



BAZAN GROUP



Polyolefins Business Unit

**The source of quality
Raw Materials for the
Plastic Industry**

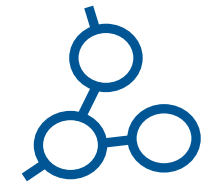
Oil Refineries Group



BAZAN

Fuels Business Unit

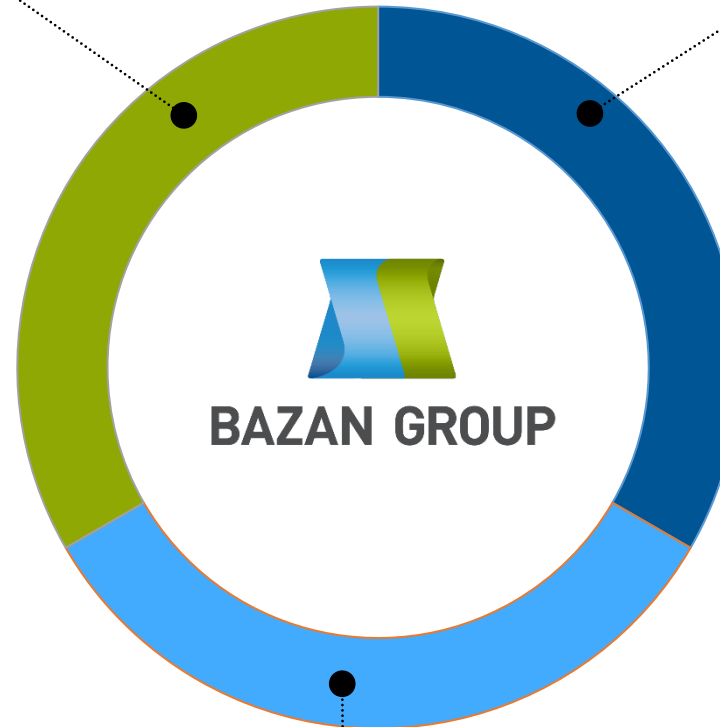
Exports typically between **30% - 40%** of its production



Carmel Olefins

Polyolefins Business Unit

Exports **about 50%** of its Polyethylene and Polypropylene



Gadiv

Aromatics

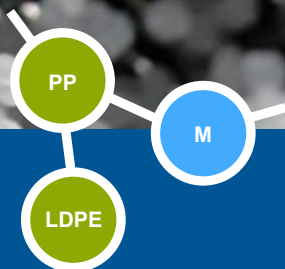
Part of the Aromatics & Base Oils Business Unit

Exports **about 95%** of its production

Introducing

Carmel Olefins Ltd.

is Israel's sole manufacturer of petrochemical products that are used as raw materials for the plastics industry



In 2010 Carmel was merged into the Oil Refineries Group (BAZAN Group) and became the Polyolefins Business Unit

Carmel manufactures commodity and special grades of Polypropylene (PP) as well as a broad range of Low Density Polyethylene (LDPE) grades



Approx. 450 permanent employees

Annual production capacity:

240kT Ethylene → 180kT LDPE

340kT Propylene → 400kT PP

Carmel's production and management center is in the Haifa Bay industrial zone, adjacent to the refinery



Ducor Petrochemicals

production site is located in the Netherlands

Annual production of 180kT polypropylene using a Novolen gas phase technology

Owned 100% by Carmel Olefins LTD.

