



BAZAN GROUP
CARMEL OLEFINS LTD

Polyolefins Business Unit

The source of quality
Raw Materials for the
Plastic Industry

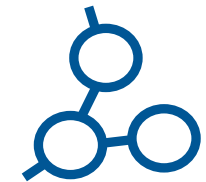
Oil Refineries Group



BAZAN

Fuels Business Unit

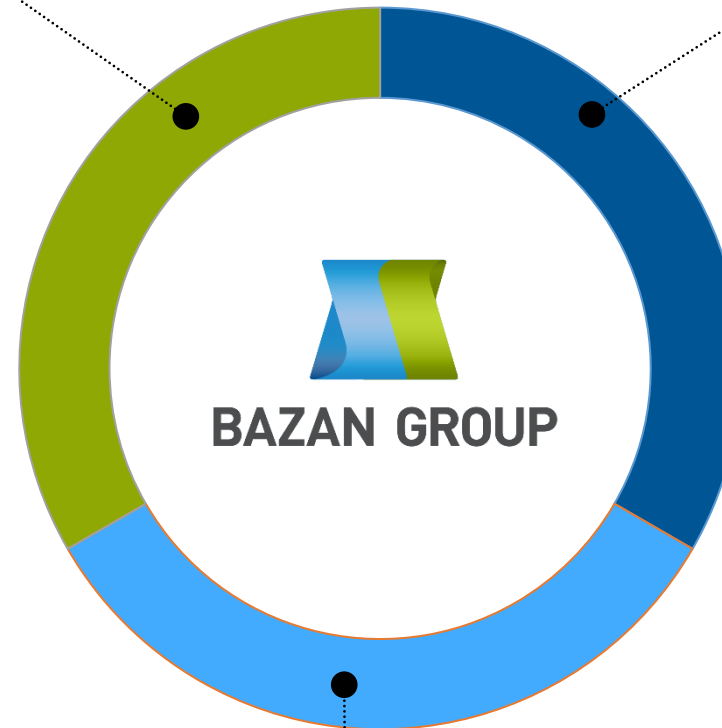
Exports typically between **30% - 40%** of its production



Carmel Olefins

Polyolefins Business Unit

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



Gadiv

Aromatics

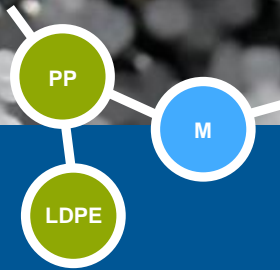
Part of the Aromatics & Base Oils Business Unit

