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# ANTICIPATE

CREATE

11 We strive to be a reliable source of state-of-the-art polypropylene and low-density polyethylene, by making the difference via a strong focus on customer satisfaction.

LET'S DISCUSS YOUR PROJECT

Sometimes a simple face-to-face conversation is all it takes to spark ideas. We'd love to hear about your needs and see how we can make your product a reality. It's one of the many ways Ducor Petrochemicals takes time to focus on the customer experience.

# WE ASSIST IN CO-CREATION

We're here to help you make efficient and cost-effective choices. With our technical know-how integrated across R&D and sales departments, Ducor is able and committed to delivering high-quality solutions.

KAKAKA CA INNOVATE

# **INNOVATION OUT** IN THE MARKETPLACE **IS WHAT COUNTS**

At Ducor Petrochemicals, we believe in working with our customers to the last details. We know that quality products make the difference and that innovation only pays off when it's on the shelf.



# UNLOCKING TOMORROW'S POSSIBILITIES: EMBRACE THE FUTURE OF PRODUCT CREATION WITH DUCOR PETROCHEMICALS

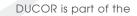
Dear Customer,

In this era of boundless possibilities, the horizon of innovation stretches further than ever before. We at Ducor Petrochemicals are fully focused on sustainability. We stand at the crossroads of technology and imagination, and we invite you to embark on a journey of limitless innovation with us.

Our relentless pursuit of innovation has led us to expand our Research and Development (R&D) frontiers, enhancing our technical prowess to empower you with unparalleled insights for crafting breakthrough products. From our production facility in Rozenburg, the Netherlands, we produce up to 185,000 metric tons of high quality and advanced polypropylene per year.

Together with the Bazan Group, we have carved an enduring niche in the landscape of polypropylene and low-density polyethylene markets, nurturing a sustainable legacy that speaks volumes about our vision for the future. Our success is a harmonious symphony of collaboration, fueled by our passion to co-create products to contribute to your innovation targets.







Ducor Petrochemicals aspires to be more than a choice; we aspire to be your ultimate preference amongst polypropylene producers. This aspiration rests on a foundation of understanding – your needs, your goals and ultimately, the consumer's desires. Through the process of Co-Creation, we anticipate your requirements and the value chain, assist in making efficient choices, with the view to creating added value. With our technological know-how, we can make recommendations that can improve the efficiency of your production process and assist you in becoming more sustainable.

As Ducor Petrochemicals, we are honored to extend an invitation to you. Let's script the future together, where innovation knows no bounds, and product creation is an artistry of collaboration. Your next pioneering creation deserves nothing less than the prowess and passion that Ducor Petrochemicals stands for.

The dawn of innovation is here. Embrace it with Ducor Petrochemicals.

Seizing Tomorrow Together,

Team Ducor Petrochemicals

# Homopolymers DuPure Polypropylene

### **FEATURES**

- DuPure and DuClear products are produced with a phthalate-free catalyst system.
- Discover Ducor's newly developed reactor grades.
- DuPure and DuClear products exhibit improved organoleptic properties.

### **ABBREVIATIONS**

TERM

### **EXPLANATION**

Ν	Nucleated	Speeds up
С	Clarified	Speeds up
AS	Anti-electrostatic	Prevents
IM	Injection moulding	Manufac
CF	Continious filaments	Continuo
BCF	Bulked continuous filaments	Bulk conti
AGF	Anti Gas Fading	Prevents
CR	Controlled rheology	Narrower