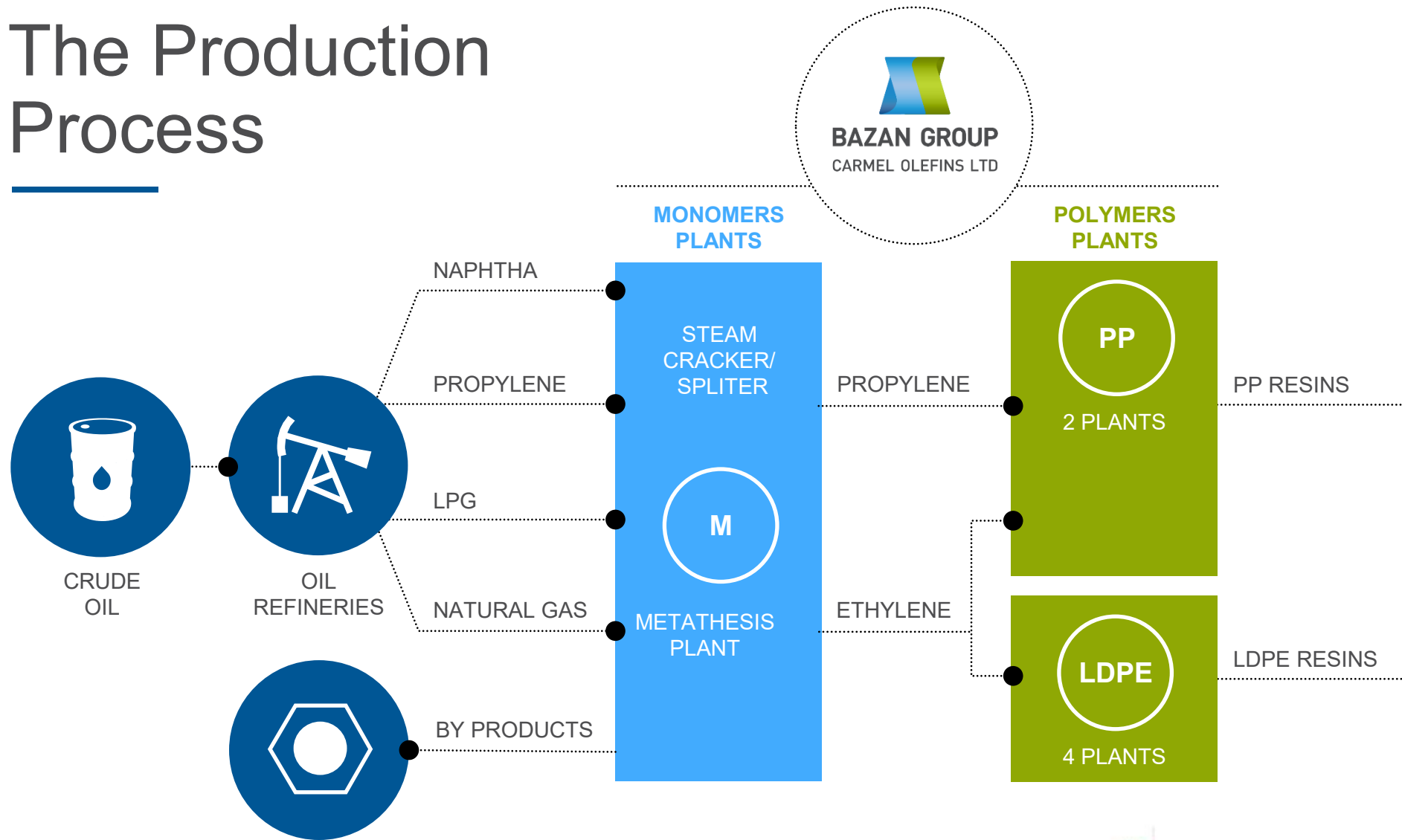
Carroll



The Production Process



The Production Process



THE PLASTIC INDUSTRY





LDPE

IPETHENE[®]

Low Density Polyethylene - LDPE

manufactures and sells

180 kT

manufactured in four lines consisting of high pressure autoclave reactors

PP

CAPILENE[®]

Polypropylene - PP

manufactures and sells

400 kT

The large range of **CAPILENE[®] PP products** are manufactured in two production lines based on Spheripol and Spherizone technology under license from Basell



Production Capability

PP

M

LDPE

M

MONOMERS

Carmel Olefins Ltd.

operates its own steam cracker that supplies

240 kT ethylene,

and

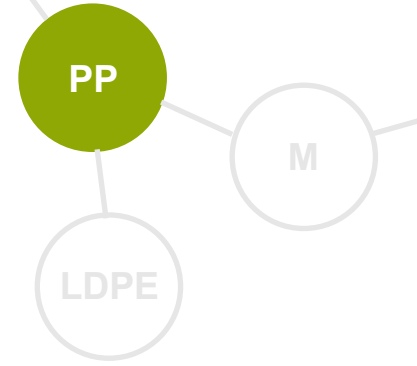
160 kT propylene;

The metathesis plant supplies

180 kT propylene.

