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Revision Number 3.1

1. Identification

Product identifier

Product Name Linear Low Density Polyethylene Recycled

Other means of identification

Product Code(s) WCL L004 SCB, RPL 0C1 WE, RPL 0C1 BE, RPL 4C5 WE, RPL 4C2 BL.

Recommended use of the chemical and restrictions on use

Recommended use Blow molding of articles. Industrial use

Uses advised against Food contact applications

Details of the supplier of the safety data sheet

Supplier

Braskem S.A.
Rua Lemos Monteiro, 120
São Paulo, SP, CEP: 05501-050, Brasil
Phone: +55 (11) 3583-2200

E-mail address productsafety@braskem.com

Emergency telephone number

Emergency telephone CHEMTREC Brazil (Rio De Janeiro): +(55)-2139581449 Portuguese
CHEMTREC Brazil (São Paulo): +(55)-1143491359 Portuguese
CHEMTREC Brazil: 0800 892 0479 Portuguese
+1 703 527 3887 (CHEMTREC International)

2. Hazard(s) identification

GHS Classification Most Important Hazards

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).

Label elements

Hazard statements

Not classified

Other information

May form combustible dust concentrations in air. 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

Pure substance/mixture Mixture.

Substance

Not applicable.

Mixture

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).

Chemical name	CAS No	Weight-%
Post-consumer recycled polyethylene*	-	< 70
PE copolymer 1- butene, 1-hexene	60785-11-7	30 - <= 45

Chemical Additions *Post-consumer recycled polyethylene; may consist of CAS numbers 25087-34-7 and 25213-02-9.

4. First-aid measures

Description of 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 After contact with product or dust: 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.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms None known.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

Specific hazards arising from the Avoid generation of dust. Fine dust dispersed in air may ignite. Powders, dusts, shavings,

chemical borings, turnings or cuttings may explode or burn with explosive violence.

Explosive properties

Sensitivity to static discharge None.

Sensitivity to mechanical impact None.

Special protective equipment and precautions 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. Avoid contact with eyes. Use personal protective equipment as required. Do not breathe dust. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

Methods for cleaning up Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on 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

Storage Conditions 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 Strong oxidizing agents.

8. Exposure controls/personal protection

Exposure guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Biological occupational exposure limits	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.
<u>Appropriate engineering controls</u>	
Engineering controls	Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen- deficient environment.
<u>Individual protection measures, such as personal protective equipment</u>	
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.
Hand protection	Wear suitable gloves. Heat resistant gloves are recommended when handling molten materials.
Skin and body protection	Wear suitable protective clothing. During hot processing: Long sleeved clothing. Protective shoes or boots.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator.
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 it before reuse. Regular cleaning of equipment, work area and clothing is recommended.
Environmental exposure controls	No information available.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Solid. Multiple Colors.
Physical state	Solid
Color	White; Transparent
Odor	No information available
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		Not applicable
Melting point / freezing point		No data available
Boiling point / boiling range		Not applicable
Flash point		Not applicable
Evaporation rate		Not applicable
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive		No data available

limits		
Lower flammability or explosive limits		No data available
Vapor pressure		Not applicable
Vapor density		Not applicable
Relative density		No data available
Water solubility		No data available
Solubility(ies)		No data available
Partition coefficient		No data available
Autoignition temperature		Not applicable
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Explosive properties	No information available.	
Oxidizing properties	No information available.	
<u>Other information</u>		
Softening point	No information available	
Molecular weight	No information available	
VOC Content (%)	No information available	
Liquid Density	No information available	
Bulk density	>0,910 g/cm ³ (ASTM D 792)	
Particle characteristics		

10. Stability and reactivity

Reactivity

Reactivity	None under normal use conditions.
Sensitivity to static discharge	None.
Sensitivity to mechanical impact	None.

Chemical stability

Stability	Stable under normal conditions.
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Possibility of hazardous reactions

Possibility of hazardous reactions	Reacts violently with fluorine.
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Conditions to avoid

Conditions to avoid	Excessive heat. Heating in air. Dust formation.
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Incompatible materials

Incompatible materials	Strong oxidizing agents.
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Hazardous decomposition products

Hazardous decomposition products	None known based on information supplied.
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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.
Eye contact	Specific test data for the substance or mixture is not available. Dust contact with the eyes can lead to mechanical irritation.
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.
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**

Based on available data, the classification criteria are not met

Oral LD50	> 5,000 mg/kg (rat)
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Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
PE copolymer 1- butene, 1-hexene	4000 mg/kg	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target organ effects	No information available.
Neurological effects	No information available.
Aspiration hazard	No information available.

12. Ecological information

Ecotoxicity	The environmental impact of this product has not been fully investigated.
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Persistence and degradability	No information available.
Mobility in soil	No information available.
Bioaccumulation	No information available.
Other adverse effects	No information available.

13. Disposal considerations

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

IMDG	Not regulated.
IATA	Not regulated.
ANTT	Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Brazil

See section 8 for national exposure control parameters

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

International Inventories

Contact supplier for inventory compliance status

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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

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This safety data sheet was created pursuant to the requirements of: ABNT NBR 14725-4:2014, ABNT NBR 14725-2:2009.

Disclaimer

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End of Safety Data Sheet