

Product Name Green Linear Low Density Polyethylene
Issuing Date 17-Aug-2021

Revision Date 18-Jan-2023
Revision Number 1.2

1. Identification

Product identifier

Product Name Green Linear Low Density Polyethylene
English chemical name PE copolymer 1- butene, 1-hexene

Other means of identification

Product Code(s) SLH118, SLH218.
Synonyms LLDPE- copo
Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Supplier

Braskem S.A.
Rua Eteno, 1561, Polo Petroquímico de Camaçari
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E-mail address productsafety@braskem.com

Emergency telephone number

Emergency telephone number CHEMTREC China: +(86) 4001-204937
+1 703 527 3887 (CHEMTREC International)

Recommended use of the chemical and restrictions on use

Recommended use Polymer preparations and compounds
Restrictions on use No information available

2. Hazard(s) identification

Emergency Overview

No significant adverse health effects

Appearance Translucent, pellets

Physical state Solid

Odor Not applicable

Classification of the substance or mixture

Not classified

Label elements

Hazard statements

Not classified

Precautionary statements**Physical and chemical hazards**

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

Environmental hazards

Not applicable.

Other hazards which do not result in classification

Special danger of slipping by leaking/spilling product. Electrostatic charges may be generated during handling. If small particles are generated during processing or handling, this product may form combustible dust concentrations in air.

3. Composition/information on ingredients**Substance**

Not applicable.

Mixture**Synonyms**

LLDPE- copo

Not classified.

Chemical name	CAS No	Weight-%
PE copolymer 1- butene, 1-hexene	60785-11-7	< 100

4. First-aid measures**Description of necessary first aid measures****Inhalation**

Remove to fresh air. Medical aid is necessary if symptoms appear to be an obvious consequence of inhalation.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

Skin contact

Wash skin with soap and water. Get medical attention if irritation develops and persists. After contact with molten product, cool skin area rapidly with cold water. Removal of solidified molten material from skin requires medical assistance. After contact with product or dust:

Ingestion

Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

No information available.

For emergency responders No information available.

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media CO2, dry chemical, dry sand, alcohol-resistant foam. Water spray or fog.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical Avoid generation of dust. Fine dust dispersed in air may ignite. Powders, dusts, shavings, borings, turnings or cuttings may explode or burn with explosive violence. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous combustion products Carbon monoxide. Carbon dioxide (CO2).

Special protective actions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions Do not allow to enter into soil/subsoil. Do not allow into any sewer, on the ground or into any body of water.

Methods and material for containment and cleaning up Prevent further leakage or spillage if safe to do so. Prevent dust cloud. Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal.

Precautions to prevent secondary hazards Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Take precautionary measures against static discharge.

7. Handling and storage

Precautions for safe handling Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. Airborne dusts are potentially explosive. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654).

Conditions for safe storage, including any incompatibilities Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals. Keep in an area equipped with sprinklers.

Incompatible materials Fluorine. Strong acids. Strong oxidizing agents. Aromatic compounds.

8. Exposure controls/personal protection

Occupational exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Monitoring and observation processes

No applicable information was found.

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). During hot processing: Tight sealing safety goggles. If there is a risk of contact: Face protection shield.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Protective shoes or boots. During hot processing:

Hand protection Wear suitable gloves. Heat resistant gloves are recommended when handling molten materials.

Respiratory protection The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Translucent pellets
Physical state	Solid
Color	White
Odor	Not applicable
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		Not applicable
Melting point / freezing point		No data available
Initial boiling point and boiling range		Not applicable
Flash point		No data available
Evaporation rate		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Vapor pressure		Not applicable
Vapor density		Not applicable
Relative density		No data available
Water solubility	Insoluble	
Solubility(ies)	Xylene	

Partition coefficient		No data available
Autoignition temperature	350 °C	
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available

Additional information

Explosive properties	No information available.
Oxidizing properties	No information available.
Bulk density	0.916 - 0.920 g/cm ³
Particle characteristics	

10. Stability and reactivity

<u>Stability</u>	Stable under normal conditions.
<u>Possibility of hazardous reactions</u>	Reacts violently with fluorine.
<u>Conditions to avoid</u>	High temperature. Dust formation.
<u>Incompatible materials</u>	Fluorine. Strong acids. Strong oxidizing agents. Aromatic compounds.
<u>Hazardous decomposition products</u>	Decomposition products depend on temperature, exposure to air, and the presence of other substances. Processing may release irritating fumes.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available. Inhalation of dust in high concentration may cause irritation of respiratory system.
Skin contact	Specific test data for the substance or mixture is not available. Contact with dust can cause mechanical irritation or drying of the skin.
Eye contact	Specific test data for the substance or mixture is not available. Dust contact with the eyes can lead to mechanical irritation.
Ingestion	Specific test data for the substance or mixture is not available. May cause irritation of the mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	None known.
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Acute toxicity**Numerical measures of toxicity**

No information available

Skin corrosion/irritation	No information available.
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Serious eye damage/eye irritation	No information available.
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Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
Specific target organ toxicity (single exposure)	No information available.
Specific target organ toxicity (repeated exposure)	No information available.
Aspiration hazard	No information available.

12. Ecological information

<u>Ecotoxicity</u>	The environmental impact of this product has not been fully investigated.
<u>Persistence and degradability</u>	No information available.
<u>Bioaccumulative potential</u>	No information available.
<u>Mobility in soil</u>	No information available.

13. Disposal considerations

<u>Waste chemicals</u>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<u>Contaminated packaging</u>	Do not reuse empty containers.

14. Transport information

<u>China</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>IATA</u>	Not regulated

Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture**National regulations****Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Catalog of occupational hazard factors: Not applicable.
 Catalog of occupational diseases: Not applicable.

Regulations on the Control over Safety of Hazardous ChemicalsInventory of hazardous chemicals

Not applicable.

GB 18218-2009 Identification of major hazard installations for dangerous chemicals Not applicable

List of hazardous chemicals under priority management Not applicable

Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used

Inventory of highly toxic goods Not applicable

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

List of toxic chemicals severely restricted for import and export in China Not applicable

Measures for the Environmental Management of New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances Contains listed substance(s): 1-Butene, polymer with ethene (CAS no. 25087-34-7).

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. Other information

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Revision Note Initial Release.

Abbreviations and acronymsLegend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet