



CARMEL OLEFINS LTD.

R & D and Technical Service

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Material Safety Data Sheet (MSDS)

According to EU Regulation (EC) No 1907/2006 (REACH)

IPETHENE[®] 111

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1. Company & Product Identification

Manufacturer:

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Product Trade Name: *Ipethene*[®]

Product Description: Synthetic resin, Olefinic polymer, Polyethylene-Low Density, LDPE.

2. Hazards Identification

Main Hazards: This product consists primarily of high molecular weight polymer, which is not hazardous to our knowledge.

Eyes: Pellets and powder may cause irritation or injury to ocular mucous, due to mechanical action.

Fumes evolved at processing temperatures may cause irritation.

Skin: Hot material can cause severe thermal burns.

Ingestion: Not toxic, the material is regarded as biologically inert.

Inhalation: Pellet inhalation is unlikely due to physical form. Product fines and

dust may cause mild respiratory irritation.

If heated to more than 235°C, product may form vapours or fumes, which by inhalation may cause irritation of respiratory system.

Physico-Chemical: During transportation avoid stacking of pallets. During storage of pallets, avoid stacking of more than two pallets (only one on top of the other).

Spilled pellets may present slipping hazards.

Flowing pellets can create static electrical charge; resulting sparks may be hurting or ignite combustible materials.

If exposed to flames and oxygen material is combustible.

3. Composition/Information on Ingredients

Chemical Name: Polyethene
Chemical Formula: (C₂H₄)_n high molecular weight polymer
CAS Number 9002-88-4
EINECS Number: Under polymer exemption.
Health Hazard: Not expected to be hazardous.

4. First Aid Measures

4.1 Product at ambient temperature Solid product is neither an irritant nor gives off hazardous vapours.

Eyes: In case of irritation caused by fine dust, rinse opened eyes for several seconds under running water until the irritation disappears, if irritation persists consult physician.

Skin: Not hazard.

Ingestion: Since this material is not expected to be an ingestion problem, no first aid procedures are required. If necessary get medical advice.

Inhalation: Pellet inhalation is unlikely due to physical form. Product fines and dust may cause mild respiratory irritation.

4.2 Product at The measures mentioned below apply to hot material in critical

<u>processing</u>	situations.
<u>temperature</u>	
Eyes:	In case of splashing of hot product, treat the eyes with cold water and seek immediately special attention at hospital or medical center. Fumes may cause irritation, wash open eyes with cold water.
Skin:	In case of skin contact with molten plastic, cool rapidly with water. Do not attempt removal of plastic without medical assistance. Do not use solvents for removal. Injured areas should be treated as thermal burns. In case of severe burns, obtain medical treatment. In case of skin contact with condensed fume, wash thoroughly with soap and water. If irritation develops, seek medical attention.
Inhalation:	In case of irritation from inhalation of processing fumes, the affected person should be removed to fresh air. If coughing, difficult breathing or other symptoms develop, seek medical attention.

5. Fire Fighting Measures

Individual Protection:	For all kind of fires fighting, wear suitable breathing equipment and protective clothing should be used.
Extinguishing Media:	Water fog, foam, dry chemicals, CO ₂
Hazardous Combustion Products:	Hazardous combustion products may include intense heat, dense smoke that contains: carbon dioxide (CO ₂), small amounts of carbon monoxide (CO), aldehydes, ketones, and acroleine. Heat value: 33.5-46 MJ/kg.
Conditions of Flammability:	Requires a continuous flame source and oxygen to ignite.
Explosion Data:	Not sensitive to mechanical impact or static discharge.

6. Accidental Release Measures:

Pellets spilled on soil: To avoid danger of slipping and falls, sweep or gather up material and place in proper container for disposal or recovery (see 13. Disposal Information). Do not use compressed air.

Pellets spilled on water: Clean up the water surface by creaming off debris from the top. Inform authorities of the possible presence of floating materials.

7. Handling and Storage

Handling: Keep away from igniting sources. Grounding of conveying and processing equipment is recommended to reduce electrostatic charges. Avoid dust accumulation by use of filters in the pneumatic transport equipment.

Storage: Store in a cool, dry place and under no direct sun light. Keep the workplace area clean and free of scattered pellets. Avoid stacking of more than one pallet on top of the other.