Primary raw materials such as naphtha and liquefied petroleum gas are sourced via pipeline from the adjacent oil refinery **BAZAN**

Polypropylene (PP)



CAPILENE®

Carmel Olefins' registered trade name

For a versatile, high-performance polypropylene portfolio of Homopolymers, impact copolymers, random copolymers and specialty grades since 1993. The choice where reliability, performance, and processing efficiency are essential



CAPILENE® PP products

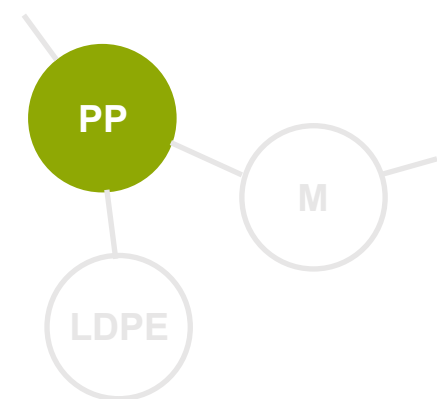
are environmentally friendly, approved for food contact and 100% recyclable

CAPILENE® reliable and superior performance meet the demanding requirements of modern manufacturing across various sectors: storage systems | toys | consumer goods | rigid packages | technical items | food packaging | fibers and textile | industrial products | hygiene and cosmetics | automotive | agriculture | and many other items



CAPILENE® Polypropylene

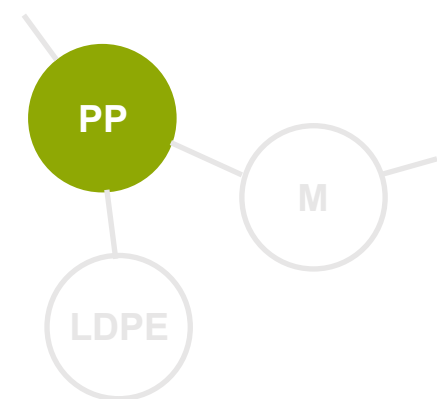
HOMOPOLYMERS



GRADE	MFR (230;2.16) ISO 1133 <g/10min>	FLEX. MODULUS ISO 178 <MPa>	IZOD IMPACT, notched @ 23°C ISO 180 <kJ/m²>
E 50 E	1.8	1400	4.0
E 78 E	1.8	1900	4.0
G 78 TF	3.0	1850	3.5
G 86 E	3.0	1600	3.5
M 45 F	8.0	1350	3.0
M 65 F	8.0	1350	3.0
R 50	12	1400	3.0
T 12 EV	26	1250	3.0
T 50	25	1400	2.5
T 77 A	25	2000	2.5
T 89 E	25	1450	2.5
U 12 EV	35	1250	2.5
U 77 A	35	1850	2.5
W 77 AV	55	1800	2.5
Y 50 V	120	1450	2.0

