Safety Data Sheet (SDS)

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 1, 2022

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier: Tricolene LLDPE (Linear Low Density Polyethylene)

Type of Product	References
Tricolene Butene LLDPE	Tricolene LLB1919, Tricolene LLB1918, Tricolene LLB1918B, Tricolene LLB08922SB Tricolene LLB1918SB-3, Tricolene LLB1919SB, Tricolene LLB1923SB, Tricolene LLB1918SB-13, Tricolene LLB1918SB, Tricolene LLB1918SBX, Tricolene LLB2919, Tricolene LLB2919SB, Tricolene LLB2918SB, Tricolene LLB3918, Tricolene LLB3919, Tricolene LLB3925, Tricolene LLB3925SB-3, Tricolene LLBI20925, Tricolene LLBM20925 Powder, Tricolene LLBI50926, Tricolene LLBM50926 Powder
Tricolene Hexene LLDPE	Tricolene LLH1919, Tricolene LLH1918-4, Tricolene LLH1920SB, Tricolene LLH1919SB, Tricolene LLH1918SB, Tricolene LLH2918, Tricolene LLH3918, Tricolene mLLH1918, Tricolene mLLH15918, Tricolene mLLH1918SB, Tricolene mLLH15918SB, Tricolene mLLH35918
Tricolene Octene LLDPE	Tricolene LLO1920, Tricolene LLO1920B, Tricolene LLO1920SB

1.2 Company:

TRICON ENERGY LTD.
777 Post Oak Blvd, Suite 550, Houston TX, 77056 USA
Phone: 1-713-963-66 www.triconenergy.com

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

2.2 Label Elements

Labels	No label element(s) required

2.3 Other hazards

- Spilled material may be a slip hazard
- May burn in a fire and generate dense, toxic smoke
- Molten plastic can cause severe thermal burns

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- 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	99-98 % Resin 1-2 % Additives
Tricolene hexene LLDPE Linear Low Density Polyethylene, 1-hexene**	Poly(ethylene-co-1-hexene)	25213-02-9	99-98 % Resin 1-2 % Additives
Tricolene octene LLDPE Linear Low Density Polyethylene, 1-octene***	Poly(ethylene-co-1-octene)	26221-73-8	99-98% Resin 1-2 % Additives

*The Linear Low Density Polyethylene, 1-butene is a copolymer of Ethylene (94-92 %) and 1-Butene (6-8 %).
**The Linear Low Density Polyethylene, 1-hexene is a copolymer of Ethylene (94-92 %) and 1-Hexene (6-8 %).
***The Linear Low Density Polyethylene, 1-octene is a copolymer of Ethylene (94-92 %) and 1-Octene (6-8 %).
****Additives such as Antioxidants, Antistatics, Slips and Antiblocks (all FDA approved for use in contact with food), depending on the specific grade.

4. FIRST AID MEASURES

Inhalation:	Exit to breathe air cool if you have inhaled accidentally 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 with ice water or a large jet of water. Do not try to remove the molten material from your skin. This could cause serious 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 any 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

Suitable Extinguishing Media	1) Water, 2) Fog or water spray (Water Fog) 3) Chemical or Dry Powder, 4) Carbon dioxide (CO_2), 5) "Alcohol" foam (Foam). Water is the best extinguishing agent. Carbon dioxide and dry chemical are generally not recommended because their lack of cooling capacity can allow 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.
Hazardous Combustion Products	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).
Fire Fighting Procedures	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.
Special Protection Equipment for Firefighting Personnel	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 fire from protected location or safe distance.
Non-Usual Fire and Explosion Hazards	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 air in sufficient concentrations and in the presence of an ignition source is a potential danger of dust explosion. Take precautions against electrostatic discharge, as with sufficient concentrations, dust can form an explosive mixture with air.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment	Spilled product may create a risk of falling on a slippery floor. Wear the proper safety gear
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.

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7. HANDLING AND STORAGE

Precautions for Safe Handling	Use with adequate ventilation. Do not smoke or have open flames or sources of ignition in handling and storage areas. Safe handling of the product requires good order and 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 accumulation of dust. Dust can burn from electrostatic discharge. Do not allow molten product 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
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
Oxidative Properties	It is not an oxidant
Explosive Properties	It is not an explosive

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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 with 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 strong oxidizing agents. It could be dissolved in aromatic hydrocarbons such as toluene or xylene, or in 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 ingestion of small amounts. May cause obstruction 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 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.

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12. ECOLOGICAL INFORMATION

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 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 dangerous goods for transport
Classification for SEA transport **IMO / IMDG** (INTERNATIONAL MARINE HAZARDOUS PRODUCTS)	It is not regulated as a dangerous material, nor as dangerous goods for transport
Classification for AIR transport **IATA** (INTERNATIONAL AIR TRANSPORT ASSOCIATION)	It is not regulated as a dangerous material, nor as dangerous goods for transport
Transport in bulk according to Annex II of the MARPOL Convention 73/78 and the IBC Code	Not relevant

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15. REGULATORY INFORMATION

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

Chemical Inventories	All components of these products are “listed” (included) in the following international inventories: **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, AUTHORIZATI ON AND RESTRICTION OF CHEMICALS) **SWITZERLAND** : Exemptions from the obligation to notify / register **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 If an entry is "Listed" above 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.
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	These products do not contain any ozone depleting substances included in the list of Regulation (EC) No 1005/2009. These products do not contain any substances regulated by the Clean Air Act: • 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.

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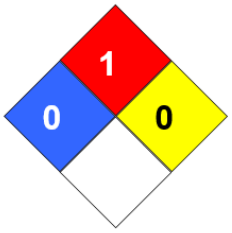
16. OTHER INFORMATION

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



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