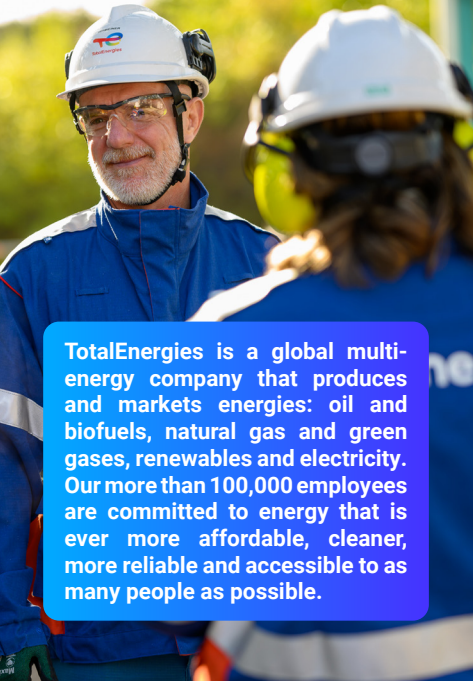
REFINING & CHEMICALS

POLYPROPYLENE
POLYETHYLENE
POLYSTYRENE

EUROPEAN PRODUCT RANGE

TotalEnergies



TotalEnergies is a global multi-energy company that produces and markets energies: oil and biofuels, natural gas and green gases, renewables and electricity. Our more than 100,000 employees are committed to energy that is ever more affordable, cleaner, more reliable and accessible to as many people as possible.

TotalEnergies Polymers: added value for your business

TotalEnergies develops, produces, and commercializes added value Polyethylene, Polypropylene and Polystyrene for a wide range of high-end applications. TotalEnergies Polymers builds on its **extensive experience** and **in-depth knowledge** to be a pioneer in new polymer technologies.

To meet today's and tomorrow's challenges, TotalEnergies offers high-quality **virgin, recycled** and **bio-based** grades, with the ambition to **produce 1 million tons of circular polymers per year by 2030.**

Our worldwide presence covering Europe, America, and Asia enables TotalEnergies to promote local business and foster proximity and intimacy with our customers. This presence relies on TotalEnergies' **integrated platforms,** ensuring a reliable production process with direct access to **secure and traceable feedstock** across the entire value chain.

Worldwide Presence

MAJOR INTEGRATED PLATFORM

POLYMER PLANT

POLYMER PLANT + R&D CENTERS AND TECHCENTERS

POLYMER PLANT + BIOREFINERY

BIOREFINERY

RE:use | MECHANICAL RECYCLING

RE:build | ADVANCED RECYCLING

RE:newable | BIOPOLYMERS

TotalEnergies RE:clic range of Circular Polymers

RE:clic

1M tons/year

Our ambition for the production of circular polymers by 2030

Life Cycle Analysis (LCA)

Life cycle analyses have been performed and independently reviewed to evaluate the benefits of our RE:clic solutions. LCA results are available upon request at polymers.europe@totalenergies.com

RE:use

Our polymers based on mechanically recycled Polyethylene, Polypropylene or Polystyrene from collectively and well sorted **post-consumer waste** (PCR).

In addition to our ready-to-use solutions containing up to 100% PCR, **tailor-made developments** are possible according to your needs.

Our RE:use portfolio

Or go on:
polymers.totalenergies.com

RE:build

Our polymers manufactured using an advanced recycling process by pyrolysis that converts hard-to-recycle plastic waste that would otherwise be destined for landfill or incineration.

All TotalEnergies polymer grades in this catalog are available under the RE:build range with **ISCC PLUS** certification based on **the mass balance principles.**

RE:newable

Our polymers based on bio-feedstocks such as vegetable oils (sunflower, rapeseed) or bio-circular feedstock such as used cooking oil. These feedstocks allow the reduction of carbon emissions without compromising performance.

All TotalEnergies polymer grades in this catalog are available under the RE:newable range with **ISCC PLUS** certification based on **the mass balance principles.** In addition, this range includes Poly Lactic Acid (PLA), a biosourced, recyclable, and biocompostable bioplastic.

Our PLA portfolio

Or go on:
totalenergies-corbion.com

TotalEnergies Commitments and Initiatives

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

The Responsible Care® Initiative is the shared commitment of the global chemical industry to responsibly manage its chemical products throughout their life cycle and to promote their role in improving quality of life and sustainable development.

TotalEnergies' global petrochemicals division, signatory of the Responsible Care® Charter, commits to implement and promote good management practices in hygiene, health, safety, environmental performance, stakeholder relations and security.

Operation Clean Sweep®

Operation Clean Sweep® (OCS) is a voluntary program aimed at improving awareness, promoting best practices, and providing guidance and tools to support companies from the plastics value chain in implementing the necessary pellet loss prevention measures.

TotalEnergies recognizes the importance of preventing pellet loss and has been committed to implementing the Operation Clean Sweep® program since 2015 and having all its operated polymer production sites in Europe and the USA compliant with OCS.

ALLIANCE TO END PLASTIC WASTE

TotalEnergies is a founding member of the Alliance to End Plastic Waste.
Since 2019, this alliance has brought together players to work on solutions to eliminate plastic waste in the environment.

The coalition ambition is organized in 4 pillars:

- The development of infrastructure systems to collect and recycle plastic in developing countries.
- The translation of ideas into solutions to address plastic waste.
- The empowerment of communities with the knowledge and tools.
- The support to cleanup activities by local communities.

Summary

Medical & healthcare

Medical applications 9
Healthcare applications 10

Film & coating

Low density polyethylene (LDPE) for film and coating applications 13
Metallocene polyethylene (mPE) for film applications 14
Medium and high density polyethylene (MDPE & HDPE) for film applications 16
Linear low density polyethylene (C4-LLDPE) for film applications 17
Geomembranes 18
Ethylene vinyl acetate copolymers (EVA) for film applications 19
Polypropylene (PP) for blown film applications 20
Polypropylene (PP) for BOPP film 21
Polystyrene (PS) for OPS film 22

Fibres & nonwovens

Polypropylene for fibres 24
Artificial turf 25

Pipes, cables, ducts & Rotomolding

Polyethylene for pressure pipes and fittings 28
Plumbing & heating 29
Gravity pipe 29
Cable 31
Rotomolding 31
Ducts 32

Consumer & industrial packaging

Pails and lids 34
Consumer packaging (extrusion blow molding) 35
Housewares 37
Industrial packaging (UN approved) 39

Food packaging & caps

Food packaging (extrusion and injection stretch blow molding) 42
Food packaging (extrusion blow molding) 43
Food packaging (injection) 44
Food packaging (extrusion sheet thermoforming) 46
Caps & closures 48

Appliances & technical parts

Technical parts 52
Appliances 55

Sheets, insulation & foams

Insulation 58
Sheets 59
Foams 61

Crates

Crates 64

PE Automotive

Automotive 67

Complete range

Polypropylene complete range 69
Polystyrene complete range 75
Polyethylene complete range 77

Medical & healthcare

Medical applications

	MAIN PROPERTIES		SPECIFIC FEATURES
Polypropylene	**Melt flow index (2.16 kg - 230°C)** g/10 min	**Flexural modulus** MPa	
Aceso® Lumicene® MR10MM0	10	900	Complies with EU and US pharmacopoeia
Aceso® PPM R020 S01	1.8	900	Complies with EU and US pharmacopoeia
Aceso® PPM R021 S01	1.8	900	
Aceso® PPM H250 S01	25	1250	
Aceso® PPM H350	35	1500	

Polyethylene	**Melt flow index (2.16 kg - 190°C)** g/10 min	**Density** g/cm³	
Aceso® PEM 1870	7.5	0.918	Complies with EU and US pharmacopoeia
Aceso® PEM 2408	0.8	0.924	
Aceso® PEM 2420	2.3	0.923	
Aceso® PEM 2440	4.0	0.924	
Aceso® HDPE 5502 R3	22*	0.954	Complies with EU pharmacopoeia

** Melt flow index (21.6 kg -190°C) g/10 min*

Healthcare applications

POLYPROPYLENE	MAIN PROPERTIES		SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	
Lumicene® MR30MC2	30	1250	Low extractables, outstanding optics
Lumicene® MR60MC2	60	1250	

POLYSTYRENE	MAIN PROPERTIES			
	Melt flow index (5 kg - 200°C) g/10 min	**Vicat Temperature (10N - 50°C/h)** °C	**Flexural Modulus** MPa	**Izod impact strength** kJ/m²
IMPACT				
6540	11.5	83	2100	9.5
7240	4.5	97	1850	11
CRYSTAL				
1160	2.4	105	2900	-
1340	4.0	98	2900	-
1540	12	91	2900	-

Film & coating

Low density polyethylene (LDPE) for film and coating applications

	CHARACTERISTICS						BLOWN FILM PROPERTIES (40 µm)*										
	Density g/cm³	Melt flow index (2.16 kg - 190°C) g/10 min	Additives**		Melting temperature °C	Vicat temperature °C	Tensile strength at yield MPa		Tensile strength at break MPa		Elongation at break %		Dart test g	Elmendorf N/mm		Haze %	Gloss 45°
AUTOCLAVE			**S**	**AB**			**MD**	**TD**	**MD**	**TD**	**MD**	**TD**		**MD**	**TD**		
FE 8000	0.924	0.8	No	No	111	99	12	12	27	23	370	570	120	53	47	11	53
FE 8004	0.924	0.8	Yes	Yes	111	99	12	12	28	24	370	570	120	53	47	12	48
1022 FN 24	0.923	2.3	No	No	110	96	12	12	22	20	460	660	90	75	62	7	59
1022 FH 24	0.923	2.3	Yes	Yes	110	96	12	12	22	20	440	630	90	72	60	8	57
LD 0304	0.924	4.0	No	No	111	95	-	-	-	-	-	-	-	-	-	-	-
LA 0710	0.918	7.5	No	No	108	90	-	-	-	-	-	-	-	-	-	-	-

