Biolefin is formulated to be totally degradable in the environment. At the end of its useful life, it fragments and oxidizes by the effect of light and heat. It then becomes assimilable by soil micro-organisms, and eventually disappears, leaving only water, carbon dioxide and biomass.

Biolefin is an Oxo-biodegradable plastic: a degradable plastic in which the degradation results from the action of naturally occurring microorganisms such as bacteria, fungi, and algae. Oxo-biodegradation is recognized as a two-stage process. Oxo-biodegradable plastics do not simply disintegrate into smaller pieces of plastic that pollute the environment. Oxo-biodegradable plastics use a technology that is based on the well understood but slow reaction of conventional plastics with the oxygen in the air. The incorporation of Totally Degradable Plastic Additives (TDPA) accelerates this reaction in a very controlled way. This causes the products to physically disintegrate in an acceptable time period when they are exposed to air and sunlight or heat. The products of this degradation, which continues after physical changes to the film are seen, are not just small pieces of the original plastic but are chemically completely different. They are significantly oxidized, denser and hydrophilic. These degradation products are highly susceptible to biodegradation by microorganisms that are naturally present in the environment and their biodegradation has been demonstrated in independent peer-reviewed studies. This allows the return of the original plastic to the eco-cycle. Biodegradation occurs over a period of 1-3 years, comparable with most natural materials and completely satisfactory from an environmental viewpoint.
Plastic incorporating EPI additives fit into the natural biocycle.

I. COMPOSITION
Components Material CAS %
ETHYLENE -POLYPROPYLENE  30 to 45
POLYETHYLENE 9002-88-4  50 to 65
ADDITIVES <5

II. HAZARDS
IDENTIFICATION
SKIN: not hazardous
EYES: not hazardous
INHALATION: not a route of exposure
INGESTION: not a route of exposure
No components are hazardous
None of the components present in this material are listed by IARC, NTP, OSHA as a carcinogen.

III. FIRST AID MEASURES
INHALATION
No specific intervention is indicated as the compound is not likely to be hazardous by inhalation.
SKIN CONTACT
The compound is not likely to be hazardous by skin contact. The predominant gases produced during normal hot wire cutting and shrinking operations are low molecular weight hydrocarbons, carbon dioxide, carbon monoxide, water, and hydrocarbon oxidation products including organic acids, aldehydes, and alcohols. The amount of each is low. Nevertheless, local ventilation is recommended. At temperatures above 617°F fumes irritating to the eyes, nose, and throat may be produced.

EYE CONTACT
This product is an inert solid. If in eye, remove as one would any foreign object.

INGESTION
First aid is normally not required.

IV. EXPOSURE CONTROLS/PERSONAL PROTECTION
Engineering Controls
No special precaution during normal use of the product.
Use static controls.
Ventilation requirements: provide adequate ventilation or local exhaust to remove fumes when performing high-temperature processing such sealing or hotwire cutting.

PERSONAL PROTECTIVE EQUIPMENT:
SKIN PROTECTION: not required
EYE PROTECTION: not required
RESPIRATION PROTECTION: not normally required. If smoke or fumes are generated during processing, use adequate ventilation or wear appropriate approved respiratory protection (not normally required).

% Volatiles : Negligible
Solubility in Water : Negligible
Odor : None
Melting point : 212 – 280 °F
Specific gravity : 0.91

V. STABILITY AND REACTIVITY
Chemical Stability: stable.
Incompatibility with Other Materials: none reasonably foreseeable.
Decomposition temp: 617°F (325°C)
Hazardous gases or vapors can be released, during combustion, including carbon monoxide, hydrocarbon oxidation products, including, organic acids, aldehydes, alcohols.

VI. TOXICOLOGICAL INFORMATION
Negligible hazard at ambient temperature for inhalation, skin contact, eye contact and ingestion.

VII. ECOLOGICAL INFORMATION
AQUATIC TOXICITY:
No information is available. Toxicity is expected to be low, based on insolubility in water.

VIII. DISPOSAL CONSIDERATIONS
Waste Disposal
Options for disposal are recycling, incineration with energy recovery, and landfill. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.