



TRICOLENE® LLDPE
Linear Low Density Polyethylene

777 Post Oak Blvd, Suite 550, Houston TX, 77056 USA
 Phone: +1-713-963-0066 www.triconenergy.com

Revised Date: July 29, 2024

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier: TRICOLENE® LLDPE (Linear Low Density Polyethylene)

Type of Product	References
<p>TRICOLENE® LLDPE Butene LLDPE</p>	<p>TRICOLENE® LLDPE LLB06920, TRICOLENE® LLDPE LLB08919, TRICOLENE® LLDPE LLB0822, TRICOLENE® LLDPE LLB08921SB, TRICOLENE® LLDPE LLB08922SB.</p> <p>TRICOLENE® LLDPE LLB1918, TRICOLENE® LLDPE LLB1919, TRICOLENE® LLDPE LLB1918B, TRICOLENE® LLDPE LLB1918SB-3, TRICOLENE® LLDPE LLB1919SB, TRICOLENE® LLDPE LLB1918SB-5, TRICOLENE® LLDPE LLB1918SB-13, TRICOLENE® LLDPE LLB1923SB, TRICOLENE® LLDPE LLB1918SB-7, TRICOLENE® LLDPE LLB1918SB-9, TRICOLENE® LLDPE LLB1918SB, TRICOLENE® LLDPE LLB1918SBX.</p> <p>TRICOLENE® LLDPE LLB2919, TRICOLENE® LLDPE LLB2919SB, TRICOLENE® LLDPE LLB2918SB, TRICOLENE® LLDPE LLB2918SB-13.</p> <p>TRICOLENE® LLDPE LLB3918, TRICOLENE® LLDPE LLB3919, TRICOLENE® LLDPE LLB3925, TRICOLENE® LLDPE LLB3925S, TRICOLENE® LLDPE LLB3925SB-3.</p> <p>TRICOLENE® LLDPE LLBN2924 Powder, TRICOLENE® LLDPE LLBI20925, TRICOLENE® LLDPE LLBM20925 Powder, TRICOLENE® LLDPE LLBI35926, TRICOLENE® LLDPE LLBI50926, TRICOLENE® LLDPE LJ2650B, TRICOLENE® LLDPE LLBM50926 Powder, TRICOLENE® LLDPE LLBI105929</p>
<p>TRICOLENE® LLDPE Hexene LLDPE</p>	<p>TRICOLENE® LLDPE LLH05917, TRICOLENE® LLDPE LLH05917SB, TRICOLENE® LLDPE LLH05924, TRICOLENE® LLDPE LLH08925, TRICOLENE® LLDPE LLH08925B, TRICOLENE® LLDPE LLH08917SB, TRICOLENE® LLDPE LLH09919 (or TRICOLENE® LLDPE LLH0919).</p> <p>TRICOLENE® LLDPE LLH1919, TRICOLENE® LLDPE LLH1918-4, TRICOLENE® LLDPE LLH1919B, TRICOLENE® LLDPE LLH1919B, TRICOLENE® LLDPE LLH1918SB-5, TRICOLENE® LLDPE LLH1919BX, TRICOLENE® LLDPE LLH1920SB, TRICOLENE® LLDPE LLH1919SBX, TRICOLENE® LLDPE LLH1919SB, TRICOLENE® LLDPE LLH1919SBY, TRICOLENE® LLDPE LLH1918SB.</p> <p>TRICOLENE® LLDPE LLH2918, TRICOLENE® LLDPE LLH3918.</p> <p>TRICOLENE® LLDPE mLLDH04925, TRICOLENE® LLDPE mLLDH05923, TRICOLENE® LLDPE mLLH09927, TRICOLENE® LLDPE mLLH1915, TRICOLENE® LLDPE mLLH1918, TRICOLENE® LLDPE mLLH1918X, TRICOLENE® LLDPE mLLH1923, TRICOLENE® LLDPE mLLH15918, TRICOLENE® LLDPE mLLH1918BX, TRICOLENE® LLDPE mLLH1915SB, TRICOLENE® LLDPE mLLH1918SB, TRICOLENE® LLDPE mLLH1918SBX, TRICOLENE® LLDPE mLLH1918SBY, TRICOLENE® LLDPE mLLH15918SB, TRICOLENE® LLDPE mLLH1915SB.</p>



