SAFETY DATA SHEET (SDS)

CAST POLYPROPYLENE FILM – CPP FILM

SECTION I: PRODUCT IDENTIFICATION

Product Name: Cast Polypropylene film (CPP) – all grades (mono & coex)
CAS Number: 9003-07-0
Chemical Name: Polypropylene - homopoloymer
Polypropylene - ethylene propylene copolymer
Polypropylene - medium Impact copolymer
Polypropylene - terpolymer
Product Description: Odorless film, clear or translucent, treated or non-treated, single wound or folded or perforated films.
Applications: Flexible packaging, lamination, lidding, retort pouches, freezer to microwave applications, confectionary packaging, surface printing, decorative applications, tapes, labels, liners, industrial applications medical sterilization, autoclaving, cosmetic packaging, produce packaging (perforated films) and Peelable CPP’s.
In case of medical applications, Copol must be consulted along with the application details.

Emergency phone numbers: 800 668 2700 & 902 794 9685
8.00 AM – 6.00 PM Atlantic Daylight Time (ADT)
Facility address: Copol International Ltd.
69, Hartigan drive, North Sydney, Nova Scotia, Canada., B2A 3M4
Email: copol@copolinternational.com

Sep. 2016 (Rev.# 02)
SECTION II: HAZARDOUS INGREDIENTS

Hazardous product classification:

CPP films are not a dangerous product according to WHMIS 2015 and globally harmonized system (GHS).

Symbol: N/A

Label elements:

No label elements (Not a dangerous product).

Signal word:

No signal word (Not a dangerous product).

Hazard statement:

No hazard statement (Not a dangerous product).

Other hazards:

CPP films left on the ground is slippery.

Edges of films and rolls are sharp and may cause cuts/ wounds.

While processing the film electrostatic charges may build up – ensure proper grounding of the equipment.

If heated above 554°F (290°C) the product may form vapors or fumes, which may produce toxic fumes which may cause irritation in eye or respiratory tract.

Contact with hot molten material may cause severe burns.

SECTION III: COMPOSITION/ INFORMATION ON INGREDIENTS

Polypropylene – 95 % -100 % (CAS Number: 9003-07-0)

Additives – 0 – 5 %
Copol’s CPP may contain polypropylene of one or more types from the following list,

Polypropylene - Homopolymer
Polypropylene - Ethylene Propylene Copolymer
Polypropylene - Medium Impact Copolymer
Polypropylene - Terpolymer
CPP may also contain polypropylene based additives like slip, antiblock and antistat.

SECTION IV: FIRST AID – HEALTH PROTECTION

Inhalation: No hazard in normal use.
First aid is normally not required.

Ingestion: Choking hazard only.
Follow standard first aid techniques and seek medical attention.

Skin: No hazard in normal use.
First aid is normally not required.

Eyes: No hazard in normal use.
First aid is normally not required.

Special precautions: At temperatures above 554 °F (290 °C) some decomposition and polymeric breakdown occurs. As a result, fumes containing carbon monoxide (CO), carbon dioxide (CO₂), water vapor, and polymeric fumes (primarily paraffinic and olefinic hydrocarbons in the range of 8 to 20 carbon atoms) may be generated. Trace amounts of by-products related to additives or pigments in the film may also be present.

Ventilation: Local exhaust ventilation around the process (sealing or melting) equipment or work area may be required to keep minimal exposures to fumes.

SECTION V: FIRE FIGHTING MEASURES

Flashpoint: 554 °F (290 °C) Note: Decomposes over 554 °F

Autoignition temperature: Greater than 575 °F (301 °C)
Flammability limits: N/A

Fire-fighting: Use water to cool fire exposed surfaces.

Extinguishing media may be water, foam, carbon dioxide, and dry chemicals. Respiratory and eye protection is required for fire-fighting personnel.

General hazard: Solid material may burn at or above the flashpoint. If thermally decomposed flammable/toxic gases may be released. Toxic gases will form upon combustion.

Static discharge: Material can accumulate a static electric charge, which may cause an incendiary electrical discharge.

Hazardous combustion products: Carbon monoxide, carbon dioxide and other irritating gases.

SECTION VI: ACCIDENTAL RELEASE MEASURES

Land spill:

Recover spilled material in suitable containers for recycle or disposal where permitted. Disposal must be done in accordance with local applicable regulations.

Water spill:

Recover spilled material in suitable containers for recycle or disposal where permitted. Disposal must be done in accordance with local applicable regulations.

SECTION VII: HANDLING AND STORAGE

Edges of films and rolls are sharp and may cause cuts/wounds. Due care should be given while handling the material. Customers are advised to use appropriate equipment’s designed for the purpose as film roll handling.

During processing the films, static electrical charges may develop on the film, which may provide source of ignition to flammable vapors and gases or may give static shock to the operator. Avoid static buildup using proper grounding methods.
Storage:

CPP films should be stored in dry place out of direct sunlight at temperatures below 50 °C (122 °F), 50 % RH and protected from UV and nitrous oxide exposure. Improper storage conditions can initiate premature degradation of color, odor and physical properties.

Keep away from ignition sources.

Observe the general rules of industrial fire protection.

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SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure controls:

Exposure to CPP films does not possess any risks when used as it is, irrespective of the time of exposure.

