOR USE IN IMPLANTATION IN THE HUMAN BODY OR IN CONTACT WITH INTERNAL BODY FLUIDS OR TISSUES. EQUISTAR CHEMICALS, LP 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 CHEMICALS, LP 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.

Information is correct to the best of our knowledge at the date of the MSDS publication.

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Numerical Data Presentation

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

This document may be available in languages other than English.

End of Material Safety Data Sheet