	Test Method	DuPure E50	DuPure G86E	DuPure G72TF	DuPure G72	DuPure G87E	DuPure L50	DuPure L50E	DuPure M10257	DuPure R50	DuPure R87E	DuPure R76	DuPure T76	DuPure T50	DuPure T88E	DuPure U76A	DuPure U76AV	DuPure U76	DuPure W76	DuPure Y76	DuClear U73A	DuClear Y73A
Melt Flow Rate - 230 °C/2.16 kg	ISO 1133	2.1	3.0	3.1	3.1	4.0	6.0	7.5	8.0	12	12	12	23	25	25	48	48	48	75	100	48	100
Tensile Modulus - 1 mm/min	ISO 527-2	1450	1500	1850	2050	1700	1500	1500	1800	1550	1550	2000	2000	1500	1500	2000	2000	2000	2000	2000	1900	1950
Charpy Impact Strength, notched - 23 °C	ISO 179/1eA	5.0	4.0	4.5	4.0	4.4	3.5	3.5	1.7	3.0	3.0	3.3	3.0	3.0	2.5	3.0	3.0	2.7	2.1	2.0	2.0	2.0
Vicat Softening Temperature - 10 N	ISO 306	154	154	156	158	154	154	154	154	154	154	158	157	154	154	157	157	157	157	157	155	155
Heat Deflection Temperature - 0.45 MPa	ISO 75-2	85	85	100	115	102	85	85	85	85	85	110	105	85	85	105	105	105	105	105	100	100
Haze - 1 mm	ASTM D1003	60	60	20-25	30	60	60	60	60	60	60	70	70	60	60	65	65	70	70	70	11	14
Additivation				N, C, AS	N, C, AS	AGF					AGF	N	N		AGF	N, AS	CR, N, AS	N	N	N	C, AS	C, AS
Application		Extrusion, IM	Thermo- formed parts, tape yarns, mono- filaments, strapping	Thermo- formed packaging	Thermo- formed packaging	High- tenacity fibres, tape yarns, mono- filaments, strapping	IM caps & closures	Cast films, OPP films, thermo- formed parts, tape yarns	Cast films, OPP films with improved stiffness and barrier properties	IM	Staple fibres, CF- yarns, high- resilience BCF	IM furniture caps & closures	Furniture, thin-walled packaging and houseware	IM	CF, BCF, fine denier staple fibres	Thin-walled packaging	Thin-walled packaging	Thin-walled packaging	IM, thin- walled packaging, compoun- ding	IM, Thin- walled packaging, compoun- ding	IM, thin-walled packaging with high transpa- rency	IM, thin-walled





- up crystallization/solidification
- up crystallization/solidification and enhances transparency
- static charge build-up on surfaces
- cturing process for end-products
- ous filament yarns
- tinuous filament yarns
- discolouration by NOx gases
- er Molecular Weight Distribution



# **Block Copolymers** DuPure Polypropylene

## **FEATURES**

- DuPure products are produced with a phthalate-free catalyst system.
- Discover Ducor's new developed reactor grades.
- DuPure products exhibit improved organoleptic properties.
- DuPure Block Copolymer range offers improved impact/stiffness balance.
- Discover Ducor's new developed PPC high speed thin-walled injection moulding grades containing nucleation additives allowing fast cycle times and high demoulding temperatures.

### **ABBREVIATIONS**

TERM

### **EXPLANATION**

N	Nucleated	Speeds u
AS	Anti-electrostatic	Prevents
IM	Injection moulding	Manufac
NB	No Break	No brea
CR	Controlled rheology	Narrowe
Ρ	Partial Break	Partial bi