CAPILENE® Polypropylene

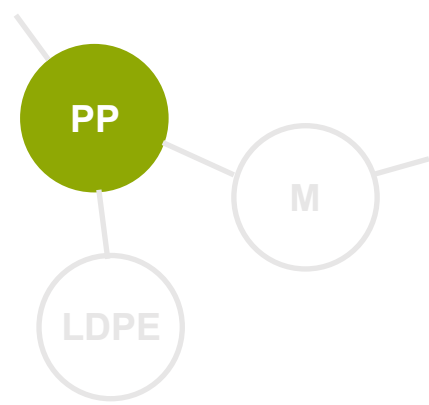
IMPACT COPOLYMERS



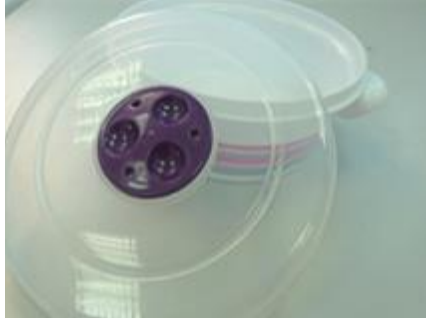
GRADE	MFR (230;2.16) ISO 1133 <g/10min>	FLEX. MODULUS ISO 178 <MPa>	IZOD IMPACT, notched @ 23°C ISO 180 <kJ/m²>
HB 56 E	0.3	1400	45
SE 50 E	1.3	1200	38
SG 50	3.5	1200	14
TG 50	3.5	1000	45
SL 50	6.0	1200	10
TL 75 A	7.0	1150	>50
SR 50	12	1150	10
TR 50	12	850	40
ST 75 A	25	1200	12
HT 75 A	25	1500	8.5
TT 75 AV	25	850	40
TU 75 AV	35	850	40
SU 75 AV	44	1150	9.0
SW 75 AV	65	1150	8.0
SY 75 AV	90	1150	6.5

CAPILENE® Polypropylene

RANDOM COPOLYMERS



GRADE	MFR (230;2.16) ISO 1133 <g/10min>	FLEX. MODULUS ISO 178 <MPa>	IZOD IMPACT, notched @ 23°C ISO 180 <kJ/m²>
QC 56 E	0.7	950	20
QE 71 E	1.5	1100	27
QM 45 F	9.5	900	4.0
QM 50 F	9.5	900	4.0
QT 80 A	25	1100	4.0
QU 80 A	35	1100	4.0
QW 80 AV	70	1100	4.0
QW 85 AV	70	1100	4.0



**High impact
resistance and
Good rigidity**

**Good
or
excellent
transparency**

**High
gloss**

**Stress
whitening
(blush)
resistance**

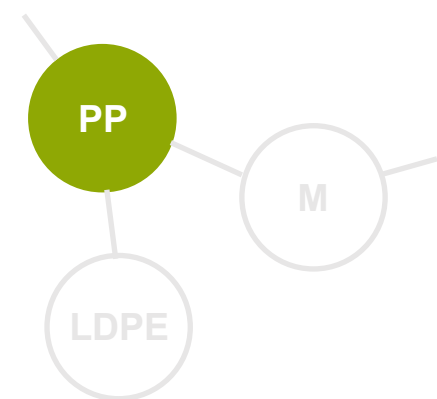
**Cold
impact
resistance**

**Good
processability**

C Grades special features

CAPILENE® Polypropylene

C- TYPES SPECIAL GRADES

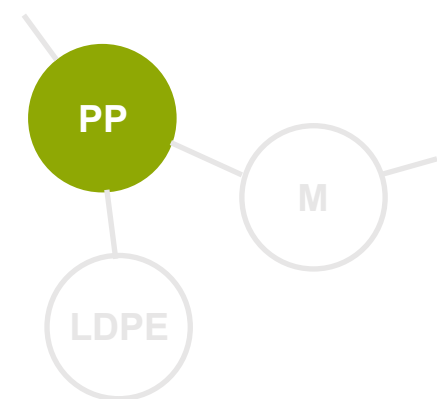


CAPILENE® C-Type High Transparency Special Polypropylene grades are specially developed to deliver outstanding optical clarity while maintaining balanced mechanical performance expected from premium polypropylene materials.

GRADE	MFR (230;2.16) ISO 1133 <g/10min>	FLEX. MODULUS ISO 178 <MPa>	IZOD IMPACT, notched @ 23°C ISO 180 <kJ/m²>	SUBZERO IMPACT RESISTANCE	TRANSPARENCY	APPLICATION
CE 71 E	1.8	850	55	✔✔✔	✔✔✔✔	Transparent and no blush impact copolymers for EBM, blown film, extrusion and thermoforming of items suitable for low temperature applications, sheet extrusion. Can be used as impact modifier, not compromising transparency.
CE 80 B	1.8	850	55			
CE 85 B	1.8	800	35			
CL 50 E	6	450	15	✔✔✔	✔✔✔✔	Soft and transparent impact copolymer suitable for EBM, cast or blown films and sheet extrusion. Can be used as impact modifier, not compromising transparency gloss and low blush.
CR 71 A	9	800	40	✔✔	✔✔✔	Transparent and no blush impact copolymers suitable for injection molding of tool boxes, organizers, storage boxes and cabinets. caps, closures, food containers, toys and appliances. Can be used as impact modifier, not compromising transparency.
CT 71 A	25	900	18			
CT 80 A	25	900	18	✔✔	✔✔✔✔	
CW 85 AV	55	950	8			
CU 78 AM	35	850	30	✔✔✔✔	✔✔✔	Transparent and no blush impact copolymers suitable for injection molding of thin wall parts for low temperature and freeze applications, like ice-cream containers. Can be used as impact modifier, not compromising transparency.
CT 12 EV	25	450	6	✔✔	✔✔✔	Soft polypropylene copolymer with narrow molecular weight distribution intended for spunbond nonwoven fabrics, featuring enhanced softness.