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	<p>TRICOLENE® LLDPE mLLH35918, TRICOLENE® LLDPE mLLH45920</p> <p>TRICOLENE® LLDPE MDHFL12938, TRICOLENE® LLDPE MDBFL15935-BMWD, TRICOLENE® LLDPE MDF03937, TRICOLENE® LLDPE mMDHF09934, TRICOLENE® LLDPE MDHF08934SB, TRICOLENE® LLDPE HDHF2942, TRICOLENE® LLDPE HDHF4942 (or LLHF4942, or MDF4942)</p> <p>TRICOLENE® LLDPE MDHP02939, TRICOLENE® LLDPE MDBP06939, TRICOLENE® LLDPE MDBP02939.</p> <p>TRICOLENE® LLDPE HDHR2942, TRICOLENE® LLDPE MDHR4939U, TRICOLENE® LLDPE mMDHR4940U, TRICOLENE® LLDPE MDHR5935U (TRICOLENE® LLDPE TR-0535-UI), TRICOLENE® LLDPE mMDHR6935U, TRICOLENE® LLDPE MDHR7935U</p>
<p>TRICOLENE® LLDPE Octene LLDPE</p>	<p>TRICOLENE® LLDPE LLOF1920, TRICOLENE® LLDPE LLOF1920-12, TRICOLENE® LLDPE LLOF1920B, TRICOLENE® LLDPE LLOF1920SB.</p> <p>TRICOLENE® LLDPE LLOF2920.</p> <p>TRICOLENE® LLDPE mLLOF1916, TRICOLENE® LLDPE mLLOF1916SB, TRICOLENE® LLDPE SPS116D.</p> <p>TRICOLENE® LLDPE mLLOF4917</p>

1.2 Company: **TRICON ENERGY LTD.**
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1.3 Recommended use: It can be used to produce plastic articles made by blown film extrusion, cast film extrusion, sheet extrusion, flexible tube and profile extrusion, injection molding, and extrusion blow molding, composite extrusion.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Regulation (EC) N° 1272/2008	This material is not considered to be hazardous according to regulatory guidelines
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2.2 Label Elements

Labels	No label element(s) required
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2.3 Other hazards

- Spilled material may be a slip hazard

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- May burn in a fire and generate dense, toxic smoke
- Molten plastic can cause severe thermal burns
- The gases generated during the melting process can cause irritation to the eyes, skin and respiratory system. Severe overexposure can cause nausea, headaches, chills, and fever.
- Secondary operations such as grinding, polishing or sawing can generate dust, which can create a respiratory or explosion hazard.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

These resins do not meet the criteria of a substance according to Regulation (EC) N° 1272/2008.

3.2 Mixtures

Product	Chemical Name of Base Resin	CAS Registry of Base Resin	Product Composition
TRICOLENE® butene LLDPE Linear Low Density Polyethylene, 1-butene*	Poly(ethylene-co-1-butene)	25087-34-7	100 % Resin
TRICOLENE® hexene LLDPE Linear Low Density Polyethylene, 1-hexene**	Poly(ethylene-co-1-hexene)	25213-02-9	100 % Resin
TRICOLENE® octene LLDPE Linear Low Density Polyethylene, 1-octene***	Poly(ethylene-co-1-octene)	26221-73-8	100 % Resin

*The 1-butene Linear Low Density Polyethylene is a copolymer of Ethylene (96-95 %) and 1-Butene (6-8 %).