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



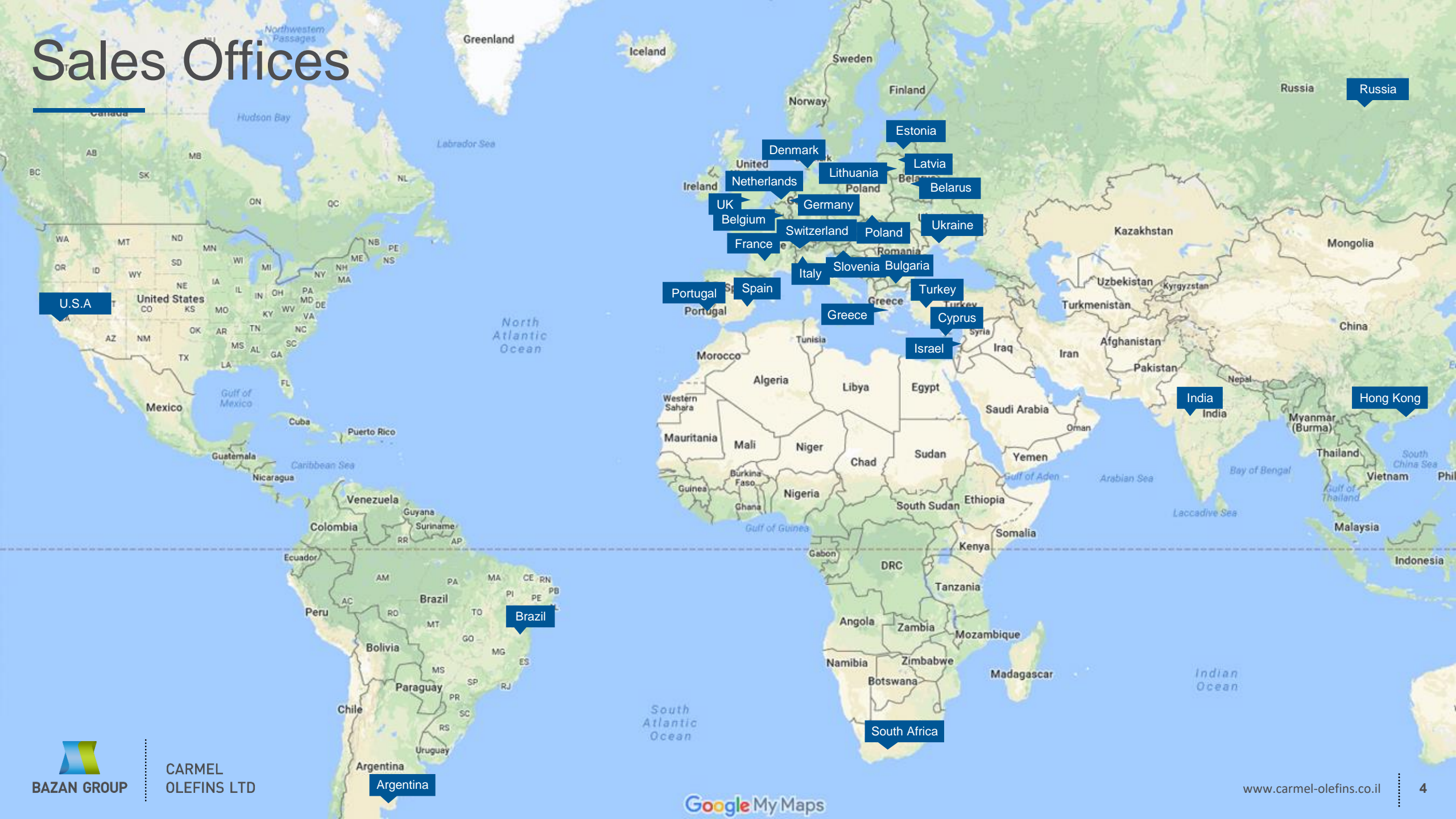
Ducor Petrochemicals

production site is located in the Netherlands

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

Owned 100% by Carmel Olefins LTD.