8. Exposure Controls/Personal Protection

Workplace: The workplace should be well ventilated and the processing fumes removed. During processing wear heat insulated gloves and safety eyeglasses. Wear safety non-slip shoes. Do not eat, drink or smoke in the workplace.

Eye/Face: Wear face shield if the material is handled hot, and when cleaning condensed fume from hoods, ducts and other surfaces.

Skin: Wear heat- resistant protective gloves and aprons when handling molten product.

Respiratory: No protection required; however, use of adequate ventilation is a good industrial practice. Exposure limits: not established.

9. Physical and Chemical Properties

Appearance: Solid plastic pellets (Granules).

Colour & Odor: Natural white opaque colour, odorless.

Melting Range: At atmospheric pressure: 90-120°C (DSC measured).

Specific Gravity:	At 20°C, 910-925 kg/m ³
Bulk Density	At 20°C, 500-600 kg/m ³
Solubility:	Insoluble in water, soluble in hot aromatic and chlorinated solvents.
% Volatiles:	Negligible.
pH:	Not applicable.
Flash Point:	Not applicable.
Decomposition:	>300°C, estimated.
Autoignition:	>350°C, estimated.

10. Stability and Reactivity

Stability:	Stable under recommended conditions of storage, handling and use.
Reactivity:	Not reactive under recommended conditions of storage, handling, processing and use.
Decomposition:	May include water vapor, carbon dioxide (CO ₂) and small amounts of carbon monoxide (CO), aldehydes, ketones and acroleine.
Conditions To Avoid:	During processing, do not exceed melt temperature recommendations.
Material to Avoid:	Strong oxidizing agent.

11. Toxicological Information

Acute toxicity:	Polyolefins are biologically inert.
Ingestion:	Because of its inert composition, the product can be considered as practically harmless.
Local effect, inhalation:	Dust may cause irritation of respiratory system. If heated to more than 235°C, the product may form vapours or fumes, which may cause irritation of respiratory way and cause coughing and sensation of shortness of breath.
Skin contact:	Because of its inert composition, no irritant effect. In contact with hot

	material, may cause severe thermal burns. At very high temperature, thermal decomposition products may be skin irritating.
Eye contact:	Because of its inert composition, no irritant effect. Fine dust, as a by-product, could cause irritation to ocular mucous. Accidentally splashing of molten partials during processing can cause ocular tissue injury. At very high temperature, thermal decomposition products may be eye irritating.
Specific effects:	Polyolefins are biologically inert, no known harmful effects on humans.

12. Ecological Information

General:	Not expected to present any significant ecological problems.
Ecological effect:	Because of its structure the material has no effect on air, soil and water. Whenever possible, avoid losses of material to the environment. When accidentally spill in water its floats on water-surface and is insoluble. It is not biodegradable and has no bioaccumulation of degraded product in the environment. It has a potential of slow degradation under the influence of UV light.

13. Disposal Considerations

Recycling:	This product may be re-used, recycled, incinerated or disposed. Recycling according to EC guideline 94/62.
Waste Disposal:	This product is not regarded as hazardous waste. Dispose in accordance with local regulations. According to EC 75/442 and EC 91/156 guidelines it is regarded as municipal waste. EC industrial waste number: 07 02 13, 16 01 19, 17 02 03 and 20 01 39: plastics. API (Association of plastic Industry) Code: 4, LDPE.

14. Transport Information

General remark to road (ADR), sea (IMO-IMDG), rail (RID) and air (ICAO/IATA) transport regulation:	The product is not dangerous and is not restricted by any transport regulation.
UN Number:	Not applicable.
Recommendation:	During transportation avoid stacking of pallets. During transportation loaded pallets should be covered and fastened to the vehicle platform.

15. Regulatory Information

Designation according to EC guidelines:	Not dangerous product according to EEC Directives 67/548 (dangerous substances) and 1999/45/EC (dangerous preparations).
EINECS Number:	Under polymer exemption

16. Other Information

This publication provides information and guidelines for safe handling and processing of *Ipethene*[®] resins and is based on currently available experience and knowledge. It is not designed as a comprehensive product performance data sheet, nor as a guide to application possibilities of our materials.

Users should follow all applicable local regulations governing Health and Safety at work, and are requested to pass this publication on to all relevant employees and customers.

Ipethene[®] is a registered trademark of **CARMEL OLEFINS LTD.**

The information presented herein is indicative and based on the present level of knowledge and experience.