	Test Method	DuPure TE76	DuPure SH50	DuPure SL50	DuPure SM76A	DuPure TM76	DuPure SR76	DuPure SR79	DuPure TR76V	DuPure TT79V	DuPure ST77A	DuPure SU76A	DuPure SU77AV	DuPure TU76V	DuPure SW76AV	DuPure SY77AV
Melt Flow Rate - 230 °C/2.16 kg	ISO 1133	2.0	4.2	6.0	7.5	7.5	15	15	15	25	30	48	48	48	75	100
Tensile Modulus - 1 mm/min	ISO 527-2	1100	1200	1250	1400	1150	1400	1500	1000	1060	1500	1400	1500	950	1350	1450
Charpy Impact Strength, unnotched 23 °C	ISO 179/1eU	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
0 °C	ISO 179/1eU	NB	140	160	120	NB	100	100	NB	190		100		NB	95	
- 20 °C	ISO 179/1eU	NB	80	110	90	NB	50	50	190	160		75		150	71	
- 30 °C	ISO 179/1eU	NB	70	95	80	170	45	45	140			65		125	60	
Charpy Impact Strength, notched 23 °C	ISO 179/1eA	60P	10.5	7.5	9	45P	6	6	43P	17	8.1	6.5	6.5	20P	6.0	5.5
0°C	ISO 179/1eA	12	5.5	4	4	9	3	3	9	8		4.0		9	4.0	
- 20 °C	ISO 179/1eA	8	4	3	3.5	7	2.5	2.5	7	6	3.5	3.2	3.1	4.5	3.0	2.5
- 30 °C	ISO 179/1eA	7	2.5	2.5	2.5	6	2	2	6.5			3.0		4	2.6	
Vicat Softening Temperature - 10 N	ISO 306	148	150	151	151	144	151	150	142	145	152	151	152	142	151	151
Heat Deflection Temperature - 0.45 MPa	ISO 75-2	80	75	77	90	80	90	95	78	85	97	90	97	78	90	97
Additivation		N			N, AS	N	Ν	N	CR, N	CR, N	N, AS	N, AS	CR, N, AS	CR, N	CR, N, AS	CR, N, AS
Application		Crates & containers	Crates, containers & closures	IM	Cylindrical containers	Crates & containers, luggage, housewares	Housewares, cylindrical containers and crates, furniture	Housewares, cylindrical containers and crates, furniture	Thin-walled packaging, buckets, housewares	Thin-walled packaging, buckets, housewares	IM, packaging, crates, containers	IM, packaging	Thin-walled packaging, housewares	Thin-walled packaging, housewares	IM, packaging	Thin-walled packaging, housewares





- up crystallization/solidification process
- ts static charge build-up on surfaces
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- ak in impact tests
- er Molecular Weight Distribution
- oreak in impact test



# Random Copolymers DuClear Polypropylene

## **FEATURES**

- DuClear and DuPure products are produced with a phthalate-free catalyst system.
- Discover Ducor's new developed reactor grades.
- DuClear and DuPure products exhibit improved organoleptic properties.

### **ABBREVIATIONS**

TERM

Ν	Nucleated	Speeds u
С	Clarified	Speeds u
AS	Anti-electrostatic	Prevents
CR	Controlled rheology	Narrowe

	Test Method	DuClear QG85A	DuPure QR50	DuPure QR76AV	DuClear QR85A	DuClear QT85A	DuClear QU85A	DuClear QU73A	DuPure QW76AV	DuClear QW85AV	DuClear QY85AV
Melt Flow Rate - 230 °C/2.16 kg (g/10min)	ISO 1133	5	11	11	11	25	40	48	75	80	100
Tensile Modulus - 1 mm/min (MPa)	ISO 527-2	1450	1000	1400	1100	1100	1100	1675	1450	1100	1100
Charpy Impact Strength, notched - 23 °C (kJ/m²)	ISO 179/1eA	5.7	6.0	4.0	5.5	5.5	5.0	4.1	3.5	4.5	4.2
Vicat Softening Temperature - 10 N (°C)	ISO 306	143	130	145	130	130	130	148	145	130	130
Heat Deflection Temperature	100 75 0		70						25		75
- 0.45 MPa (°C)	ISO 75-2	96	70	85	75	75	75	90	85	75	75
Haze - 1 mm (%)	ASTM D1003	11	50	41	8	8	8	13	50	8	8
Additivation		C, AS		CR, N, AS	C, AS	C, AS	C, AS	C, AS	CR, N, AS	CR, C, AS	CR, C, AS
Application		Thermoforming, high- transparency food packaging, ready meal trays, drinking cups	Injection moulding, caps & closures, compounding, cast film with broad sealing range, lamination films	Injection (stretch blow) moulding, bottles, houseware, caps-& closures	C, AS Injection (stretch blow) moulding high-transparency houseware, caps & closures, packaging	High-transparency thin-walled packaging, food containers, boxes & houseware	C, AS High-speed injection moulding, high transparency thin- walled packaging, containers and houseware	High-speed injection moulding, high transparency thin- walled packaging, containers and houseware			