**The 1-hexene Linear Low Density Polyethylene is a copolymer of Ethylene (96-95 %) and 1-Hexene (6-8 %).

***The 1-octene Linear Low Density Polyethylene is a copolymer of Ethylene (96-95 %) and 1-Octene (6-8 %).

4. FIRST AID MEASURES

Inhalation:	Exit to breathe air cool if you accidentally inhale the smoke produced by overheating or combustion. In the case of discomfort protracted, go to one doctor.
Contact with the skin:	If the molten polymer comes into contact with the skin, do not apply ice but cool it with ice water or a large jet of water. Do not try to remove the molten material from your skin. This could cause severe tissue damage. Seek immediate medical attention. An adequate safety and emergency shower should be available immediately.
Contact with eyes:	Rinse your eyes with water for several minutes. Remove contact lenses after 1 or 2 minutes, and continue washing your eyes for several more minutes. If side effects develop, contact a doctor, preferably an ophthalmologist.
Ingestion:	No risks that require measures special for first aid. In large quantities, it can cause gastrointestinal obstruction. Laxatives should not be administered. Vomiting should not be induced unless authorized to do so by medical personnel.



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5. FIREFIGHTING MEASURES

<p>Suitable Extinguishing Media</p>	<p>1) Water, 2) Fog or water spray (Water Fog) 3) Chemical or Dry Powder, 4) Carbon dioxide (CO₂), 5) "Alcohol" foam (Foam). Water is the best extinguishing agent. Carbon dioxide and dry chemicals are generally not recommended because their lack of cooling capacity can allow the re-ignition of fires. If possible, the water should be applied as a mist with a spray nozzle as it is a surface-burning material. Do not use a solid stream of water, as it can scatter and spread fire.</p>
<p>Hazardous Combustion Products</p>	<p>During a fire, the smoke may contain the source material together with combustion products of varying composition that can be toxic and/or irritating. Combustion products may include but are not limited to Carbon monoxide (CO) and Carbon dioxide (CO₂).</p>
<p>Fire Fighting Procedures</p>	<p>Keep people away. Circumscribe the fire and prevent unnecessary access—Moisten well with water to cool it down and prevent it from catching fire again. If the material is molten, do not apply a direct stream of water. Use finely sprayed water or foam. Cool the surroundings with water to locate the fire area. For small fires, manual dry chemical or carbon dioxide fire extinguishers can be used.</p>
<p>Special Protection Equipment for Firefighting Personnel</p>	<p>Wear positive pressure self-contained breathing apparatus and fire protective clothing (includes a fire helmet, jacket, pants, boots, and gloves). If fire protection equipment is not available or not in use, extinguish the fire from a protected location or safe distance.</p>
<p>Non-Usual Fire and Explosion Hazards</p>	<p>Pneumatic conveying of resins and other mechanical maintenance operations can generate combustible resin dust. Do not allow dust to accumulate to reduce potential dust explosions since the fine dust could disperse in the air in sufficient concentrations, and the presence of an ignition source is a potential danger of dust explosion. Take precautions against electrostatic discharge, as with sufficient concentrations, and dust can form an explosive mixture with air.</p>

6. ACCIDENTAL RELEASE MEASURES

<p>Personal Precautions, Protective Equipment</p>	<p>Spilled products may create a risk of falling on a slippery floor. Wear the proper safety gear.</p>
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Cleaning Methods	Contain spilled material if possible. Sweep. It will be collected in appropriate and properly labeled containers. Do not create clouds of dust using a brush or compressed air. Keep away from sources of ignition.
Environmental Precautions	Avoid entry into soil, ditches, sewers, water courses and/or groundwater.