None of the LDPE of TotalEnergies contain antioxidant

** Extrusion conditions: 45 mm screw diameter, L/D = 30, die diameter = 120 mm, die gap = 1.4 mm, BUR = 2.5:1*
*** S: slip additive - AB: antiblock additive*

Metallocene polyethylene (mPE) for film applications

	Density g/cm³	Melt flow index (2.16 kg - 190°C) g/10 min	Melting temperature °C	Vicat temperature °C	Additives***		Tensile strength at yield MPa		Tensile strength at break MPa		Elongation at break %		Dart test g	Elmendorf N/mm		Haze %	Gloss 45°
	CHARACTERISTICS				BLOWN FILM PROPERTIES (40 µm)*												
					PPA	S+AB	MD	TD	MD	TD	MD	TD		MD	TD		
Lumicene Supertough® 12AST05	0.912	0.65	100	93	Yes	No	8	8	70	70	570	580	>1950	60	100	5	70
Lumicene Supertough® 16AST15	0.916	1.5	109	105	Yes	No	9	9	59	45	480	500	>1750	80	150	5	70
Lumicene Supertough® 18AST05	0.918	0.65	115	105	Yes	No	11	11	35	35	500	530	>1700	65	125	8	60
Lumicene Supertough® 18AST10	0.919	1.15	115	105	Yes	No	10	10	39	37	600	600	>1700	90	140	5	70
Lumicene Supertough® 22AST05	0.921	0.5	113	106	Yes	No	10	10	65	60	650	700	>1000	75	150	7	60
Lumicene Supertough® 32AST05	0.931	0.5	123	115	Yes	No	16	16	57	48	600	650	300	55	200	14	50
Lumicene Supertough® 40AST05	0.940	0.5	127	122	Yes	No	19	21	48	45	630	750	135	16	155	15	40
	CHARACTERISTICS				CAST FILM PROPERTIES (20 µm)**												
Lumicene Supertough® 33ST22	0.933	2.2	122	114	No	No	12	12	27	21	370	490	90	70	200	4	77

** Extrusion conditions: 45 mm screw diameter, L/D = 30, die diameter = 120 mm, die gap = 1.4 mm, BUR = 2.5:1*
*** Extrusion conditions: Die gap = 250 µm; chill roll temperature = 20°C, Melt temperature = 260°C*
**** PPA: Polymer processing Aid – S: slip additive – AB: antiblock additive*

Metallocene polyethylene (mPE) for film applications

	Density g/cm³	Melt flow index (2.16 kg - 190°C) g/10 min	Melting temperature °C	Vicat temperature °C	Additives***		Tensile strength at yield MPa		Tensile strength at break MPa		Elongation at break %		Dart test g	Elmendorf N/mm		Haze %	Gloss 45°
					PPA	S+AB	MD	TD	MD	TD	MD	TD		MD	TD		
	CHARACTERISTICS						BLOWN FILM PROPERTIES (40 µm)*										
Lumicene® M 1810 AP	0.917	1.0	110	105	Yes	No	10	10	68	62	670	700	>1200	105	165	3	80
Lumicene® M 1811 PCA	0.918	1.0	111	105	Yes	Yes	10	10	68	62	670	700	>1200	105	165	5	75
Lumicene® M 1820 AP	0.918	2.0	110	102	Yes	No	10	10	59	55	650	700	>1000	115	165	5	72
Lumicene® M 2310 AP	0.923	0.9	116	114	Yes	No	12	12	59	58	650	740	310	80	160	5	73
Lumicene® M 2710 AP	0.927	0.9	119	118	Yes	No	14	14	51	48	650	720	200	60	160	6	70
Lumicene® M 2711 PCA	0.927	1.2	119	118	Yes	Yes	14	14	51	48	650	720	200	60	160	8	65
Lumicene® M 3410 AP	0.934	0.9	124	123	Yes	No	17	18	47	43	630	700	100	20	100	9	60
Lumicene® M 4707 AP	0.947	0.7	131	130	Yes	No	24	25	39	38	610	750	80	10	60	14	50
Lumicene® M 5510 AP	0.955	1.2	134	133	Yes	No	28	28	57	45	870	910	100	11	90	24	40
Lumicene® M 6012 AP	0.960	1.2	134	133	Yes	No	28	32	52	52	870	1040	55	8	28	15	54
	CHARACTERISTICS						CAST FILM PROPERTIES (20 µm)**										
Lumicene® M 1820 AP	0.918	2.0	110	102	Yes	No	8	8	59	55	400	600	700	110	160	1	90
Lumicene® M 1835	0.918	3.5	108	99	No	No	7	6	36	39	400	600	700	115	175	1	92
Lumicene® M 2735	0.927	3.5	119	118	No	No	9	9	39	24	470	530	100	50	120	1	89
Lumicene® M 3427	0.934	3.1	123	120	No	No	12	12	39	27	480	590	50	20	115	2	86
Lumicene® M 4040	0.940	4.0	126	122	No	No	15	15	33	26	480	610	30	10	90	5	86
Lumicene® M 6040	0.960	4.0	133	131	No	No	23	24	26	34	520	850	40	8	70	12	51

** Extrusion conditions: 45 mm screw diameter, L/D = 30, die diameter = 120 mm, die gap = 1.4 mm, BUR = 2.5:1*
*** Extrusion conditions: Die gap = 250 µm; chill roll temperature = 20°C, Melt temperature = 260°C*
**** PPA: Polymer processing Aid – S: slip additive – AB: antiblock additive*

Medium and high density polyethylene (MDPE & HDPE) for film applications

	CHARACTERISTICS						BLOWN FILM PROPERTIES (20 µm)*								
	Density g/cm³	**Melt flow index (2.16 kg - 190°C)** g/10 min	**Melt flow index (21.6 kg - 190°C)** g/10 min	**Melting temperature** °C	**Vicat temperature** °C	**Flexural modulus (0.25% max)** MPa	**Tensile strength at yield** MPa		**Tensile strength at break** MPa		**Elongation at break** %		**Dart test** g	**Elmendorf** N/mm	
							MD	**TD**	**MD**	**TD**	**MD**	**TD**		**MD**	**TD**
HF 513	0.934	0.15	14	125	118	620	20	19	65	52	400	500	220	11	135
HT 514	0.938	0.15	14	126	121	740	21	22	69	51	420	520	190	9	130
HR 515	0.942	0.22	17	127	124	810	23	24	65	53	450	540	145	8	130
2008SN60	0.961	0.8	52	135	132	1400							20	0.1	2.5

** Extrusion conditions: HDPE configuration: 70 mm screw diameter, L/D = 25, die diameter = 120 mm, die gap = 1.2 mm, BUR = 4.5:1, neck height: 8 x die diameter*
*** Intended for non-food contact applications*

Linear low density polyethylene (C4-LLDPE) for film applications

	Density g/cm³	Melt flow index (2.16 kg - 190°C) g/10 min	Additives**		Melting temperature °C	Vicat temperature °C	Tensile strength at yield MPa		Tensile strength at break MPa		Elongation at break %		Dart test g	Elmendorf N/mm		Haze %	Gloss 45°
			S	AB			MD	TD	MD	TD	MD	TD		MD	TD		
	CHARACTERISTICS						BLOWN FILM PROPERTIES (40 µm)*										
Lotrène® Q1018 N	0.918	1.0	No	No	122		10	11	41	33	650	800	130	70	150	10	58
Lotrène® Q1018 H	0.918	1.0	Yes	Yes	122		10	11	41	33	650	800	130	70	150	12	49
Lotrène® Q2018C	0.918	2.0	No	No	121		10	11	41	33	650	800	70	45	90	7	62
	CHARACTERISTICS						CAST FILM PROPERTIES (20µm)***										
Lotrène® Q2018C	0.918	2.0	No	No	122	101	9.4	10.1	49	27	450	780	63	18	159	1.6	91
Lotrène® Q3018C	0.918	2.8	No	No	122	101	10.2	9.7	49	27	510	860	60	31	147	1.4	91

** Extrusion conditions: 45 mm screw diameter, L/D = 30, die diameter, L/D = 120 mm, die gap = 2.2, BUR = 2.5:1*
*** S: slip additive - AB: antiblock additive*
**** Extrusion conditions : 30mm screw, L/D=30:1, die lengths = 600mm, die gap = 0.8mm, Melt temperature = 250°C, Chill roll temperature = 25°C*
Lotrène® polyethylene products are manufactured by Qatofin Company Ltd

Geomembranes

POLYETHYLENE	CHARACTERISTICS						SPECIFIC FEATURES	
	Density g/cm^3	**Melt flow index (2.16 kg - 190°C)** g/10 min	**Melt flow index (21.6 kg - 190°C)** g/10 min	**Flexural modulus** MPa	**Tensile strength (50 mm/min)** MPa at yield	**Tensile strength (50 mm/min)** MPa at break	**Flat die**	**Blown**
Lumicene Supertough® 22AST05	0.921	0.50	-	280	10	25	✔	✔
Lumicene Supertough® 32AST05	0.931	0.50	-	540	15	25	✔	✔
HF 513	0.934	0.15	14	620	17	20	✔	✔
HT 514	0.938	0.15	14	740	20	20	✔	✔

Ethylene vinyl acetate copolymers (EVA) for film applications

	CHARACTERISTICS					BLOWN FILM PROPERTIES (40 µm)*									
	Vinyl acetate %	Melt flow index (2.16 kg - 190°C) g/10 min	Melting temperature °C	Vicat temperature °C	Elasticity modulus** MPa	Tensile strength at yield MPa		Tensile strength at break MPa		Elongation at break %		Dart test g	Elmendorf N/mm		Haze %
						MD	TD	MD	TD	MD	TD		MD	TD	
1005 VN 2	5.5	0.5	104	90	160	10	9	32	27	300	570	340	34	33	8
1010 VN 3	9.0	1.5	98	82	110	8	7	31	28	370	600	480	32	36	3
1020 VN 3	9.0	3.0	97	79	100	8	7	29	24	380	570	400	30	35	3
1005 VN 35	12	0.5	93	76	75	6	6	39	37	380	650	630	15	20	4
1003 VN 4	13.5	0.4	92	74	70	6	5	38	38	310	590	650	13	28	3
1005 VN 4	14	0.7	91	72	65	6	5	36	35	320	610	600	18	30	3
1040 VN 4	14	4.5	90	68	62	6	5	27	23	370	650	300	36	44	2
1005 VN 5	17	0.7	89	69	56	6	4	38	39	320	660	680	18	40	2
1020 VN 5	17.5	2.0	87	64	50	6	4	29	28	330	620	500	26	43	1

** Extrusion conditions: 45 mm screw diameter, L/D = 30, die diameter = 120 mm, die gap = 1.4 mm, BUR = 2.5:1*
*** Property determined on moulded plate*

Polypropylene (PP) for blown film applications

	CHARACTERISTICS						BLOWN FILM PROPERTIES (40 µm)*										
	Flexural Modulus MPa	**Melt flow index (2.16 kg - 230°C)** g/10 min	**Additives****		**Melting temperature** °C	**Vicat temperature** °C	**Tensile strength at yield** MPa		**Tensile strength at break** MPa		**Elongation at break** %		**Dart test** g	**Elmendorf** N/mm		**Haze** %	**Gloss 45°**
			Clarif	**CaSt**			**MD**	**TD**	**MD**	**TD**	**MD**	**TD**		**MD**	**TD**		
Lumicene® MR 2002	1300	15	No	Yes	151	145	42	45	36	37	90	90	25	2	3	3	77
PPR 3221	900	1.8	Yes	No	144	124	35	30	70	26	650	480	35	3	20	9	50
PPR 3260	1000	1.8	No	Yes	148	135	36	33	80	28	690	460	33	5	20	19	33
PPC 2660	1100	0.8	No	Yes	165	148	32	30	72	45	550	650	70	5	45	41	14
PPC 3660	1200	1.3	No	Yes	165	147	32	29	57	37	570	610	120	5	40	75	7
PPH 3060	1300	1.8	No	Yes	165	152	40	40	80	80	620	620	20	3	25	41	14

** Extrusion conditions: 45 mm screw diameter, L/D = 30, die diameter, L/D = 120 mm, die gap = 2.2, BUR = 2.5:1*
*** Clarif: Clarified - CaSt: calcium stearate*

Polypropylene (PP) for BOPP film

	CHARACTERISTICS			SPECIFIC FEATURES
	Flexural modulus MPa	**Melt flow index (2.16 kg - 230°C)** g/10 min	**Melting temperature** °C	
PPH 4050	1350	3.3	165	Calcium stearate free
PPH 4070	1700	3.0	165	High crystallinity

Polystyrene (PS) for OPS film

	CHARACTERISTICS			SPECIFIC FEATURES
	Flexural modulus MPa	**Melt flow index (5 kg - 200°C)** g/10 min	**Vicat temperature (10N, 50°C)** °C	
IMPACT				
7240	1850	4.5	87	Improved dilution capability
8260	1650	2.5	99	Improved environmental stress cracking resistance
CRYSTAL				
1160	2900	2.4	105	High heat resistance and high melt strength
1540	2900	12	91	Easy flow
1810	2900	20	90	
1340	2900	4	98	

Fibres & nonwovens

Polypropylene for fibres

	MAIN PROPERTIES				SPECIFIC FEATURES	TYPICAL APPLICATIONS			
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Anti Gas Fading**		**Raphia, Slit film**	**Staple fibers**	**CF, BCF**	**Spun-bond**
Lumicene® MR10YN9	10	950	-	✔	Excellent softness, reduced melting temperature, low VOC		✔	✔	✔
Lumicene® MR 2002	15	1300	3.0	✔	Super fine titer and excellent tenacity			✔	✔
Lumicene® MR 2001	25	1300	3.0	✔	Super fine titer and excellent tenacity			✔	✔
PPH 3060	1.8	1300	6.0		Broad processing window	✔			
PPH 4060	3.0	1350	5.0		Low water carry over	✔			
PPH 4069	4.0	1450	4.0	✔	High tenacity		✔		
PPH 4070	3.0	1700	5.0		Low water carry over	✔			
PPH 7059	13	1450	3.5	✔	Excellent thermal bonding		✔		
PPH 7069	12	1450	3.5	✔			✔	✔	
PPH 9069	25	1500	3.0	✔			✔	✔	
PPH 9099	27	1200	3.5	✔	Very fine titer and high tenacity			✔	✔

Artificial turf

POLYETHYLENE	MAIN PROPERTIES			SPECIFIC FEATURES		TYPICAL APPLICATIONS			
	Density g/cm³	**Melt flow index (2.16 kg - 190°C)** g/10 min	**VICAT Temperature** °C		**Processing**	**Contact sports**	**Non contact sports**	**Landscaping**	**Backing**
Lumicene Supertough® 22AST05	0.921	0.5	106	Very high fibrillation resistance	✔✔	✔	✔		
Lumicene® M 1820 AP	0.918	2.0	102	Outstanding softness	✔	✔		✔	
Lumicene® M 1835	0.918	3.5	99	Outstanding softness and superior processing	✔	✔		✔	
Lumicene® M 2735	0.927	3.5	118	Superior processing	✔	✔	✔	✔	
Lumicene® M 3427	0.934	3.1	120	High thermal resistance	✔	✔	✔	✔	
Lotrène® Q 2018 C	0.918	2.0	100					✔	

Lotrène® polyethylene products are manufactured by Qatofin Company Ltd

Artificial turf

POLYPROPYLENE	MAIN PROPERTIES			SPECIFIC FEATURES	TYPICAL APPLICATIONS			
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²		**Contact sports**	**Non contact sports**	**Landscap-ing**	**Backing**
Homopolymers								
PPH 3060	1.8	1300	6.0	Broad processing window		✔	✔	✔
PPH 4060	3.0	1350	5.0	Low water carry over			✔	✔
Impact Copolymers								
PPC 3640	1.3	1300	> 50	Low water carry over and outstanding fibrillation resistance		✔		
PPC 3660	1.3	1200	> 50	Outstanding fibrillation resistance		✔		
PPC 3650	2.0	1150	> 50	Superior processing and outstanding fibrillation resistance		✔		

Pipes, cables, ducts & Rotomolding

Polyethylene for pressure pipes and fittings

		MAIN PROPERTIES						TYPICAL APPLICATIONS				
		Colour	**Density*** g/cm³	**Melt flow index (5 kg - 190°C)** g/10 min	**Flexural modulus** MPa	**Tensile strength at yield (50 mm/min)** MPa	**Tensile strength at break (50 mm/min)** MPa	**PE 100 RC for non-conventional pipe installation**	**Gas**	**Potable water**	**Sewage**	**Industrial applications**
XRC20N RT	**PE 100 RC RT**	●	0.947	0.2	1000	25	30					✔
XRC20B	**PE 100 RC**	●	0.958	0.23	1000	25	30		✔	✔		✔
XSC 50 Orange	**PE 100 RC**	●	0.950	0.28	1000	25	30	✔	✔			
3802B	**PE 80**	●	0.948	0.9	700	18	32		✔		✔	✔
LF 38 YS CF		yellow stripes										

** Density of coloured compound*

Plumbing & heating

POLYETHYLENE	MAIN PROPERTIES			APPLICATION, PROCESS
	Density g/cm³	**Melt flow index (2.16 kg - 190°C)** g/10 min	**Melt flow index (5 kg - 190°C)** g/10 min	
Lumicene® M 4040	0.940	4.0	-	High flexibility base resin for PEX-b
XRT 70	0.947	-	0.7	PE-RT Type II mono & multilayer pipes

Gravity pipe

POLYETHYLENE	MAIN PROPERTIES			TYPICAL APPLICATIONS	
	Density g/cm³	**Melt flow index (21.6kg - 190°C)** g/10 min	**Flexural Modulus** MPa	**Sewage & drainage**	**Soil & waste discharge**
2007 TN 61	0.961	52	1400	✔	✔
2004 TN 52	0.954	22	1200	✔	✔
53090	0.953	9	1150		
3802B	0.948*	20	700		

** Density of black compound*

Gravity pipe

POLYPROPYLENE	MAIN PROPERTIES				TYPICAL APPLICATIONS			
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	**Sewage & drainage**	**Soil & waste discharge**	**Flue gas**	**Industrial applica-tions**
Impact copolymers								
PPC 1640	0.3	1350	> 80	8.0	✔	✔		✔
PPC 1645	0.3	1700	> 50	7.0	✔	✔		✔
PPC 2660	0.8	1100	> 50	6.0		✔		
PPC 3660	1.3	1200	> 50	7.0		✔		
Homopolymers								
PPH 1060	0.3	1500	7.0	-	✔	✔	✔	✔
PPH 2060	0.9	1550	8.0	-				✔

Cable

POLYETHYLENE	MAIN PROPERTIES								TYPICAL APPLICATIONS		
	Density g/cm³	**Melt flow index (2.16 kg - 190°C)** g/10 min	**Melt flow index (5 kg - 190°C)** g/10 min	**Colour**	**Flexural modulus** MPa	**Tensile strength at yield (50 mm/min)** MPa	**Tensile strength at break (50 mm/min)** MPa	**Shore D**	**Jacketing**	**Insulation**	**Compounds**
CD 0230 DPI	0.922	2.0	-	Natural	240	-	-	50		✔	
3802	0.938	-	0.9	Natural	700	18	32	60	✔		
3802 B	0.948	-	0.9	Black	700	18	32	60	✔		
FE 8000	0.924	0.8	-	Natural	275	10	12	48		✔	
M 1835	0.918	3.5	-	Natural	210	9	24	-		✔	
M 2735	0.927	3.5	-	Natural	420	14	22	-			✔
M 3427	0.934	3.1	-	Natural	600	17	25	55			✔
Q 1018 N	0.918	1.0	-	Natural	-	-	-	-			✔
Q 2018 C	0.918	2.0	-	Natural	-	-	-	-		✔	✔
1070 MN 18 C	0.918	7.5	-	Natural	200	9	11	47			✔
1200 MN 18 C	0.918	20	-	Natural	155	8	7.5	44			✔
1700 MN 18 C	0.918	70	-	Natural	140	8	7	43			✔