### **EXPLANATION**

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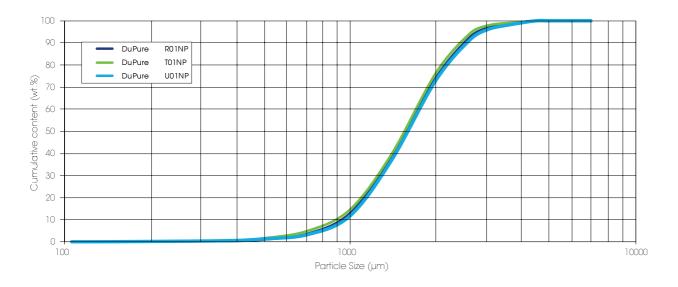
# Non-Pelletized Resins Polypropylene DuPure Polypropylene

## FOR USE IN COMPOUNDING & MASTERBATCHES

Non-pelletized polypropylene resins are supplied in the form of unstabilized free flowing powder. The spherical shape and narrow particle size distribution (with low fines content) makes these non-pelletized resins very suitable for mixing with (liquid-)additives, fillers, and colour pigments/ concentrates in compounding or masterbatch production.

	Test Method	DuPure G01NP	DuPure R01NP	DuPure T01NP	DuPure U01NP
Melt Flow Rate - 230 °C/2.16 kg (g/10min)	ISO 1133	3.5	13	25	50
Tensile Modulus 1 mm/min (MPa)	ISO 527-2	1600	1600	1600	1600
Melting Point DSC (°C)	ISO 3146	163	163	163	163
Density (g/cm³)	ISO 1183	0.91	0.91	0.91	0.91
Additivation		-	-	-	-
Application		Compounding, masterbatches	Compounding, masterbatches	Compounding, masterbatches	Compounding, masterbatches

### NON-PELLETIZED RESIN PARTICULE SIZE DISTRIBUTION





DuMore Polypropylene are PP compounds containing 50% (washed & colour-sorted) post-consumer PP regrind, making a significant impact on reducing your carbon footprint. Through the blend of recycled and prime material, you will be able to continue to innovate, without compromising on quality or performance. Through the process of Co-Creation, Ducor is able to create grades that meet the requirements of the end-user to facilitate more sustainable product development. For your own Co-Creation project, please contact us to discuss your requirements.

	Test Method	DuMore TR76-50	DuMore SU77A-50
Melt Flow Rate - 230 °C/2.16 kg (g/10min)	ISO 1133	12	50
Tensile Modulus 1 mm/min (MPa)	ISO 527-2	1150	1400
Charpy Impact Strength, notched - 23 °C (kJ/m²)	ISO 179/1eA	15	7.5
Charpy Impact Strength, notched - 20 °C (kJ/m²)	ISO 179/1eA	3.5	3
Vicat Softening Temperature - 10 N (°C)	ISO 306	144	150
Heat Deflection Temperature - 0.45 MPa (°C)	ISO 75-2	80	90
Application		IM, houseware, crates, containers, boxes	IM, houseware, crates, containers, boxes, buckets