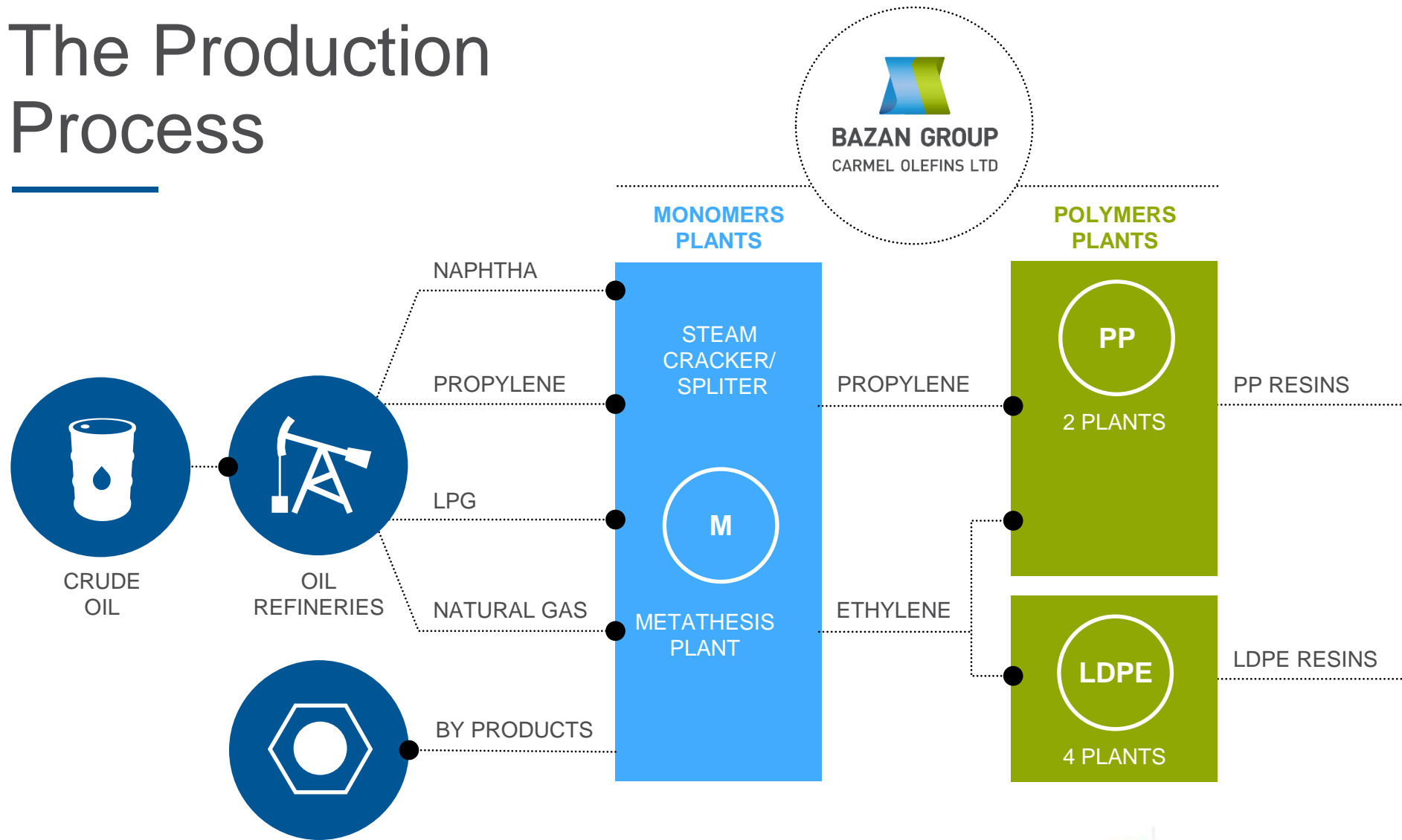
Sales Offices



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

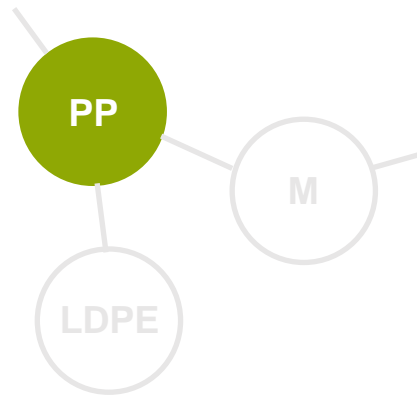
160 kT propylene;

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® is
Carmel Olefins' registered trade name
for a highly versatile range of PP Homopolymers,
impact copolymers, random copolymers and
specialty grades since 1993



CAPILENE® PP products
are environmentally friendly,
food contact and 100% recyclable

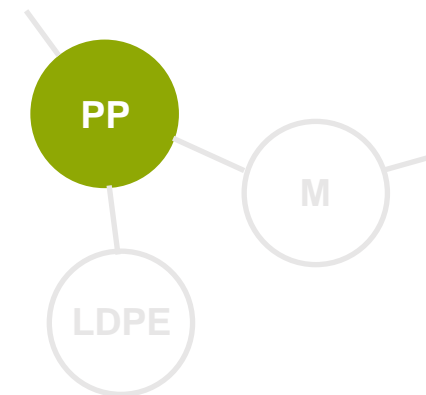
CAPILENE® is used in the production of
storage systems | toys | consumer goods | **tough**
packages | technical items | food packaging | fibers
and textile | industrial products | hygiene and
cosmetics | automotive | agriculture | and many
other items