7. HANDLING AND STORAGE

Precautions for Safe Handling	Use with adequate ventilation. Do not smoke or have open flames or ignition sources in handling and storage areas. Safe product handling requires good order, cleanliness, and dust control. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential risk of dust explosions, isolate and ground electrical equipment and prevent dust accumulation. Dust can burn from electrostatic discharge. Do not allow molten products to come into contact with eyes, skin, or clothing. Avoid inhalation of process fumes.
Conditions for Safe Storage	Store indoors. Store in a fresh and dry place. Store away from direct sunlight or ultraviolet rays.
Stability in Warehouse	Shelf life: Use within 12 months

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye / Face Protection	Wear safety glasses (with side shields). If there is a possibility that exposure to the particulate matter may cause discomfort to the eyes, use motorcycle-type glasses. If exposure causes discomfort to the eyes, wear a full-face respirator.
Skin Protection	At ambient temperatures the use of clean and protective clothing is good industrial practice. If the material is heated or state molten, wear gloves and thermally resistant isolates that can withstand the heat of the molten product temperature.
Respiratory Protection	Respiratory protection is not normally required. If heated material generates vapor or gases that are not adequately controlled by ventilation, wear a suitable respirator, type N95.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid in the form of Pellets or Powder (Granules), depending on the grade reference.
Colour	Translucent to White
Odor	Odorless to slight
Density	0.915-0.925 g / cm ³
Water solubility	Negligible
Melting Temperature (Range)	115 to 128 ° C
Degradation Temperature (Start)	Degradation starts from 300 ° C
Ignition Temperature	> 343 ° C

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Oxidative Properties	It is not an oxidant
Explosive Properties	It is not an explosive

10. STABILITY AND REACTIVITY

Reactivity	This material is considered non-reactive in a normal environment and based on the intended storage and conditions of temperature and pressure during handling.
Chemical Stability	Chemically stable under normal conditions of use and storage. It does not undergo depolymerization.
Possibility of Dangerous Reactions	There are no known dangerous reactions to these products. Polymerization will not occur.
Conditions to avoid	High temperatures. Do not let the temperature exceed 300 ° C. Direct sunlight
Incompatible Materials	Avoid contact with potent oxidizing agents. It could be dissolved in aromatic hydrocarbons such as toluene or xylene or chlorinated solvents such as trichloroethane or trichlorobenzene at temperatures above 120 ° C.
Hazardous Degradation Products	Normal combustion forms carbon dioxide, water vapor, and can produce carbon monoxide, other hydrocarbon products, and products of oxidation of hydrocarbons (ketones, aldehydes, organic acids) depending on temperature and air availability. The incomplete combustion can also produce formaldehyde.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Very low oral toxicity. Harmful effects are not expected from the ingestion of small amounts. It may obstruct if swallowed. The 50% Lethal Dose (LD50) by ingestion of a single oral dose has not been determined. Typical for this family of materials: LD50, Rat, > 5,000 mg / kg
Acute Dermal Toxicity	No harmful effects are expected from absorption through the skin. The dermal LD50 has not been determined. Typical for this family of materials: LD50, Rabbit, > 2,000 mg / kg
Acute Inhalation Toxicity	A single exposure to dust is unlikely to cause adverse effects. Vapors released during processing may cause respiratory irritation. The LC50 has not been determined.,
Skin Corrosion or Irritation	Prolonged contact does not cause skin irritation. Mechanical injury only. Under normal processing conditions, the material is heated to elevated temperatures; contact with the material can cause burns.
Serious Eye Injury or Irritation	Both the solid and the powder of the product can cause irritation or injury to the cornea due to mechanical action. Elevated temperatures can generate vapors in concentrations sufficient to cause eye irritation. Effects can include discomfort and redness.
Respiratory or Skin Sensitization	Depending on the processing temperature, the fumes can be irritating.
Carcinogenicity	No relevant data was found.