### **ABBREVIATIONS**

	TERM	EXPLANATIC
IM	Injection moulding	Manufacturin







### ON

ng process for end products



# Specialties Polypropylene Capilene

## IMPACT MODIFIERS / TRANSPARENT IMPACT BLOCK COPOLYMERS,

## EXTRUSION COATING AND LOW-EMISSION GRADES

	Test Method	Capilene CE71E	Capilene CE85B	Capilene CL50E	Capilene CR71A	Capilene CR11EV	Capilene CT12EV	Capilene CT71A	Capilene CT80A	Capilene CU78AM	Capilene CW85AV
Melt Flow Rate - 230 °C/2.16 kg (g/10min)	ISO 1133	1.8	1.8	6	9	12	25	25	25	35	55
Flexural Modulus - 5 mm/min (MPa)	ISO 178	850	800	450	800	500	450	900	900	850	950
IZOD Impact Strength, notched - 23 °C (kJ/m²)	ISO 180/1A	55	35	15	40	7	6	18	18	30	7
Vicat Soffening Temperature - 10 N (°C)	ISO 306	135	131	118	135	120	120	135	131		135
Heat Deflection Temperature - 0.45 MPa (°C)	ISO 75-2	79	74	60	79	60	60	79	71		70
Haze - 1 mm (%)	ASTM D1003	20	10	35	20	-	-	30	12	25	12
Application		Transparent and no blush impact copolymer for EBM and thermoforming of items suitable for low temperature applications, sheet extrusion. Can be used as impact modifier, not compromising transparency.	Transparent and no blush impact copolymer for EBM and thermoforming of items suitable for low temperature applications, sheet extrusion. Can be used as impact modifier, not compromising transparency.	Soft and transparent impact copolymer suitable for cast, blown films and injection moulding. Can be used as impact modifier, not compromising transparency.	Transparent and no blush impact copolymer suitable for injection moulding of large storage boxes, clear pails and containers, toys, household articles, heavy duty toolboxes, caps and closures. Can be used as impact modifier not compromising transparency.	Soft and transparent impact copolymer suitable for staple fibers. Intended for carded non- woven fabrics, featuring enhanced softness.	Soft and transparent impact copolymer suitable for continuous filament, spunbonding. Intended for spunbond non-woven fabrics, featuring enhanced softness.	Transparent and no blush impact copolymer suitable for injection moulding of tool boxes, organizers, storage boxes and cabinets, food containers, toys and appliances. Can be used as impact modifier, not compromising transparency.	Transparent and no blush impact copolymer suitable for injection moulding of tool boxes, organizers, storage boxes and cabinets, food containers, toys and appliances. Can be used as impact modifier, not compromising transparency.	Transparent and no blush impact copolymer suitable for injection moulding of thin wall parts for low temperature and freeze applications, like ice- cream containers. Can be used as impact modifier, not compromising transparency.	Transparent and no blush impact copolymer suitable for injection moulding of tool boxes, organizers, storage boxes and cabinets, food containers, toys and appliances. Can be used as impact modifier, not compromising transparency.

	Test Method	Capilene MT34EC	Capilene MU32EC	Capilene U50LE	Capilene Y50LE
Melt Flow Rate - 230 °C/2.16 kg (g/10min)	ISO 1133	25	29	55	150
Flexural Modulus - 5 mm/min (MPa)	ISO 178	1000	1100	1400	1400
IZOD Impact Strength, notched - 23 °C (kJ/m²)	ISO 180/1A	3	3	2,5	2
Application		Specialty polypropylene grades for extrusion coating and lamination of paper, paperboards, plastic films, woven and non-woven polypropylene based fabrics.	Specialty polypropylene grades for extrusion coating and lamination of paper, paperboards, plastic films, woven and non-woven polypropylene based fabrics.	New Capilene polypropylene resins provide a unique combination of high flow and low emissions (According to VDA 278) that is favorable for use in automotive interior trims compounds.	New Capilene polypropylene resins provide a unique combination of high flow and low emissions (According to VDA 278) that is favorable for use in automotive interior trims compounds.









# Low Density Polyethylene Ipethene

Ducor Petrochemicals offers a range of **low density polyethylene grades** with excellent properties for the most common processing techniques in **film extrusion**.

We market our LDPE products under the tradename **Ipethene** and the offered range fully meets the requirements of the **West European market**.

In our assortment we also offer grades with an **additivation package** for the production of **stretch**, **blown and shrink** films as well as for **high-speed extrusion coating**.