Rotomolding

POLYETHYLENE	MAIN PROPERTIES		TYPICAL APPLICATIONS	FEATURES
	Density[1] (g/cm³)	**Melt flow rate**[2]		
M 3581 UV	0.935	6.0	Small tanks, TÜV* certified	High flow
M 4041 UV	0.940	4.0	Tanks, TÜV* certified	High stiffness

All products available in pellets or powder form
1. *(ISO 1183) -* ***2.*** *PE: 2.16kg - 190°C g/10min (ISO 1133/D) - * TÜV CER34*

Ducts

POLYETHYLENE	MAIN PROPERTIES			TYPICAL APPLICATIONS		
	Density g/cm³	Melt flow index (2.16 kg - 190°C) g/10 min	Flexural modulus MPa	Microducts/ Optical Fiber	Macroducts	Electrical Conduits
HF513	0.934	0.15	620	✔		
HT514	0.938	0.15	740	✔		
HR515	0.942	0.22	810	✔		
3802	0.938	0.20	700	✔	✔	
3802B	0.948	0.20	700	✔	✔	
XRT70	0.947	0.70*	750	✔	✔	
5502	0.954	0.25	1200	✔		✔

POLYPROPYLENE	MAIN PROPERTIES				TYPICAL APPLICATIONS	
	Melt flow index (2.16 kg - 230°C) g/10 min	Flexural Modulus MPa	Izod notched (at 23°C) kJ/m²	Izod notched (at -20°C) kJ/m²	Macroducts	Electrical Conduits
PPC 1640	0.3	1350	>80	8.0	✔	
PPC 1645	0.3	1700	>50	7.0	✔	
PPC 2660	0.8	1100	>50	6.0	✔	
PPC 3640	1.3	1300	>50	7.0		✔
PPC 3645	1.3	1400	>50	9.0		✔
PPC 3650	2.0	1150	>50	6.5		✔
PPC 3660	1.3	1200	>50	7.0		✔

** 5kg – 190°C ** Charpy Notched (at 23°C) kJ/m²*

Consumer & industrial packaging

Pails and lids

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Random Copolymers					
Lumicene® MR30MC2	30	1250	5.0	-	Clarified and antistatic, ultra low migration
Lumicene® MR60MC2	60	1250	5.0	-	
PPR 7220	10	1200	5.0	-	Clarified
PPR 10232	40	1150	5.0	-	Clarified and antistatic
PPR 12232	80	1150	5.0	-	Clarified and antistatic
PPR 12236	80	1150	5.0	-	Clarified and antistatic
Impact Copolymers					
PPC 7712	13	1100	> 40	6.0	Nucleated and antistatic
PPC 7810 B	15	950	> 50	8.0	Nucleated, UN pails
PPC 7642	16	1500	8.0	5.0	Nucleated and antistatic
PPC 7652	16	1350	9.0	5.5	Nucleated and antistatic
PPC 9712	25	1050	> 40	5.5	Nucleated and antistatic
PPC 9760	25	1300	7.0	5.0	
PPC 9642	26	1500	8.0	5.0	Nucleated and antistatic
PPC 10712	40	1300	8.0	4.5	
PPC 10642	44	1500	7.5	4.0	Nucleated and high antistatic
PPC 11812	50	1100	13.5	6.5	Nucleated and antistatic
PPC 12642	70	1500	6.5	4.0	Nucleated and antistatic
PPC 12712	70	1200	7.0	3.5	Nucleated and antistatic

Consumer packaging (extrusion blow molding)

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Random Copolymers					
Lumicene® MR10MX0	10	1250	5	-	Outstanding transparency for ISBM application Ultra low migration
PPR 3221	1.8	900	22	-	Clarified
PPR 3260	1.8	1000	7.5	-	
PPR 7220	10	1200	5.0	-	Clarified - for ISBM
Impact Copolymers					
PPC 2660	0.8	1100	> 50	6.0	
PPC 3645	1.3	1400	> 50	9.0	Nucleated
PPC 3660	1.3	1200	> 50	7.0	
Homopolymers					
PPH 3060	1.8	1300	6.0	-	
PPH 4060	3.0	1350	5.0	-	

Consumer packaging (extrusion blow molding)

POLYETHYLENE	MAIN PROPERTIES					SPECIFIC FEATURES
	Density g/cm³	**Melt flow index (2.16 kg - 190°C)** g/10 min	**Melt flow index (21.6 kg - 190°C)** g/10 min	**Flexural modulus** MPa	**ESCR (F 50)** h	
High Density Polyethylene						
Lumicene® M 3410 EP	0.934	0.90	27	600	> 1000	Very high surface gloss, improved contact transparency
2008 SN 60	0.961	0.80	52	1400	10	Rigid bottles for pasteurized and UHT milk, juices and soups
5502	0.954	0.25	22	1200	60	
3802	0.938	0.20	20	700	> 500	

**Intended for non-food contact applications*

Housewares

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Random Copolymers					
Lumicene® MR60MC2	60	1250	5.0	-	Clarified and antistatic Ultra low migration
PPR 10232	40	1150	5.0	-	Clarified and antistatic
PPR 12232	80	1150	5.0	-	Clarified and antistatic
PPR 12236	80	1150	5.0	-	Clarified and antistatic
Impact Copolymers					
PPC 9642	26	1500	8.0	5.0	Nucleated and antistatic
PPC 10712	40	1300	8.0	4.5	
PPC 10641	44	1500	7.5	4.0	
PPC 10642	44	1500	7.5	4.0	
PPC 11812	50	1100	14	6.5	
PPC 12712	70	1200	7.0	3.5	
PPC 13812	100	1250	7.5	3.5	
PPC 14642	130	1500	4.5	-	
Homopolymers					
PPH 10042	35	1600	3.0	-	Nucleated and antistatic
PPH 10012	42	1500	3.0	-	Nucleated and antistatic
PPH 11012	55	1600	2.5	-	Nucleated and antistatic
PPH 12020	60	1800	3.5	-	Clarified

Housewares

POLYSTYRENE	MAIN PROPERTIES					SPECIFIC FEATURES
	Melt flow index (5 kg - 200°C) g/10 min	**Vicat Temperature (1 kg)** °C	**Vicat Temperature (5 kg)** °C	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	
Crystal (GPPS)						
1540	12	91	86	2900	-	
1810	20	90	85	2900	-	
Impact (HIPS)						
3450	7.0	103	95	2250	8.0	High heat resistance
3630	15	89	82	2400	6.0	
4440	10	96	88	2000	10	
6540	12	92	83	2100	9.5	

Industrial packaging (UN approved)

POLYETHYLENE	MAIN PROPERTIES						SPECIFIC FEATURES	TYPICAL APPLICATIONS					
	Density g/cm³	Melt flow index (21.6 kg - 190°C) g/10 min	Flexural modulus MPa	Charpy impact strength		ESCR (F 50) h		Drums**		Jerrycans	IBC	Containers used in explosives atmosphere	Caps
				(at 23°C) kJ/m²	(at -30°C) kJ/m²			OTD	THD				
53090	0.953	9.0	1150	29	20	> 250	Pellets	✔		✔			
51090	0.950	7.0	1050	29	20	> 250	Pellets			✔			
56020 S	0.952	2.1	1100	75	50	> 200	Powder	✔	✔	✔			
56020 XP	0.952	1.4	1100	80	55	> 250	Pellets	✔	✔	✔			
49080 UV	0.949	7.0	1000	30	22	> 250	Pellets				✔		
3802	0.938	20	700	20	8.0	> 250	Pellets						✔
ESD201B	0.995*	4.5	1200				Black conductive compound	✔	✔	✔		✔	

** Density of black compound.*
*** OTD: Open top drums, THD: Tight head drums.*

TotalEnergies
QUARTZ
5000
SN
15W-40
GASOLINE

Food packaging & caps

Food packaging (extrusion and injection stretch blow molding)

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Random Copolymers					
Lumicene® MR10MX0	10	1250	5.0	-	Outstanding transparency for ISBM application Ultra low migration
PPR 3221	1.8	900	22	-	Clarified
PPR 3260	1.8	1000	7.5	-	
PPR 7220	10	1200	5.0	-	Clarified - for ISBM
Impact Copolymers					
PPC 2660	0.8	1100	> 50	6.0	
PPC 3645	1.3	1400	> 50	9.0	Nucleated
PPC 3660	1.3	1200	> 50	7.0	
Homopolymers					
PPH 3060	1.8	1300	6.0	-	
PPH 4060	3.0	1350	5.0	-	

Food packaging (extrusion blow molding)

POLYETHYLENE	MAIN PROPERTIES					SPECIFIC FEATURES
	Density g/cm³	**Melt flow index (2.16 kg - 190°C)** g/10 min	**Melt flow index (21.6 kg - 190°C)** g/10 min	**Flexural modulus** MPa	**ESCR (F 50)** h	
High Density Polyethylene						
2008 SN 60	0.961	0.80	52	1400	10	Rigid bottles for pasteurized and UHT milk, juices and soups
5502	0.954	0.25	22	1200	60	

Food packaging (injection)

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural Modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Random Copolymers					
Lumicene® MR10MX0	10	1250	5.0	-	Outstanding aesthetics, ultra low migration
Lumicene® MR30MC2	30	1250	5.0	-	Clarified and antistatic, ultra low migration
Lumicene® MR60MC2	60	1250	5.0	-	Clarified and antistatic
PPR 7220	10	1200	5.0	-	Clarified
PPR 7227	10	1200	5.5	-	Clarified, organoleptic sensitive application
PPR 10232	40	1150	5.0	-	Clarified and antistatic
PPR 12232	80	1150	5.0	-	Clarified and antistatic
PPR 12236	80	1150	5.0	-	Clarified and antistatic

...

