



The Polyolefin Company (Singapore) Pte Ltd

Printed date & time:

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05/11/2008

MSDS Reference No.:

TPC052

Material Safety Data Sheet

1 Chemical product & company identification:

Product name:	COSMOTHENE ® LDPE
Chemical name:	Low Density Polyethylene
Chemical formula:	-----[--CH2 - CH2--]-----
Grade name:	F410-1
CAS No.:	9002-88-4
Manufacturer's name & address:	THE POLYOLEFIN COMPANY (S) PTE LTD Office: 150, Beach Road, #10-00 Gateway West. Singapore 189720 Plant: 400/401 Pulau Ayer Merbau Singapore 628285
Telephone number:	(65)-6292-9622 (Office)
Fax number:	(65)-6293-8890, (65)-6292-6595.

2 Composition/information on ingredients:

Major component name:	Polyethylene
Percent by volume or weight:	> 99%
Component name:	Additives
Percent by volume or weight:	<1%

3 Hazards identification:

Types of hazards:	
Corrosive:	No
Flammable:	It burns easily under fire.
Oxidising:	No
Toxic:	No
Explosive:	No

4 First-aid measures:

Inhalation:	If exposed to the thermal decomposition gas, remove the person from exposure to fresh air environment. If difficulty in breathing occurs, administer artificial respiration, followed by oxygen and seek medical attention immediately.
Contact:	
Eye:	If irritation develop, seek medical attention immediately.
Skin:	Pellet is inert and harmless. If irritation develop, seek medical attention immediately. If in contact with hot molten resin, do not peel off the hot molten resin from skin, but flush with plenty of water (min 15 minutes) to cool down the thermal burned skin quickly and then seek medical attention immediately.
Ingestion:	If illness or adverse symptoms develop, seek medical attention immediately.



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5 Fire fighting measures:

Types of fire fighting agents:	Water spray, foam, carbon dioxide, dry chemicals.
Precautions to be observed:	Dense smoke and hazardous gases (Carbon monoxide and Carbon dioxide) will be emitted when it is burned without sufficient oxygen. Resin when melted will spread on the floor which it will catch fire easily.
Protective clothing & breathing apparatus:	Wear appropriate safety equipment for fire conditions (including positive pressure self contained apparatus (SCBA) and protective fire-fighting garments).

6 Accidental release measures:

Personal protective equipment including breathing apparatus:	When handling molten resin, use thermal resistant gloves.
Steps to be taken:	Spilled pellet is a slipping hazard. Sweep up and discard. Keep out of water sources and sewers. In case of molten resin spillage, cool it down with water and then dispose accordingly.

7 Handling & storage:

Handling:	Wear appropriate personal protection equipment. Material is in solid form and is non-hazardous. No risk to the health of operators when handling at room temperature. During processing, avoid inhalation of the fumes and vapors.
Ventilation:	Workplace must be equipped with a good ventilation system and fume collector (if necessary).
Storage container:	Store away from heat or flames. Have good housekeeping to prevent dust accumulation. Avoid contact with hot aromatic, chlorinated solvents and other hot strong oxidants.
Conditions of storage:	Not relevant.

8 Exposure controls/personal protection:

Engineering controls:	Not relevant
Personal protective equipment:	
Eye protection:	Use safety glasses.
Respiratory protection:	Use dusk mask.
Skin protection:	Normal clothing. When handling hot molten resin, wear thermal resistant hand gloves.



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9 Physical & chemical properties:

Appearance:	Solid, opaque / translucent pellet
Odour:	Odourless
Boiling points:	Not applicable
Melting points: (°C)	105 ~ 113
Vapour pressure:	Not applicable
Specific gravity:	0.91 - 0.93
Solubility in water:	Not soluble
Other properties:	Soluble in hot aromatic or chlorinated solvents
Autoignition temperature: (°C)	Not applicable

10 Stability & reactivity:

Stability:	Stable
Thermal decomposition temperature: (°C)	> 300
Decomposition products:	Carbon monoxide and carbon dioxide may be generated.
Polymerization:	Will not occur
Incompatible materials:	Hot aromatic, chlorinated solvents and hot strong oxidants
SADT for organic peroxides where applicable:	Not applicable