### **ABBREVIATIONS**

	TERM	EXPLAN
SL	Slip	Reduces
AB	Anti-Block	Prevents

	Test Method	Ipethene 100	Ipethene 101	lpethene 111	Ipethene 113	lpethene 213	Ipethene 320	lpethene 323	lpethene 322	Ipethene 470	lpethene 670	lpethene 810	Ipethene 900	lpethene 970	lpethene 4140	Ipethene 4203
Melt Flow Rate - 190 °C/2.16 kg (g/10min)	ISO 1133	0,3	0,3	0.7	0,7	1	2	2	2	4.5	7.5	20	50	70	0,13	0,2
Density (g/cm³)	ISO 1183	0,92	0,921	0.920	0.920	0.920	0.920	0.920	0.920	0.917	0.917	0,918	0.916	0,917	0,92	0,92
Additivation		-	-		SL. AB	SL. AB		SL. AB	SL. AB			-		-	-	-
Processing Technique		Blown film extrusion, blow moulding, Pipe extrusion	Blown film extrusion, blow moulding, Pipe extrusion	Blown film extrusion, blow moulding	Blown film extrusion	Blown film extrusion, foaming	Blown film extrusion, cast film extrusion, blow moulding, foaming, compound- ing, injection moulding	Blown film extrusion, cast film extrusion	Blown film extrusion, cast film extrusion, foaming	Blow moulding, compounding, extrusion coating & lamination	Blow moulding, compounding, extrusion coating & lamination	Compoun- ding, injection moulding	Compoun- ding, injection moulding	Compoun- ding, injection moulding	Blown film extrusion, blow moulding, pipe extrusion	Blown film extrusion, blow moulding, pipe extrusion





### IATION

s friction between surfaces surfaces from sticking together

# What makes Ducor a reliable partner

# RELIABILITY

Multiple sources of monomers, supplied by sea or pipeline, and sufficient raw material basis makes Ducor Petrochemicals your reliable long-term partner for plastics. Our three production lines are completely interchangeable and combinable. So, if one line is down, the other two can bear the entire production load. Even more costeffective: after each 100-ton run, it's perfectly possible to switch to another product.

## **INNOVATION**

Deliberately structured to facilitate innovation, Ducor Petrochemicals follows the market closely so we can adapt and ensure fast product cycles. Knowledge is highly valued. We work hard to maintain an extensive network of a well-trained, insightful and up-todate workforce. The investment in expertise and R&D extends beyond our European borders, with our large R&D department located at our Israel-based sister company.

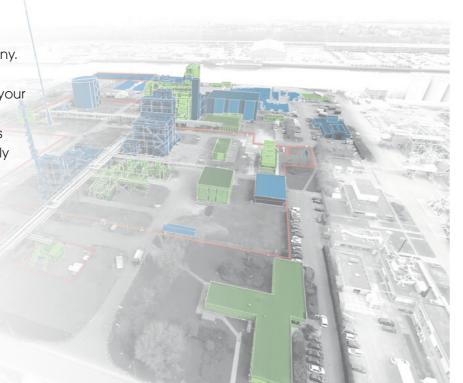
At Ducor, we're ready and able to take your plastics needs to the next level. We look forward to getting your ideas off the lines and into sales as efficiently and effortlessly as possible.

# **FLEXIBILITY**

Ducor Petrochemicals' flexibility is not exclusive to the big players on the market. We serve 200 smaller customers a year because we are willing to perform production runs below 500 tons. We're also capable of providing very short turnarounds. Our three production lines enable us to produce three different products at a time and switch lines as needed. Hence, completing orders within two business days is no impossible feat.

# STRATEGIC LOCATION

Ducor Petrochemicals is strategically located adjacent to the two major world harbors, Rotterdam and Antwerp. Connections to several pipelines makes this location an ideal logistic hub operating right in the heart of Europe.







Polypropylene produced from sustainable materials

- As key element of our Sustainability program, Ducor has been ISCC PLUS certified since January 2023
- The ISCC PLUS certification allows Ducor to buy renewable or circular feedstock from our suppliers and produce renewable or circular PP derived from this feedstock (using mass balance principle)
- All of our grades are available in any % or renewable/circular feedstock (pending on your sustainability needs)
- Based on your needs and sustainable agenda, Ducor can produce PP based on x% of bio (1st generation feedstock such as corn, sugarcane, etc.), bio-circular (2<sup>nd</sup> generation such as Used Cooking Oil, tail oil) or circular (based on recycled plastics or end-of-life tires through chemical recycling)



# **INTERNATIONAL SUSTAINABILITY & CARBON**



Follow our sustainability efforts: ducorchem.com/future-proof/sustainability-quality/



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DUCOR is part of the