CAPILENE® Polypropylene

SPECIAL GRADES

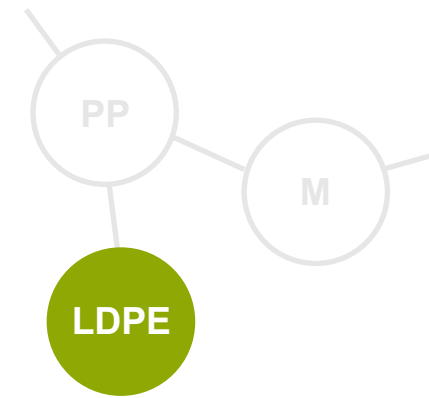


CAPILENE® MT34EC & MU32EC are specialty polypropylene grades designed for extrusion coating applications, delivering excellent coating uniformity, stable processing, and strong adhesion performance across a variety of substrates.

CAPILENE® QG71H & QL55H – Low SIT are specialty polypropylene random copolymers developed for applications requiring exceptionally low seal initiation temperatures (SIT), combined with excellent optical properties.

GRADE	MFR (230;2.16) ISO 1133 <g/10min>	FLEX. MODULUS ISO 178 <MPa>	IZOD IMPACT, notched @ 23°C ISO 180 <kJ/m²>	SUBZERO IMPACT RESISTANCE	TRANSPARENCY	APPLICATION
MT 34 EC	25	1000	3.0			Specialty polypropylene grades for extrusion coating and lamination of paper, paperboards, plastic films, woven and non-woven polypropylene based fabrics.
MU 32 EC	29	1100	3.0			
QG71H	3	750	28	Random	✓✓✓✓	New advanced low seaming temperature random PP. Capilene polypropylene resins provide enhanced composition for superior sealing designed to deliver high throughput and superb film quality. suitable for blown and cast film, thermoforming and metalized BOPP
QL55H	5	600	7	Random		

Polyethylene (LDPE)



IPETHENE®

Carmel Olefins' registered trade name for a versatile portfolio of LDPE grades combining excellent processability and optical performance.



IPETHENE® LDPE products are environmentally friendly, approved for food contact and 100% recyclable.

IPETHENE® combines excellent processability, and optics to meet the diverse requirements of various processing methods for the production of consumer goods | flexible packaging | food packaging | piping | foaming | hygiene and cosmetics | automotive | agriculture | compounding and hot melt adhesives | and many other items



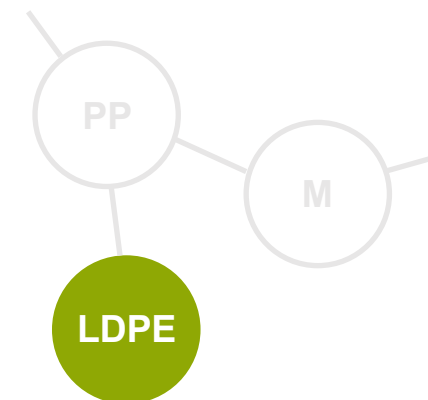
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IPETHENE® Low Density Polyethylene