Food packaging (injection)

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	Flexural modulus MPa	Izod notched (at 23°C) kJ/m²	Izod notched (at -20°C) kJ/m²	
Impact Copolymers					
PPC 5660	7.0	1200	10	5.5	
PPC 7612	12	1250	13	6.0	Nucleated and antistatic
PPC 7712	13	1100	> 40	6.0	Nucleated and antistatic
PPC 7650	15	1400	9.0	5.5	Nucleated
PPC 7760	15	1200	10	5.5	
PPC 7810 B	15	950	> 50	8.0	Nucleated
PPC 7642	16	1500	8.0	5.0	Nucleated and antistatic
PPC 7652	16	1350	9.0	5.5	Nucleated and antistatic
PPC 9712	25	1050	> 40	5.5	Nucleated and antistatic
PPC 9760	25	1300	7.0	5.0	
PPC 9642	26	1500	8.0	5.0	
PPC 10712	40	1300	8.0	4.5	
PPC 10641	44	1500	7.5	4.0	
PPC 10642	44	1500	7.5	4.0	
PPC 11812	50	1100	13.5	6.5	Nucleated and antistatic
PPC 12642	70	1500	6.5	4.0	
PPC 12712	70	1200	7.0	3.5	
PPC 13812	100	1250	7.5	3.5	
PPC 14642	130	1500	4.5	-	

Food packaging (injection)

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Homopolymers					
PPH 5060	6.0	1400	4.0	-	
PPH 7060	12	1450	3.5	-	
PPH 7062	12	1450	3.5	-	Antistatic
PPH 9020	25	1600	4.0	-	Clarified
PPH 9069	25	1500	3.0	-	
PPH 9081	25	1250	3.5	-	
PPH 10060	35	1500	2.5	-	
PPH 10012	42	1500	3.0	-	Nucleated and antistatic
PPH 11012	55	1600	2.5	-	Nucleated and antistatic
PPH 12020	60	1800	3.5	-	Clarified

POLYSTYRENE	MAIN PROPERTIES					SPECIFIC FEATURES
	Melt flow index (5 kg - 200°C) g/10 min	**Vicat Temperature (1 kg)** °C	**Vicat Temperature (5 kg)** °C	**Flexural Modulus** MPa	**Izod notched (at 23°C)** kJ/m²	
Crystal (GPPS)						
1160	2.4	105	101	2900	-	
1340	4.0	98	93	2900	-	
1540	12	91	86	2900	-	
1810	20	90	85	2900	-	
Impact (HIPS)						
3450	7.0	103	95	2250	8.0	High heat resistance
6540	11.5	92	83	2100	9.5	
7240	4.5	97	87	1850	11	
8260	2.5	99	90	1650	13	Improved ESCR for high fat content or aggressive foodstuffs

Food packaging (extrusion sheet thermoforming)

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Random Copolymers					
Lumicene® MR10MX0	10	1250	5.0	-	Outstanding transparency
PPR 3221	1.8	900	22	-	Clarified
PPR 3260	1.8	1000	7.5	-	
Impact Copolymers					
PPC 3640	1.3	1300	> 50	7.0	Nucleated
PPC 3645	1.3	1400	> 50	9.0	Nucleated
PPC 3660	1.3	1200	> 50	7.0	
PPC 4640	3.5	1350	25	6.0	Nucleated
PPC 4660	3.5	1200	18	5.5	
PPC 5660	7.0	1200	10	5.5	
Homopolymers					
PPH 3060	1.8	1300	6.0	-	
PPH 4022	3.0	1700	5.0	-	Nucleated and antistatic
PPH 4060	3.0	1350	5.0	-	
PPH 5060	6.0	1400	4.0	-	

Food packaging (extrusion sheet thermoforming)

POLYSTYRENE	MAIN PROPERTIES					SPECIFIC FEATURES
	Melt flow index (5 kg - 200°C) g/10 min	**Vicat Temperature (1 kg)** °C	**Vicat Temperature (5 kg)** °C	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	
Crystal (GPPS)						
1070	1.6	105	101	2900	-	
1160	2.4	105	101	2900	-	High heat resistance
1340	4.0	98	93	2900	-	
1540	12	91	86	2900	-	
Impact (HIPS)						
3450	7.0	103	95	2250	8.0	High heat resistance
7240	4.5	97	87	1850	11	Improved dilution capabilitty
8260	2.5	99	90	1650	13	Improved ESCR for high fat content or aggressive foodstuffs

Caps & closures

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Random Copolymers					
Lumicene® MR10MX0	10	1250	5.0	-	Outstanding aesthetics, ultra low migration
Lumicene® MR30MC2	30	1250	5.0	-	Clarified and antistatic, ultra low migration
PPR 7220	10	1200	5.0	-	Clarified
PPR 7227	10	1200	5.5	-	Clarified, organoleptic sensitive application
PPR 10232	40	1150	5.0	-	Clarified and antistatic
PPR 12232	80	1150	5.0	-	Clarified and antistatic
Impact Copolymers					
PPC 5660	7.0	1200	10	5.5	
PPC 7642	16	1500	8.0	5.0	
PPC 7652	16	1350	9.0	5.5	
PPC 9712	25	1050	> 40	5.5	
PPC 9642	26	1500	8.0	5.0	
PPC 10712	40	1300	8.0	4.5	Nucleated and antistatic
PPC 10641	44	1500	7.5	4.0	
PPC 12642	70	1500	6.5	4.0	
PPC 12712	70	1200	7.0	3.5	
PPC 14642	130	1500	4.5	-	
Homopolymers					
PPH 5060	6.0	1400	4.0	-	

Caps & closures

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	Flexural modulus MPa	Izod notched (at 23°C) kJ/m²	Izod notched (at -20°C) kJ/m²	
PPH 7060	12	1450	3.5	-	
PPH 7062	12	1450	3.5	-	Antistatic
PPH 9020	25	1600	4.0	-	Clarified
PPH 9081	25	1250	3.5	-	
PPH 10012	42	1500	3.0	-	Nucleated and antistatic
PPH 11012	55	1600	2.5	-	Nucleated and antistatic

POLYETHYLENE	MAIN PROPERTIES				SPECIFIC FEATURES
	Density g/cm³	Melt flow index (2.16 kg - 190°C) g/10 min	Flexural modulus MPa	ESCR (F 50) h	
High Density Polyethylene					
Lumicene® M 5220	0.952	2.0	1100	> 150	Organo sensitive carbonated drinks
Lumicene® M 5220 M	0.952	2.0	1100	> 150	Organo sensitive carbonated drinks. Slip agent 1
Lumicene® M 5222	0.952	2.0	1100	> 150	Organo sensitive carbonated drinks. Slip agent 2
HD 6042	0.960	4.0	1400	12	Organo sensitive still drinks
HD 6081	0.960	8.0	1300	-	Organo sensitive still drinks
HD 6082	0.960	8.0	1300	-	Organo highly sensitive still drinks
Low Density Polyethylene					
1022 FN 24	0.923	2.3	220	-	Suitable for soft-lids, pull rings
LD 0304	0.924	4.0	250	-	Suitable for soft-lids, pull rings
1070 MN 18 C	0.918	7.5	-	-	Suitable for soft-lids, pull rings
1200 MN 18 C	0.918	22	150	-	
1700 MN 18 C	0.918	70	140	-	

Appliances & technical parts

Technical parts

TYPICAL APPLICATIONS	GRADE		MAIN PROPERTIES				SPECIFIC FEATURES
	Polymer Type	**Reference**	**Melt flow Index (PP: 2.16 kg - 230°C) (PS: 5 kg - 200°C)** g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Media boxes	PPR	PPR 12232	80	1150	5.0		Clarified and antistatic
	PS Crystal	1340	4.0	2900			Injection and extrusion
		1540	12	2900			
Razors	PPR	Lumicene® MR10MX0	10	1250	5.0		Outstanding transparency
		PPR 10232	40	1150	5.0		Clarified and antistatic
	PPC	PPC 10641	44	1500	7.5	4.0	Nucleated and antistatic
	PPH	PPH 10042	35	1600	3.0		Nucleated and antistatic
	PS Crystal	1540	12	2900			Injection and extrusion
	PS Impact	8260	2.5	1650	13.0		Injection and extrusion
		3450	7.0	2250	8.0		
		3630	15	2400	6.0		
Gardening	PPC	PPC 4640	3.5	1350	25	6.0	Nucleated
		PPC 6742	8.0	1200	> 40	7.0	Nucleated and antistatic
		PPC 7712	13	1100	> 40	6.0	
		PPC 9642	26	1500	8.0	5.0	

Technical parts

TYPICAL APPLICATIONS	GRADE		MAIN PROPERTIES				SPECIFIC FEATURES
	Polymer Type	**Reference**	**Melt flow Index (PP: 2.16 kg - 230°C) (PS: 5 kg - 200°C)** g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Luggage	PPC	PPC 7712	13	1100	> 40	6.0	Nucleated and antistatic
		PPC 11812	50	1100	13.5	6.5	
Baby seats	PPC	PPC 4640	3.5	1300	25	6.0	Nucleated
		PPC 6742	8.0	1200	> 40	7.0	Nucleated and antistatic
Mastic cartridge	PPC	PPC 7642	16	1500	8.0		
		PPC 9642	26	1500	8.0		Nucleated and antistatic
Electronics	PS Impact	6540	11.5	2100	9.5		Injection
Sanitary	PS Impact	6540	11.5	2100	9.5		Injection
Officeware	PS Crystal	1340	4.0	2900			Injection and extrusion
		1540	12	2900			
	PS Impact	3450	7.0	2250	8.0		Injection and extrusion
	PPH	PPH 3060	1.8	1300	6.0		
		PPH 12020	60	1800	3.5		Clarified
	PPR	Lumicene® MR10MX0	10	1250	5.0		Outstanding transparency
		Lumicene® MR60MC2	60	1250	5.0		Clarified and antistatic