GRADE	MFR (230;2.16)	FLEX. MODULUS	IZOD IMPACT, notched @ 23°C
	ISO 1133 <g/10min>	ISO 178 <MPa>	ISO 180 <kJ/m²>
HOMOPOLYMERS			
E 50 E	1.8	1400	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
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 77 A	35	1850	2.5
W 77 AV	55	1800	2.5
Y 50 V	120	1450	2.0

IMPACT COPOLYMERS			
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
SR 50	12	1150	10
TR 50	12	850	40
ST 75 A	25	1200	12
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

RANDOM COPOLYMERS			
QC 56 E	0.7	950	20
QE 71 E	1.5	1100	27
QM 45 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

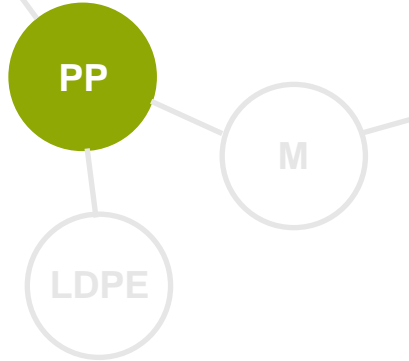


CAPILENE®

Polypropylene

SPECIALTY PRODUCTS

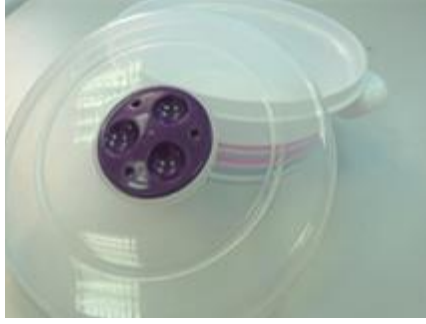
GRADE	MFR (230/ 2.16) ISO 1133 <g/10min>	FLEX. MODULUS ISO 178 <MPa>	IZOD IMPACT, notched @23°C ISO 180 <kJ/m²>	SUBZERO IMPACT RESISTANCE	TRANSPA- RENCY	APPLICATION
MT 34 EC	25	1000	3.0			Specialty polypropylene grades for extrusion coating and lamination of paper, paperboards, plastic films, woven and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



CAPILENE® Polypropylene



Poor
 Mediocre
 Good
 Excellent



**High impact
resistance and
Good rigidity**

**Good
or
excellent
transparency**

**High
gloss**

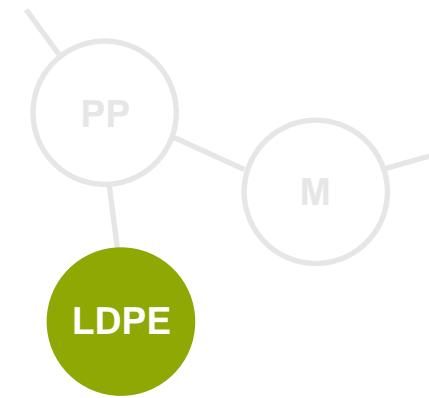
**Stress
whitening
(blush)
resistance**

**Cold
impact
resistance**

**Good
processability**

C Grades special features

Polyethylene (LDPE)



IPETHENE® is
Carmel Olefins' registered trade name
for a large variety of LDPE grades.