11 Toxicological information:

Routes of entry:	Inhalation: Vapors produced are unlikely at room temperature (with reference to the physical properties). Dust may produce irritation to the mucous membrane of the nose, throat and upper respiratory tract. Skin contact: Essentially non-irritating but in contact with hot molten resin can cause severe burned. Ingestion: May cause choking if swallowed. Resin itself is inert and harmless. Ingestion must be avoided.
Acute effects:	No known applicable information
Chronic effects:	No known applicable information
Hazard ratings & permissible exposure level:	No known applicable information

12 Ecological information:

Mobility:	No known applicable information
Persistence & biodegradability:	No known applicable information
Bio-accumulative potential:	No known applicable information
Aquatic toxicity & data relating to ecotoxicity:	No known applicable information



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13 Disposal considerations:

Disposal methods:	Recover for reuse if possible. It may be buried on an authorized landfill site or be incinerated, however these disposal methods shall comply with the local authorities legislation.
Disposal containers:	Not relevant
Precautions during waste handling:	Not applicable

14 Transport information:

Type of packaging:	Standard 25 kg resin bag, 650 kg fle-con bag or sea bulk containers.
Labelling:	Not applicable
Placarding:	Not applicable
Special transport requirements:	Not applicable

15 Regulatory information:

Local regulations:	Under the Singapore Standard 286: Part 1: 1984, Classification and Class Labels for Hazardous Substances, Section 3.1, this product is NOT a "Hazardous Substance".
International regulations:	OSHA HAZARD COMMUNICATION STANDARD. This product is NOT a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

16 Other information:

Training advice:	Not required
Recommended uses & restrictions: (FDA information)	This material has such quality as products made from polyethylene will, as long as it is used unmodified and processed according to standard manufacturing practices in the industries, comply with the U.S. FDA Regulation 21 CFR 177.1520 (C) 2.1. Note : Direct food contact is subjected to the extraction provisions of the regulation on the finished food contact article.
RoHS Compliance:	The substance regulated by the EU Directive
EINECS number:	None
Written references and/or technical contact points:	Not applicable
Sources of key data used to compile the data sheet:	Not applicable



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Co. Reg. No.: 198001666D

COSMOTHENE® F410-1

CHARACTERISTICS

COSMOTHENE F410-1 has excellent transparency, good stiffness and processibility. It is formulated with medium level of slip and antiblocking agent.

APPLICATIONS

Transparent thin gauge bag, shopping bag, zipper bag and many others general purpose bag.

F410-1 complies with U.S. FDA Regulation 21 CFR 177.1520 (C) 2.1, as long as it is used unmodified and processed according to standard manufacturing practices in the industries.

Note : Direct food contact is subjected to the extraction provisions of the regulation on the finished food contact article.

PHYSICAL PROPERTIES

ITEM	UNIT	F410-1	TEST METHOD
Melt Flow Rate	g/10 mins	5	ASTM D1238
Density	g/cm ³	0.923	ASTM D792
Tensile Strength at break	MPa	13.7	ASTM D638
Elongation	%	550	ASTM D638
Stiffness	MPa	240	ASTM D747
Melting Point	°C	111	TPC METHOD

FILM PROPERTIES

ITEM	UNIT	F410-1	TEST METHOD
Haze	%	4.0	ASTM D1003
Gloss	%	120	ASTM D2457
Slip	Tan θ	0.14	TPC METHOD
Blocking	g/100cm ²	30	ASTM D3354
Thickness	μ	30	

PROCESSING CONDITIONS

Extruder : 50mm \emptyset L/D : 26, C.R : 3.4

Temperature (°C) :	C ₁	C ₂	C ₃	H	Die	Stock
	130	145	155	160	160	160

- The figures presented are typical laboratory averages, only for reference.
- The information is based on our current knowledge, is subjected to continuous updates and is intended to suggest/ recommend product applications and to provide typical data on the related properties. It should not therefore be construed as guaranteeing any specific property of the product. TPC makes no warranty of any kind, expressed or implied, regarding the accuracy of these data.



Jan 2011

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POLYPROPYLENE

COSMOTHENE®
LOW DENSITY POLYETHYLENE

COSMOTHENE® EVA
ETHYLENE VINYL
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