Technical parts

TYPICAL APPLICATIONS	GRADE		MAIN PROPERTIES				SPECIFIC FEATURES
	Polymer Type	**Reference**	**Melt flow Index (PP: 2.16 kg - 230°C) (PS: 5 kg - 200°C)** g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
Batteries	PPC	PPC 5660	7	1200	10	5.5	Car batteries
		PPC 6742	8	1200	> 40	7.0	Batteries (Nucleated and antistatic)
		PPC 7760	15	1200	10	5.5	Truck batteries

Appliances

POLYPROPYLENE	MAIN PROPERTIES			SPECIFIC FEATURES	TYPICAL APPLICATIONS		
	Melt flow index (2.16 kg - 230°C) g/10 min	Flexural modulus MPa	Izod notched (at 23°C) kJ/m²		Fridge & Freezer	Diswasher & washing machines	Small appliances
Homopolymers							
PPH 5060	6.0	1400	4.0			✔	
PPH 7060	12	1450	3.5			✔	✔
PPH 10042	35	1600	3.0	Nucleated and antistatic			✔
Impact copolymers							
PPC 7652	16	1350	9.0				✔
PPC 7642	16	1500	8.0				✔
PPC 9642	26	1500	8.0	Nucleated and antistatic			✔
Random copolymers							
Lumicene® MR10MX0	10	1250	5.0	Outstanding transparency	✔		

Appliances

POLYSTYRENE	MAIN PROPERTIES						SPECIFIC FEATURES	EXTRUSION	INJECTION	TYPICAL APPLICATIONS
	Melt flow index (5 kg - 200°C) g/10 min	**Vicat Temperature (5 kg)** MPa	**IZOD Impact Strength** kJ/m²	**Tensile Strength at break** MPa	**Elongation at break** %	**Flexural modulus** MPa				
IMPACT (HIPS)										
6540	11.5	83	9.5	20	45	2100	High flow High impact	✔	✔	Injected refrigerator parts
8260	2.5	90	13.0	25	> 60	1650	Improved environmental stress cracking resistance Matt finish Soft touch	✔	✔	Refrigerator parts: inner liners, door liners, injected parts
CRYSTAL (GPPS)										
1160	2.4	101	-	48	3	2900	High heat resistance High molecular weight	✔	✔	Transparent fridge parts
1340	4.0	93	-	44	2.5	2900	High molecular weight	✔	✔	Transparent fridge parts
1540	12	86	-	42	2	2900	High fluidity	✔	✔	Transparent fridge parts Glossy coextruded top layer

Sheets, insulation & foams

Insulation

EXPANDABLE POLYSTYRENE*	MAIN PROPERTIES					TYPICAL APPLICATIONS				
	Bead size mm	**Flame-retardant**	**Prefoam density single pre-expansion** kg/m³	**Prefoam density second pre-expansion** kg/m³	**Pentane content** %	**Panels & Floor**	**ETICS-ITE External Insulation**	**ICF: Insulating Concrete Form**	**Blocks - Doublage**	**SIP: Structural Insulated Panels**
XLR 5550	1.25		16-18	10-12	< 5.6	✔		✔	✔	
XLR 5359 SE	1.25	✔			< 5.6	✔	✔	✔		✔
XLR 5559 SE	1.25	✔			< 5.6	✔	✔	✔		✔

CRYSTAL POLYSTYRENE	MAIN PROPERTIES			SPECIFIC FEATURES	KEY FEATURES	TYPICAL APPLICATIONS
	Melt Flow Index (5 kg - 200°C) g/10min	**Vicat Temperature (1 kg)** °C	**Vicat Temperature (5 kg)** °C			**Board thickness**
1160	2.4	105	101	Transparent Pellets (cylindrical or spherical) Bulk density ~ 600kg/m³	High heat resistance High molecular weight	✔
1450N	6.5	105	101		High heat resistance Easy flow No lubricant	✔✔
1960N	30	105	101		Very easy flow No lubricant	✔✔✔

** Product must be used in applications in compliance with applicable resistance to Fire Regulations*

Sheets

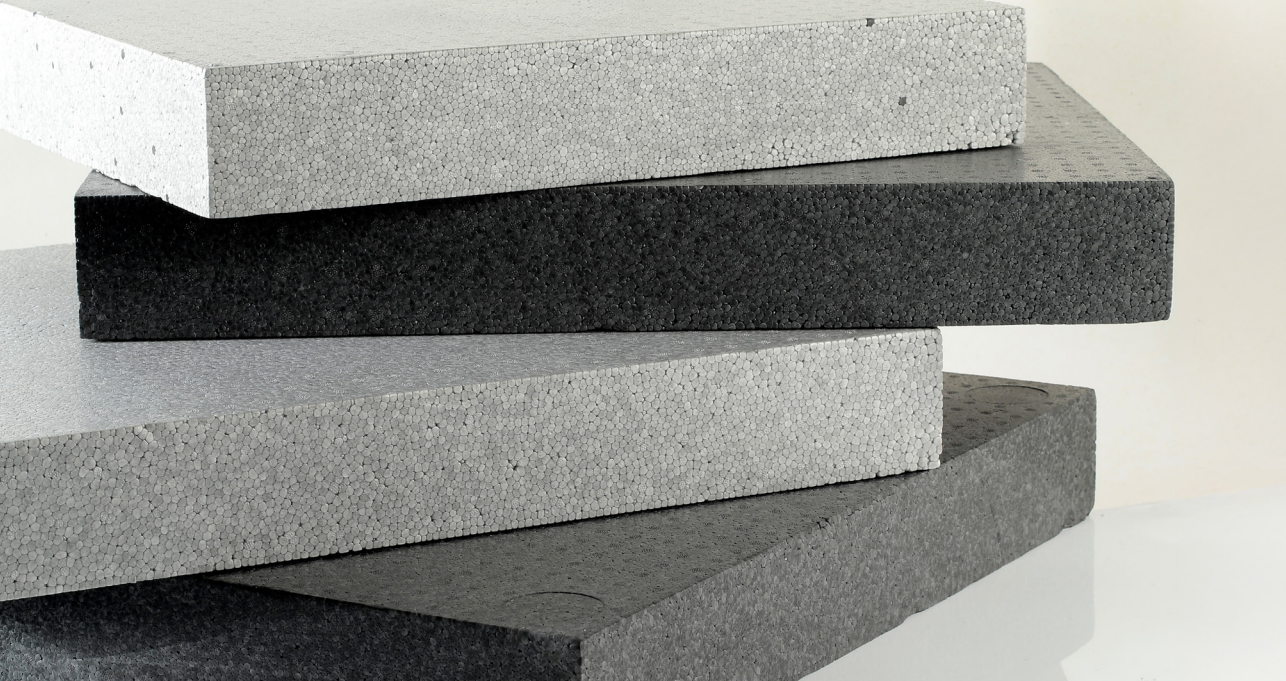
POLYETHYLENE		MAIN PROPERTIES						SPECIFIC FEATURES	TYPICAL APPLICATIONS			
	Density g/cm³	**Melt flow index (21.6 kg - 190°C)** g/10 min	**Flexural modulus** MPa	**Charpy impact strength** kJ/m²		**Izod notched** kJ/m²			**industrial sheets**	**Corrugated cardboard**	**General purpose**	**Optical properties**
				at 23°C	**at -30°C**	**at 23°C**	**at -20°C**					
53090	0.953	9	1150	29	20	-	-	Pellets	✔		✔	
56020 S	0.952	2.1	1100	75	50	-	-	Powder	✔		✔	
51090	0.950	7	1050	29	20	-	-	Pellets	✔		✔	

Sheets

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES	TYPICAL APPLICATIONS			
	Melt flow index (2.16 kg - 230°C) g/10 min	Flexural modulus MPa	Izod notched (at 23°C) kJ/m²	Izod notched (at -20°C) kJ/m²		industrial sheets	Corrugated cardboard	General purpose	Optical properties
Homopolymers									
PPH 1060	0.3	1500	7.0	-	High heat stabilized High stiffness	✔			
PPH 2060	0.9	1550	8.0	-	Excellent for sensitive applications. Long term stabilization. High stiffness & good processability.	✔		✔	
PPH 3060	1.8	1300	6.0	-				✔	
PPH 4060	3.0	1350	5.0	-				✔	
Impact Copolymers									
PPC 1640	0.3	1350	> 80	8.0	High stiffness	✔			
PPC 1645	0.3	1700	> 50	7.0	Very high stiffness	✔			
PPC 2660	0.8	1100	> 50	6.0			✔		
PPC 3645	1.3	1400	> 50	9.0	Nucleated		✔		
PPC 3660	1.3	1200	> 50	7.0			✔		
PPC 3650	2.0	1150	> 50	6.5		✔			
PPC 4660	3.5	1200	18	5.5		✔		✔	
Random Copolymers									
PPR 3221	1.8	900	22	-	Clarified				✔
PPR 3260	1.8	1000	7.5	-				✔	
Lumicene® MR10MX0	10	1250	5.0		Outstanding transparency				✔

Foams

POLYETHYLENE	MAIN PROPERTIES									SPECIFIC FEATURES
	Density g/cm^3	**Melt flow index (2.16 kg - 190°C)** g/10 min	**Melting temperature** °C	**Vicat temperature** °C	**Elasticity modulus** MPa	**Tensile strength at break** MPa	**Elongation at break** %	**Crystalization temperature** °C	**Heat of fusion** °C	
CD0230	0.922	2.0	109	94	240	12	475	99	-	Excellent melt strength & high elongational viscosity
1022 FN 24	0.923	2.3	110	96	260	12	480	99	115	Non additivated
FE 8000	0.924	0.8	111	99	265	13	560	100	116	
LD 0304	0.924	4.0	111	95	250	13	550	100	116	Foamed sheet / High stability