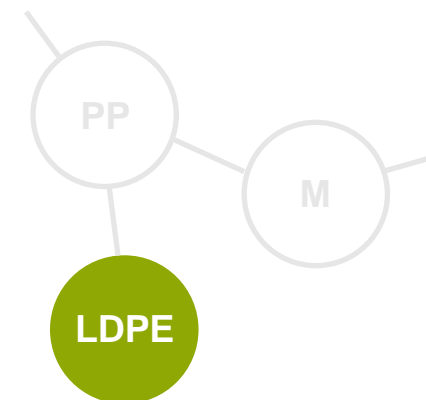


IPETHENE® LDPE products
are environmentally friendly,
food contact and 100% recyclable

IPETHENE® is used in 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



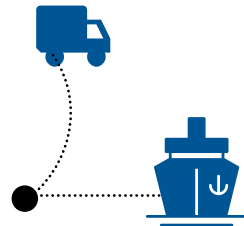
GRADE	MFR (190;2.16) ISO 1133 <g/10min>	DENSITY ISO 11183-A <g/cc>	ADDITIVES	APPLICATION
4140	0.13	0.920		Film Extrusion
4203	0.2	0.920	-	Film Extrusion Pipe Extrusion Blow Molding
100	0.3	0.920	-	Film Extrusion Pipe Extrusion Blow Molding
101	0.3	0.921	-	Film Extrusion Pipe Extrusion Blow Molding
111	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
470	4.5	0.917	-	Extrusion Coating Blow Molding Injection Molding Compounding
600	6.5	0.917	-	Injection Molding Compounding
670	7.5	0.917	-	Extrusion Coating Injection Molding Compounding
810	20	0.918	-	Injection Molding Compounding
830	20	0.921	-	Injection Molding
900	50	0.916	-	Injection Molding Compounding
970	70	0.914	-	Carpet Backing Injection Molding High filler compounds
1070	100	0.916	-	Carpet Backing Injection Molding High filler compounds Hot-melt adhesives



IPETHENE[®]

Low Density Polyethylene

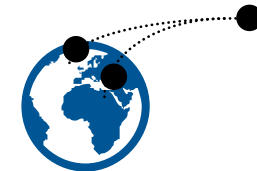
Product Availability



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 27001:2013** standard for Information Security Management.
- ISO 50001:2018** standard for Energy Management

Our products
also meet
**Israeli,
European (EU)
and US (FDA)
food contact
standards**