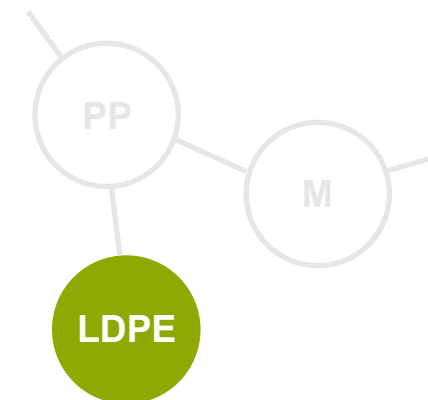
HEAVY DUTY APPLICATIONS

GRADE	MFR (190;2.16) ISO 1133 <g/10min>	DENSITY ISO 11183-A <g/cc>	ADDITIVES ISO 180 <kJ/m²>	APPLICATION
4140	0.13	0.920	-	Film Extrusion
4203	0.2	0.920	-	Film Extrusion Pipe Extrusion Blow Molding
100	0.3	0.920	-	Film Extrusion Pipe Extrusion Blow Molding
101	0.3	0.921	-	Film Extrusion Pipe Extrusion Blow Molding



IPETHENE® Low Density Polyethylene

CAST, BLOWN and FOAMING

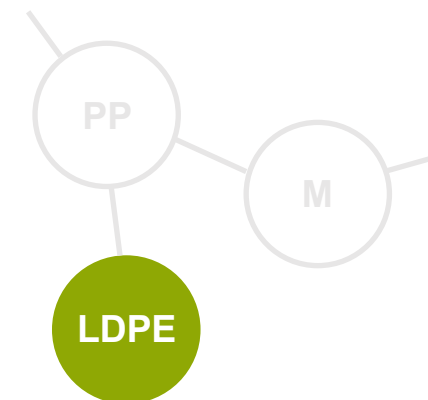


GRADE	MFR (190;2.16) ISO 1133 <g/10min>	DENSITY ISO 11183-A <g/cc>	ADDITIVES ISO 180 <kJ/m²>	APPLICATION
111	0.7	0.920	-	Film Extrusion Blow Molding
113	0.7	0.920	Medium Slip & Anti-Block	Film Extrusion
213	1	0.920	Medium Slip & Anti-Block	Film Extrusion
320	2	0.920	-	Film Extrusion Blow Molding Injection Molding Compounding
322	2	0.920	Medium Slip & Anti-Block	Film Extrusion
323	2	0.920	High Slip & Anti-Block	Film Extrusion

IPETHENE[®] Low Density Polyethylene

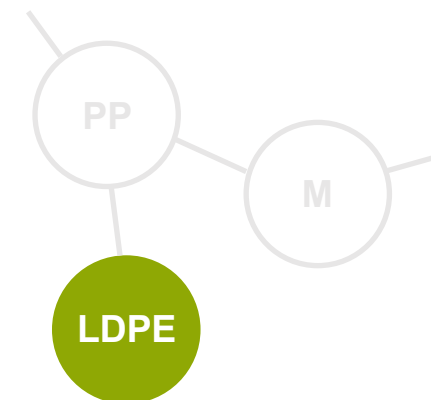
COATING APPLICATIONS

GRADE	MFR (190;2.16) ISO 1133 <g/10min>	DENSITY ISO 11183-A <g/cc>	ADDITIVES ISO 180 <kJ/m ² >	APPLICATION
470	4.5	0.917	-	Extrusion Coating Blow Molding Injection Molding Compounding
670	7.5	0.917	-	Extrusion Coating Injection Molding Compounding



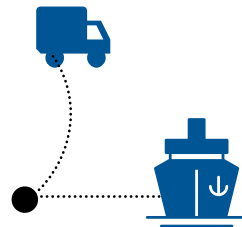
IPETHENE® Low Density Polyethylene

INJECTION MOLDING APPLICATIONS



GRADE	MFR (190;2.16) ISO 1133 <g/10min>	DENSITY ISO 11183-A <g/cc>	ADDITIVES ISO 180 <kJ/m²>	APPLICATION
600	6.5	0.917	-	Compounding
810	20	0.918	-	Compounding
830	20	0.921	-	Injection Molding
900	50	0.916	-	Compounding
970	70	0.914	-	Carpet Backing High filler compounds
1070	100	0.916	-	Carpet Backing High filler compounds Hot-melt adhesives
2050	200	0.915	-	Carpet Backing High filler compounds Hot-melt adhesives Thin-walled articles Coating

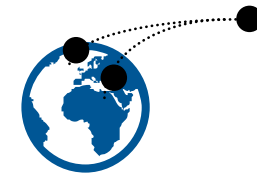
Product Availability



Carmel Olefins Ltd.
has a fully-integrated and highly flexible logistics network that ensures **optimal delivery from its manufacturing center in Haifa to customers throughout Israel and around the world**



Products can be supplied in: bags on pallets or sea bulk containers according to customers' preferences



Carmel Olefins Ltd. guarantees fast and reliable delivery abroad through our local warehousing in:

- Italy
- U.K.
- Netherlands



Carmel Olefins Ltd.

is committed to the highest standards

of quality in its manufacturing, products, logistics and technical services through a culture of continuous improvement and Quality Management approach.