Crates

Crates

POLYETHYLENE	MAIN PROPERTIES			SPECIFIC FEATURES
	Melt flow index (2.16 kg - 190°C) g/10 min	**Density** g/cm³	**Flexural modulus** MPa	
Lumicene® M5220	2.0	0.952	1100	Good ESCR performance
ESD201B	4.5*	0.995	1200	

** 21.6 kg -190°C*

Crates

POLYPROPYLENE	MAIN PROPERTIES				SPECIFIC FEATURES	TYPICAL APPLICATIONS					
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²		**Heavy duty crates**	**Foldable light weight crates**	**Pail lids**	**Thin-wall Crates**	**Pallets**	**Standardized crates (e.g. Post, Automotive, ...)**
PPC 3650	2.0	1150	> 50	6.5	High impact strength	✔					
PPC 4640	3.5	1350	25	6.0	Creep resistance and impact properties Excellent stiffness	✔					
PPC 6742	8.0	1200	> 40	7.0	Optimized rigidity for such high level of impact resistance	✔				✔	✔
PPC 7612	12	1250	13	6.0	Excellent creep resistance Nucleated for fast cycle time						✔
PPC 7712	13	1100	> 40	6.0	High fluidity & High impact resistance	✔		✔			
PPC 7642	16	1500	8.0	5.0	High rigidity product Good impact resistance		✔				
PPC 9712	25	1050	> 40	5.5	High fluidity & High impact resistance			✔			

PE Automotive

Automotive

POLYETHYLENE	MAIN PROPERTIES							SPECIFIC FEATURES		TYPICAL APPLICATIONS				
Grade	**Density** g/cm³ • ISO 1183	**Melt flow index (21.6 kg - 190°C)** g/10 min • ISO 1133	**Melt flow index (2.16 kg - 190°C)** g/10 min • ISO 1133	**Flexural modulus** MPa • ISO 178	**Tensile strength at yield** MPa • ISO 527	**ESCR F(50) 100% Igepal** h • ASTM D1693	**Superficial Resistivity** Ohm/sq • Internal method	**Colour**		**Fuel Tanks**	**Filler Pipes**	**SCR tanks**	**Components**	**Flexible parts, Air ducts**
MS201B	0.949*	8	< 0.1	1100	24	> 1000		black		✔	✔		✔	
MS201N	0.949	8	< 0.1	1100	24	> 1000		natural		✔	✔		✔	
MS201BN-NA	0.946	6	< 0.1	1000	24	> 1000		natural		✔	✔	✔	✔	
MS482	0.947	80	2	1050	23	> 1000		natural	injection grade			✔	✔	
ESD201B	0.995*	4.5	< 0.1	1200	28	> 1000	max 10000	black	conductive compound		✔			
3802	0.938	20	0.2	700	18	> 1000		natural					✔	✔

** Density of black compound*

Complete range

Polypropylene complete range

	MAIN PROPERTIES			SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	
Random Copolymer				
Lumicene® MR10MX0	10	1250	5.0	Outstanding transparency
Aceso® Lumicene® MR10MM0	10	900	4.5	Complies with EU and US pharmacopoeia
Lumicene® MR10YN9	10	950	-	Excellent softness, reduced melting temperature, low VOC
Lumicene® MR30MC2	30	1250	5.0	Clarified and antistatic
Lumicene® MR60MC2	60	1250	5.0	Clarified and antistatic
Homopolymer				
Lumicene® MR 2002	15	1300	3.0	Fine titer and high tenacity fibres, film
Lumicene® MR 2001	25	1300	3.0	Fine titer and high tenacity fibres
Lumicene® MH140CN0	140	1400	2.0	

Polypropylene complete range

RANDOM COPOLYMERS	MAIN PROPERTIES			SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	
Aceso® PPM R020 S01	1.8	900	6.0	Complies with EU and US pharmacopoeia
Aceso® PPM R021 S01	1.8	900	6.0	Complies with EU and US pharmacopoeia Blow moulding and injection stretch blow moulding
PPR 3221	1.8	900	22	Clarified
PPR 3260	1.8	1000	7.5	
PPR 7220	10	1200	5.0	Clarified
PPR 7227	10	1200	5.5	Clarified Organoleptic sensitive application
PPR 10231	40	1150	5.0	Clarified and antistatic
PPR 10232	40	1150	5.0	
PPR 12232	80	1150	5.0	
PPR 12236	80	1150	5.0	

Polypropylene complete range

IMPACT COPOLYMERS	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
PPC 1640	0.3	1350	> 80	8.0	Medium stiffness
PPC 1645	0.3	1700	> 50	7.0	High stiffness
PPC 2660	0.8	1100	> 50	6.0	
PPC 3640	1.3	1300	> 50	7.0	Nucleated
PPC 3645	1.3	1400	> 50	9.0	Nucleated
PPC 3660	1.3	1200	> 50	7.0	
PPC 3650	2.0	1150	> 50	6.5	
PPC 4640	3.5	1350	25	6.0	Nucleated
PPC 4660	3.5	1200	18	5.5	
PPC 4663	3.5	1200	18	5.5	UV stabilised
PPC 5660	7.0	1200	10	5.5	
PPC 6742	8.0	1200	> 40	7.0	
PPC 7612	12	1250	13	6.0	Nucleated and antistatic
PPC 7712	13	1100	> 40	6.0	
PPC 7810 B	15	950	> 50	8.0	Nucleated
PPC 7650	15	1400	9.0	5.5	Nucleated
PPC 7760	15	1200	10	5.5	
PPC 7642	16	1500	8.0	5.0	Nucleated and antistatic

Polypropylene complete range

IMPACT COPOLYMERS	MAIN PROPERTIES				SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	**Izod notched (at -20°C)** kJ/m²	
PPC 7652	16	1350	9.0	5.5	Nucleated and antistatic
PPC 9712	25	1050	> 40	5.5	Nucleated and antistatic
PPC 9760	25	1300	7.0	5.0	
PPC 9642	26	1500	8.0	5.0	Nucleated and antistatic
PPC 10712	40	1300	8.0	4.5	
PPC 10641	44	1500	7.5	4.0	
PPC 10642	44	1500	7.5	4.0	Nucleated High antistatic for pails applications
PPC 11812	50	1100	13.5	6.5	Nucleated and antistatic
PPC 12642	70	1500	6.5	4.0	Nucleated and antistatic
PPC 12712	70	1200	7.0	3.5	
PPC 13812	100	1250	7.5	3.5	Nucleated
PPC 14642	130	1500	4.5	-	Nucleated and antistatic

Polypropylene complete range

HOMOPOLYMERS	MAIN PROPERTIES			SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	
PPH 1060	0.3	1500	7.0	
PPH 2060	0.9	1550	8.0	Excellent for sensitive applications. Long term stabilization. High stiffness & good processability
PPH 3060	1.8	1300	6.0	
PPH 4022	3.0	1700	5.5	Nucleated and antistatic
PPH 4050	3.3	1350	5.0	Calcium stearate free
PPH 4060	3.0	1350	5.0	Calcium stearate free
PPH 4069	4.0	1450	4.0	Excellent tensile strength, anti gas fading
PPH 4070	3.0	1700	5.0	High crystallinity without nucleation
PPH 5060	6.0	1400	4.0	
PPH 7059	13	1450	3.5	Excellent thermal bonding, anti gas fading
PPH 7060	12	1450	3.5	
PPH 7062	12	1450	3.5	Antistatic
PPH 7069	12	1450	3.5	Standard MWD, anti gas fading

Polypropylene complete range

HOMOPOLYMERS	MAIN PROPERTIES			SPECIFIC FEATURES
	Melt flow index (2.16 kg - 230°C) g/10 min	**Flexural modulus** MPa	**Izod notched (at 23°C)** kJ/m²	
PPH 9020	25	1600	4.0	Clarified
PPH 9069	25	1500	3.0	Standard MWD, anti gas fading
PPH 9081	25	1250	3.5	
PPH 9099	27	1200	3.5	Narrow MWD, anti gas fading
Aceso® PPM H250 S01	25	1250	3.5	Complies with EU and US pharmacopoeia
PPH 10042	35	1600	3.0	Nucleated and antistatic
PPH 10060	35	1500	2.5	
Aceso® PPM H350	35	1500	2.5	Complies with EU and US pharmacopoeia
PPH 10012	42	1500	3.0	Nucleated and antistatic
PPH 11012	55	1600	2.5	
PPH 12020	60	1800	3.5	Clarified

Polystyrene complete range

	MAIN PROPERTIES					SPECIFIC FEATURES
	Melt flow index (5 kg - 200°C) g/10 min	**Vicat Temperature (5 kg)** °C	**Izod notched (at 23°C)** kJ/m²	**Flexural modulus** MPa	**Elongation at break** %	
Impact (HIPS)						
3630	15	82	6.0	2400	30	
3450	7.0	95	8.0	2250	55	High heat resistance
4440	10	88	10	2000	50	
6540	12	83	9.5	2100	45	
5240	2.3	94	11	1850	50	High heat resistance coupled with high impact
7240	4.5	87	11	1850	60	
8260	2.5	90	13	1650	> 60	Improved ESCR for high fat content or aggressive foodstuffs
Crystal (GPPS)						
1070	1.6	101	-	2900	3	High heat resistance, high molecular weight
1160	2.4	101	-	2900	3	High heat resistance, high molecular weight
1340	4.0	93	-	2900	2.5	High molecular weight
1450N	6.5	101		2900	3	High heat resistance, easy flow
1540	12	86	-	2900	2	Easy flow
1810	20	85	-	2900	2	Very easy flow
1960N	30	101		2900	2	High heat resistance, very easy flow