Aiming for Excellence



Strategic plan



Policy
adoption
ESG



Innovation in
biopolymers

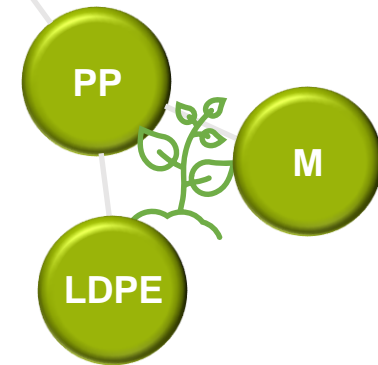


Growth in
plastic
recycling



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

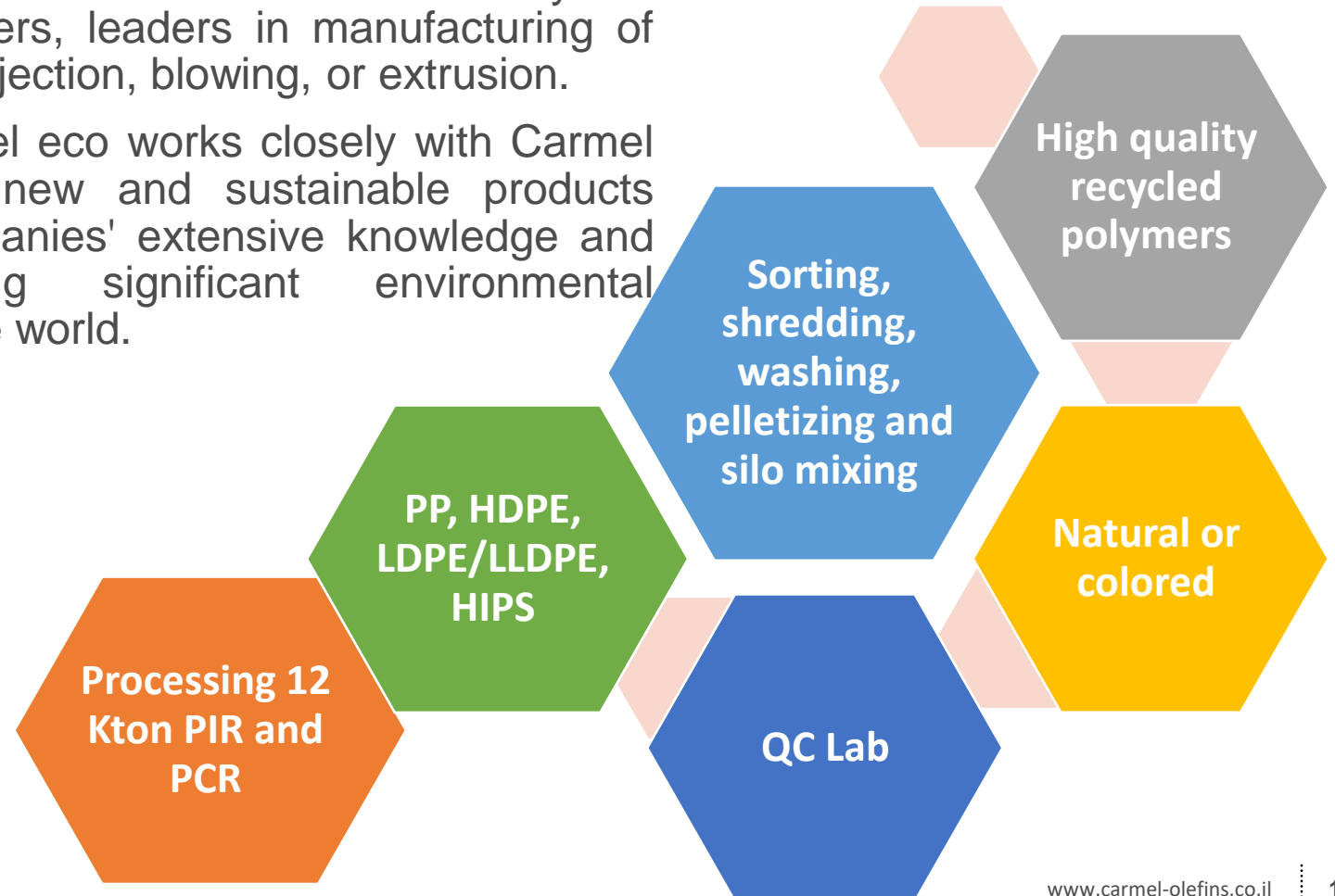
RecyClass

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 petrochemicals polypropylene
medical grades

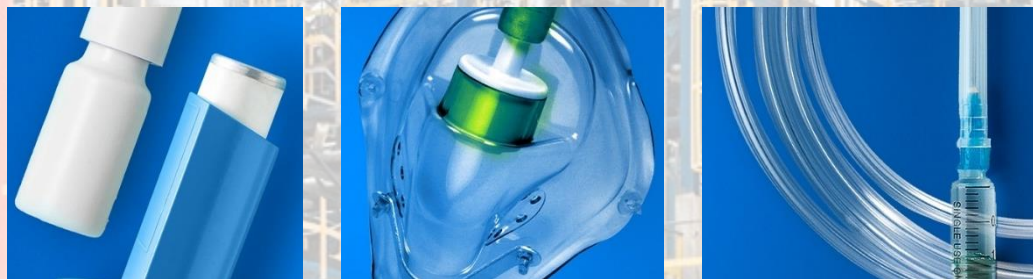
DuCare® is
Ducor Petrochemical brand name for a
range of polypropylene resins for life science
applications and medical markets



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!