Carmel Olefins Ltd.

meets all the relevant national and international statutory requirements..

The company is certified to:

ISO 9001:2015 standard for Quality Management

ISO 45001:2018 standard for Occupational Health & Safety

ISO 14001:2015 standard for Environmental Management

ISO 27001:2022 standard for Information Security Management.

ISO 50001:2018 standard for Energy Management

Our products
also meet various food
contact regulations:
**Israeli, EU, US FDA,
China, Japan and
MERCOSUR**

Aiming for Excellence



Strategic plan



Policy
adoption
ESG



Innovation in
biopolymers

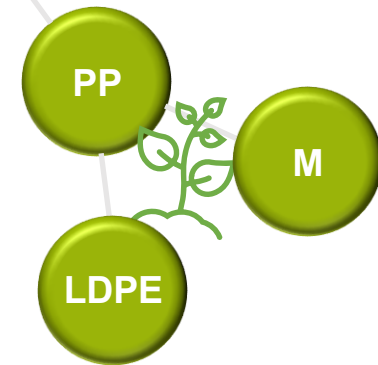


Growth in
plastic
recycling



Leading the
polymers
market in Israel

Introducing Carmel Olefins bio circular Capilene[®] PP and Ipethene[®] LDPE



**Carmel Olefins' Bio circular
Polypropylene and Low density
Polyethylene, ISCC PLUS certified (mass
balance approach) sourced from post
consumer used cooking oil**

Applies to ALL Carmel Olefins products
portfolio in any certified amount
Complies with all regulations as fossil
based, including DOOF CONTATC
Reduced carbon footprint
100% recyclable