Polystyrene complete range

EXPANDABLE POLYSTYRENE	MAIN PROPERTIES					TYPICAL APPLICATIONS				
	Bead size mm	**Flame-retardant***	**Prefoam density single pre-expansion** kg/m³	**Prefoam density second pre-expansion** kg/m³	**Pentane content** %	**Panels & Floor**	**ETICS- ITE External Insulation**	**ICF: Insulating Concrete Form**	**Blocks - Doublage**	**SIP: Structural insulated Panels**
XLR 5550	1.25		16-18	10-12	< 5.6	✔		✔	✔	
XLR 5359 SE	1.25	✔			< 5.6	✔	✔	✔		✔
XLR 5559 SE	1.25	✔			< 5.6	✔	✔	✔		✔

** All properties are measured according to the standard quality control procedures*

Polyethylene complete range

	TYPE	MAIN PROPERTIES						SPECIFIC FEATURES
		Density g/cm³	Melt flow index (2.16kg - 190°C) g/10 min	Melt flow index (21.6kg - 190°C) g/10 min	Flexural modulus MPa	Charpy impact strength kJ/m² (23°C)	Charpy impact strength kJ/m² (-30°C)	
Aceso® HDPE 5502 R3	HDPE	0.954	0.2	22	1200	16		Complies with EU pharmacopoeia
Aceso® PEM 2408	LDPE	0.924	0.8					Complies with EU and US pharmacopoeia
Aceso® PEM 2440	LDPE	0.924	4.0					Complies with EU and US pharmacopoeia
Aceso® PEM 2420	LDPE	0.923	2.3					Complies with EU and US pharmacopoeia
Aceso® PEM 1870	LDPE	0.918	7.5					Complies with EU and US pharmacopoeia
Lumicene Supertough® 40AST05	mPE	0.940	0.5					
Lumicene Supertough® 33ST22	mPE	0.933	2.2					
Lumicene Supertough® 32AST05	mPE	0.932	0.5					
Lumicene Supertough® 22AST05	mPE	0.921	0.5					
Lumicene Supertough® 18AST10	mPE	0.919	1.15					
Lumicene Supertough® 18AST05	mPE	0.918	0.65					
Lumicene Supertough® 16AST15	mPE	0.916	1.5					
Lumicene Supertough® 12AST05	mPE	0.912	0.65					

Polyethylene complete range

	TYPE	MAIN PROPERTIES			SPECIFIC FEATURES
		Density g/cm³	**Melt flow index (2.16kg - 190°C)** g/10 min	**Flexural modulus** MPa	
Lumicene® M 6012 AP	mPE	0.960	1.2		
Lumicene® M 6040		0.960	4.0		
Lumicene® M 5510 AP		0.955	1.2		
Lumicene® M 5220		0.952	2.0	1100	Organo sensitive carbonated drinks.
Lumicene® M 5220 M		0.952	2.0	1100	Organo sensitive carbonated drinks. Slip agent 1
Lumicene® M 5222		0.952	2.0	1100	Organo sensitive carbonated drinks. Slip agent 2
Lumicene® M 4707 AP		0.947	0.7		
Lumicene® M 3670		0.941	3.5		Powder; black
Lumicene® M 3671		0.941	3.5		Pellets
Lumicene® M 4040		0.940	4.0		
Lumicene® M 4041 UV		0.940	4.0	730	Pellets
Lumicene® M 3581 UV		0.935	6.0	700	Pellets
Lumicene® M 3410 AP		0.934	0.9		
Lumicene® M 3421 UV		0.934	2.7	590	Pellets
Lumicene® M 3427		0.934	3.1		
Lumicene® M 2710 AP		0.927	0.9		
Lumicene® M 2711 PCA		0.927	1.2		Contains slip & antiblock additives
Lumicene® M 2735		0.927	3.5		
Lumicene® M 2310 AP		0.923	0.9		
Lumicene® M 1811 PCA		0.918	1.0		Contains slip & antiblock additives

Polyethylene complete range

	TYPE	MAIN PROPERTIES				SPECIFIC FEATURES
		Density g/cm³	**Melt flow index (2.16 kg - 190°C)** g/10 min	**Melt flow index (5kg - 190°C)** g/10 min	**Flexural modulus** MPa	
Lumicene® M 1810 AP	mPE	0.917	1.0			
Lumicene® M 1820 AP		0.918	2.0			
Lumicene® M 1835		0.918	3.5			
XRC20N RT	HDPE	0.947		0.2	1000	Natural - hexene-based compound primarily intended to protect highvoltage cable
XRC20B		0.958		0.23	1000	Black - High resistance to crack initiation and to slow crack growth
XSC 50 Orange		0.950		0.28	1000	Orange
XRT 70		0.947		0.7	750	PE-RT Type II; mono & multilayer pipes

Polyethylene complete range

	MAIN PROPERTIES						SPECIFIC FEATURES
	Density g/cm³	**Melt flow index (2.16kg - 190°C)** g/10 min	**Melt flow index (21.6kg - 190°C)** g/10 min	**Flexural modulus** MPa	**Charpy impact strength** kJ/m² (23°C)	**Charpy impact strength** kJ/m² (-30°C)	
HDPE							
ESD201B	0.995*		4.5	1200			Black conductive compound
2007 TN 61	0.961		52	1400			
2008 SN 60	0.961	0.80	52	1400	10		Rigid bottles for pasteurized and UHT milk, juices and soups
HD 6042	0.960	4.0		1400			Organo sensitive still drinks
HD 6081	0.960	8.0		1300			Organo sensitive still drinks
HD 6082	0.960	8.0		1300			Organo sensitive still drinks
2004 TN 52	0.954		22	1200			
5502	0.954	0.25	22	1200	16		
53090	0.953		9	1150	29	20	
56020 S	0.952		2.1	1100	75	50	Powder
56020 XP	0.952		1.4	1100	80	55	
51090	0.950		7	1050	29	20	
49080 UV	0.949		7	1000	30	22	
MS201B	0.949*	< 0.1	8	1100			Black
MS201N	0.949	< 0.1	8	1100			

** Density of black compound*

Polyethylene complete range

	MAIN PROPERTIES						SPECIFIC FEATURES
	Density g/cm³	**Melt flow index (2.16kg - 190°C)** g/10 min	**Melt flow index (21.6kg - 190°C)** g/10 min	**Flexural modulus** MPa	**Charpy impact strength**		
					kJ/m² (23°C)	kJ/m² (-30°C)	
MS201BN-NA	0.946	< 0.1	6	1000			
3802B	0.948*	0.2	20	700			Black PE80 grade
MS482	0.947	2	80	1050			
MDPE							
HR 515	0.942	0.22	17	810			
HT 514	0.938	0.15	14	740			
3802	0.938	0.2	20	700	20	8.0	
HF 513	0.934	0.15	14	620			

Polyethylene complete range

	MAIN PROPERTIES			FEATURES
	Density g/cm^3	**Melt flow index (2.16 kg - 190°C)** g/10 min	**Melting temperature** °C	
LDPE AUTOCLAVE process				
CD 0230	0.922	2.0	111	
CD 0230 DPI	0.922	2.0	111	Clean resin quality
FE 8000	0.924	0.8	111	
FE 8004	0.924	0.8	111	Slip and anti-block additives
LD 0304	0.924	4.0	111	Coating
1022 FN 24	0.923	2.3	110	Suitable for soft-lids, pull rings
1022 FH 24	0.923	2.3	110	
LA 0710	0.918	7.5	108	Coating
1070 MN 18 C	0.918	7.5	108	Suitable for soft-lids, pull rings
1200 MN 18 C	0.918	22	106	Suitable for soft-lids, pull rings
1700 MN 18 C	0.918	70	103	
LLC4				
Lotrène® Q1018 N	0.918	1.0	122	
Lotrène® Q1018 H	0.918	1.0	122	Slip and anti-block additives
Lotrène® Q2018C	0.918	2.0	121	
Lotrène® Q3018C	0.918	2.8	122	

Lotrène® polyethylene products are manufactured by Qatofin Company Ltd

Polyethylene complete range

	MAIN PROPERTIES			TYPICAL APPLICATIONS		
	VA %	**MI2 (2.16 kg - 190°C)** g/10 min	**Melting Temperature** °C	**Vicat Temperature** °C	**Elasticity Modulus**** MPa	**HFFR* Compounds**
EVA						
1005 VN 2	5.5	0.5	104			
1010 VN 3	9.0	1.5	98			
1020 VN 3	9.0	3.0	97			
1005 VN 35	12	0.5	93			
1003 VN 4	13.5	0.4	92			
1005 VN 4	14	0.7	91	72	65	X
1040 VN 4	14	4.5	90	68	62	X
1005 VN 5	17	0.7	89	69	56	X
1020 VN 5	17.5	2.0	87	64	50	X

** HFFR: Halogen Free Flame Retardant*
*** Property determined on molded plate*

TotalEnergies
TotalEnergies

Information contained in this publication is true and accurate at the time of publication and to the best of our knowledge. The nominal values stated herein are obtained using laboratory test specimens. Before using one of the products mentioned herein, customers and other users should take all care in determining the suitability of such product for the intended use. Unless specifically indicated, the products mentioned herein are not suitable for applications in the pharmaceutical or medical sector. The Companies within TotalEnergies Petrochemicals do not accept any liability whatsoever arising from the use of this information or the use, application or processing of any product described herein. No information contained in this publication can be considered as a suggestion to infringe patents. The Companies disclaim any liability that may be claimed for infringement or alleged infringement of patents.

Contact us at

polymers.europe@totalenergies.com

Find us at

polymers.totalenergies.com

Or by scanning the QR Code

TotalEnergies

TotalEnergies Petrochemicals & Refining
Refining & Chemicals Division
Polymers
Anspachlaan 1 bus 2 / Boulevard Anspach 1, boîte 2
1000 – Brussel/Bruxelles – België/Belgique
Email: polymers.europe@totalenergies.com
www.polymers.totalenergies.com

November 2024 - **quatrebis.fr**