Engineering controls:

Seal bars, hot wire cut-offs, or other devices used in processing the film may result in temperatures above 554°F (290°C). The resulting polymeric fumes are considered a health nuisance. Adequate ventilation of the work area should be provided; the ventilation should maintain the concentration of polymeric fumes below 5 milligrams per cubic meter and the carbon monoxide concentration below 50 p.p.m. of air.

Protection Measures:

During normal handling protective gloves and usual protective equipment are recommended. If overexposure to polymeric fumes by inhalation cannot be prevented by ventilation or other means, respirators may be required.

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SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Films, rolls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
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<tr>
<td>Color</td>
<td>Clear or transparent, translucent, pearl</td>
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<tr>
<td>Odour</td>
<td>Odourless</td>
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<tr>
<td>pH</td>
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<tr>
<td>Melting point</td>
<td>&gt; 200 ° F (93 °C)</td>
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<tr>
<td>Property</td>
<td>Value</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Freezing point</td>
<td>N/A</td>
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<tr>
<td>Boiling point</td>
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<tr>
<td>Flashpoint</td>
<td>554°F (290 °C)</td>
</tr>
<tr>
<td>Evaporation rate</td>
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<tr>
<td>Flammability limits</td>
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<td>Vapor pressure</td>
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<tr>
<td>Vapor density</td>
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<tr>
<td>Specific Gravity</td>
<td>0.88 – 0.92</td>
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<tr>
<td>Solubility in water</td>
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<tr>
<td>Partition co-eff.</td>
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<tr>
<td>Autoignition temperature</td>
<td>&gt; 575°F (301 °C)</td>
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<tr>
<td>Decomposes</td>
<td>554°F</td>
</tr>
<tr>
<td>Viscosity</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### SECTION X: STABILITY & REACTIVITY

**Stability & Reactivity:** In general CPP films are stable and inert when used under the prescribed temperatures and applications conditions as per FDA regulations.

**Possibility of hazardous reactions:** None when used as it is. May form harmful gases if burnt.

**Conditions to avoid:** Contact with strong oxidizers, open flame, prolonged heating over 554°F (290 °C) may cause thermal decomposition. Static build up may occur.

**Hazardous decomposition products:** May form carbon monoxide, carbon dioxide, olefinic or paraffinic hydrocarbons.

### SECTION XI: TOXICOLOGICAL INFORMATION

**Inhalation:**

CPP is non-toxic when used as it is, if burnt or melted may release toxic gases like CO, CO₂ etc. which may cause irritation if inhaled.
Oral:
Choking may happen.

Skin corrosion/irritation:
Nonirritant. Contact with hot molten material may cause severe burns.

Eye damage or irritation:
Nonirritant. Mechanical irritation is possible.

Germ cell mutagenicity:
Not classified. Not expected to be a germ cell mutant.

Carcinogenicity:
Not expected to be a carcinogen.

Reproductive toxicity:
Not classified. Not expected to cause reproductive toxicity.

STOT – single exposure & repeated exposure:
Not classified.

SECTION XII: ECOLOGICAL INFORMATION

Ecotoxicity:
CPP films usually float on water, as multiple layers or in some other forms it may submerge in water and may act as a physical barrier in both aquatic as well as terrestrial environments.

Degradability:
CPP may partially degrade due to long term radiation exposure (E.g.: Long term exposure to sunlight). In general, CPP is non bio-degradable and non-compostable.

Bioaccumulative Potential:
CPP is not expected to bioaccumulate.
When CPP is burnt it releases gases like CO, CO₂, H₂O etc.

**SECTION XIII: DISPOSAL CONSIDERATIONS**

Copol suggests maximum recycle of CPPs’ based on pre and post usage. CPP films may be disposed as landfills or incinerated in accordance with local official regulations. CPP landfills may act as physical, chemical and biological barriers.

**SECTION XIV: TRANSPORT INFORMATION**

- Electrostatic accumulation hazard: Use proper static dissipation techniques (i.e. Grounding)
- Transport temperature: < 50°C
- Transport pressure: N/A

CPP films are not considered as dangerous goods.

**SECTION XV: REGULATORY INFORMATION**

Our CPP films are approved under U.S. food & drug administration (FDA) & EU regulations.

- GHS: Not a dangerous substance.
- U.S. dot classification: Not regulated.
- WHMIS classification: Not a controlled product.
- Canadian T.D.G. description: Not a regulated product.

Country of Origin Canada

**SECTION XVI: OTHER INFORMATION**

Rev. # 2

Revision date – September 2016.

Copol’s SDS has been revised in accordance with WHIMIS- 2015 (GHS incorporated).
Additions:

Seven new sections have been added and the other sections are modified, rearranged or renamed and additional information is added to comply with WHMIS 2015 format.

Abbreviations and acronyms:

- CPP: Cast Poly Propylene
- Coex: Co-extruded
- GHS: Globally Harmonized System
- °C: Degree Celsius
- °F: Degree Fahrenheit
- P.P.M: Part Per Million
- N/A: Not Applicable or Not Available
- EU: European Union
- DOT: Department of Transportation
- EPA: Environmental Protection Agency
- TDG: Transportation of Dangerous Goods
- WHMIS: Workplace Hazardous Material Information System

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