RecyClass

RECYCLING PROCESS
CERTIFICATE

RecyClass

RECYCLING
PROCESS

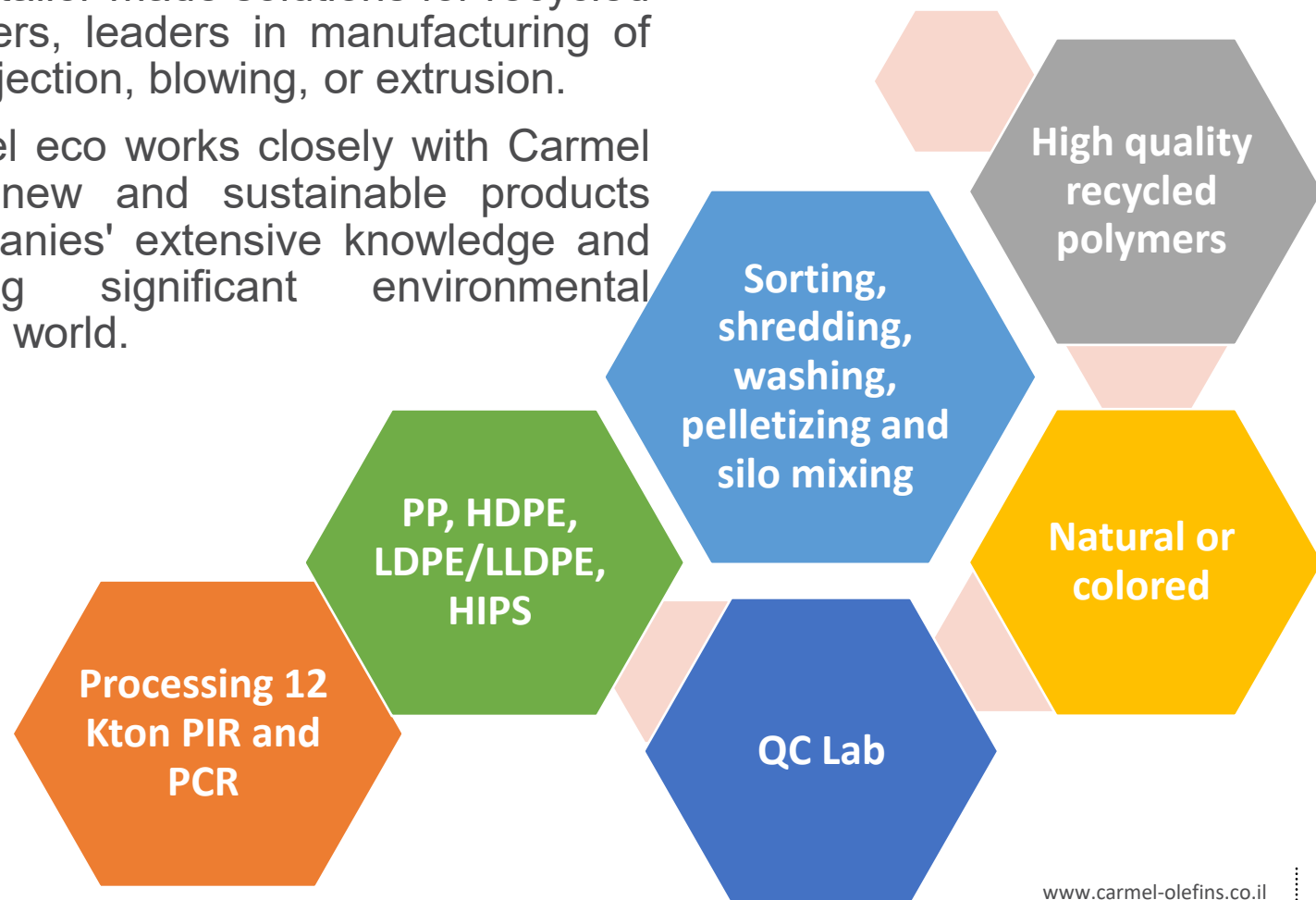
RecyClass

100%
RECYCLED
PLASTIC



Carmel Eco is Bazan group's mechanical recycling division that provides tailor-made solutions for recycled plastic to its customers, leaders in manufacturing of plastic products via injection, blowing, or extrusion.

Hand in hand, Carmel eco works closely with Carmel Olefins to develop new and sustainable products based on both companies' extensive knowledge and experience, tackling significant environmental challenges across the world.



DUPURE®

Ducor petrochemicals polypropylene
non pelletized resins

DuPure® is
Ducor Petrochemical brand name for a
range of non-pelletized polypropylene resins



DuPure® products

are manufactured with Novolen gas phase
technology in various standardized and
customized grades, non-toxic and 100%
recyclable

DuPure® is used in the production of
packaging | textiles | housewares | foaming |
electrical appliances | automotive | and many other
items

DU CARE®

Ducor petrochemiclas polypropylene
medical grades

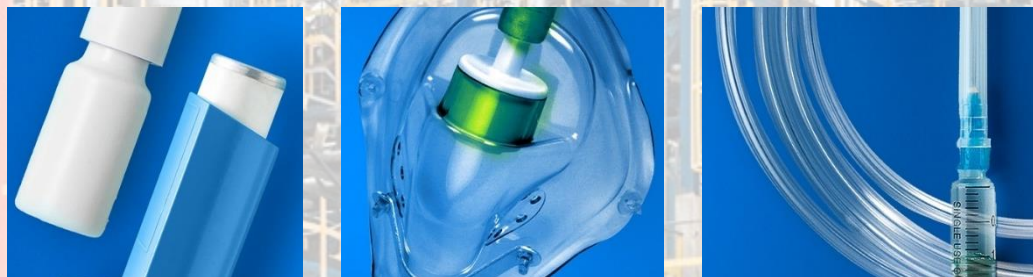
DuCare® is
Ducor Petrochemical brand name for a
range of polypropylene resins for life science
applications and medical markets



DuCare® products

are manufactured with Novolen gas phase
technology in various standardized and
customized grades, non-toxic and 100%
recyclable

DuCare® is ideal for the production of PCR
tips, pipette tips and medical packaging, among
others products.





BAZAN GROUP
CARMEL OLEFINS LTD

THANK YOU!