12. ECOLOGICAL INFORMATION

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Ecotoxicity	The product is not expected to have acute toxicity, but in pellets, they can cause, by mechanical causes, adverse effects if they are ingested by birds or aquatic animals.
Persistence and degradability	This water-insoluble polymeric solid is expected to be inert to the environment. On exposure to sunlight, a superficial photodegradation is expected. No appreciable biodegradation is expected.
Bioaccumulative Potential	Bioconcentration is not expected due to its high molecular weight
Mobility in Soil	In the terrestrial environment, the material is expected to remain in the soil. In the aquatic environment, material is expected to float.

13. DISPOSAL CONSIDERATIONS

Considerations Relating to Waste Elimination	Do not send to any drain, or to the ground, or to any stream. Use the material for its intended purpose or recycle it if possible.
Waste Packaging	Keep product waste in its original packaging (bags, big bags, Gaylord box) properly closed.

14. TRANSPORT INFORMATION

Classification for LAND transport US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)	It is not regulated as a dangerous material nor as hazardous goods for transport
Classification for SEA transport IMO / IMDG (INTERNATIONAL MARINE HAZARDOUS PRODUCTS)	It is not regulated as a dangerous material nor as hazardous goods for transport
Classification for AIR transport IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)	It is not regulated as a dangerous material or as hazardous transport goods.
Transport in bulk according to Annex II of the MARPOL Convention 73/78 and the IBC Code	Not relevant

15. REGULATORY INFORMATION

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

Chemical Inventories	<p>All components of these products are "listed" (included) in the following international inventories:</p> <p>AUSTRALIA: Australian Inventory of Chemical Substances (AICS) CANADA: Domestic Substances List (DSL) PEOPLE 'S REPUBLIC OF CHINA: Inventory of Existing Chemical Substances EUROPEAN UNION: All necessary components have been registered or pre-registered according to Regulation (EU) No. 1907/2006 (REACH = REGISTRATION, EVALUATION, AUTHORIZATION ON AND RESTRICTION OF CHEMICALS) SWITZERLAND: Exemptions from the obligation to notify/register</p>
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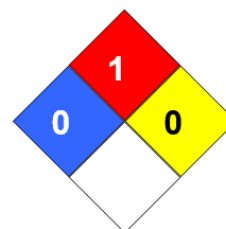
	<p>JAPAN: Existing & New Chemical Substances (ENCS) Inventory SOUTH KOREA: Existing Chemicals List (ECL) NEW ZEALAND: Inventory of Chemical Substances (NZIoCS) PHILIPPINES: Philippine Inventory of Chemicals and Chemical Substances (PICCS) TAIWAN: Taiwan Chemical Substance Inventory (TCSI) UNITED STATES: Toxic Substances Control Act (TSCA) Chemical Inventory</p> <p>Suppose an entry is "Listed" above. In that case, it means that all chemical components are listed in the respective inventory and/or that there is a qualified exemption for one or more components. A "Not Listed " entry above indicates that the amount or production of one or more components is restricted in that country/region.</p>
California - Proposition on 65	Complies and there are no substances to report according to the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)
Germany -WGK Water Pollutant Classification	No danger to water (nwg)
Clean Air	<p>These products do not contain any ozone-depleting substances included in the Regulation (EC) No 1005/2009 list.</p> <p>These products do not contain any substances regulated by the Clean Air Act:</p> <ul style="list-style-type: none"> • Class I or Class II Ozone Depleting Substances - CAA Section 602 • Hazardous Air Pollutants - CAA Section 112 • Volatile Organic Compounds (VOC) - CAA Section 111

15.2 Chemical safety assessment

Not relevant.

16. OTHER INFORMATION

NFPA classification (National Fire Protection Association)	Health Hazard:	0
	Fire Danger:	1
	Danger of Reactivity :	0



The information provided in this Safety Data Sheet (MSDS) by Tricon Energy Ltd. is the most correct information available to us as of the date of its publication. The information provided is intended only as a guide for safe handling, use, storage, transportation, and disposal and should not be construed as a guarantee or specification of quality.

SDS - Safety Data Sheet

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