

# Pipe & Industrial Sheet: *Hostalen* HDPE and *Petrothene* HDPE

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TYPICAL PROPERTIES	PHYSICAL			MECHANICAL					THERMAL	OTHER		SPECIFIC CHARACTERISTICS	TYPICAL APPLICATIONS
	MFR 190 °C/ 5 kg	MFR 190 °C/ 21.6 kg	Density	Tensile Modulus (sec., v=1mm/ min)	Tensile Stress at Yield (v=50mm/min)	Hardness shore D (3 sec.)	Charpy notched impact strength		Vicat Softening Point (49 N)	OIT (210 °C)	FNCT (4 MPa, 2% Arcopal, 80 °C)		
	ISO 1133-1		ISO 1183 A	ISO 527	ISO 527	ISO 868	at 23 °C	at -30 °C					
Test Method	g/10 min		g/cm <sup>3</sup>	MPa	MPa		kJ/m <sup>2</sup>		°C	min	h		
<b>Product grades – Hostalen</b>													
GM 5010 T3 Black	0.43	9.0	0.957	1050	22	59	24	8	70	30	> 100	PE80 HDPE black colour with high impact and stiffness (RAL 9004); pellets	Water, gas, wastewater and industrial pressure pipe systems; pipe lining; spiral wound and corrugated non-pressure pipes
CRP 100 Black	0.23	6.4	0.959	1100	23	63	26	13	74	30	> 1000	PE100 black colour (RAL 9004); excellent processing, good ESCR; pellets	Water, gas, wastewater and industrial pressure pipe systems; pipe lining; spiral wound and corrugated non-pressure pipes
CRP 100 RESIST CR Black	0.23	6.4	0.958	1100	23	63	26	13	74	30	> 8760	PE100-RC black colour; (RAL9004); High ESCR meets PAS1075; pellets	Water, gas, wastewater and industrial pressure pipes in challenging applications such as with sandless bedding; no dig installation and pipe lining
CRP100 Black (XL)	0.23	6.4	0.959	1100	23	63	26	13	74	30	> 1000	PE100 black colour (RAL9004), high melt viscosity; low sag; pellets	Larger diameter and thick-walled pressure pipe systems
CRP 100 RD Black	0.23	6.4	0.959	1100	23	63	26	13	74	30	> 1000	PE100 black colour (RAL9004); good (CC1) resistance to disinfectants; pellets	Drinking and industrial pipe systems exposed to higher disinfectant concentrations
CRP 100 RT Black	0.45	9.5	0.957	1050	22	59	24	8	70	40	350	PE100 (ISO 12162:2009) black colour (RAL9004), long term hydrostatic strength at raised temperatures; pellets	Power cable conduits and industrial pipe applications at temperatures above 40°C, where long term heat ageing stability is provided by a special stabilization package
CRP 100 W Blue	0.27	7.6	0.950	1050	23	62	26	13	74	30	> 1000	PE100 dark blue colour (similar RAL 5005); good ESCR, pellets	Drinking water pressure pipe systems acc. EN12201 / ISO4427 inc. pipe lining
CRP 100 RESIST CR W blue	0.27	7.3	0.950	1050	23	63	26	13	74	30	> 8760	PE100-RC dark blue colour (similar RAL5005); meets PAS1075; pellets	Drinking water pressure pipe systems acc. EN12201 / ISO4427 in challenging apps.
CRP 100 Orange	0.23	6.4	0.951	1050	23	62	29	15	74	30	> 1000	PE100, orange colour (similar RAL1033); good ESCR, pellets	Gas distribution pressure pipe systems acc. EN1555 / ISO4437 inc. pipe lining
CRP 100 RESIST CR Orange	0.27	7.3	0.950	1050	23	62	29	15	74	30	> 8760	PE100-RC orange colour (similar RAL1033); meets PAS1075; pellets	Gas pressure pipe systems acc. EN1555 / ISO4437 in challenging applications
GM 9310 C Black		4.5	1.000	1250	26	66	5	3	83	20		Semiconductive; HDPE black colour (RAL 9004); pellets	Pipes and sheets with lower surface resistivity for explosion-proof areas
<b>Product grades – Petrothene</b>													
KR52828E	1.1	21	0.956	900	23	61				30	40	HDPE, black colour, good weather resistance, good heat ageing resistance	jacketing of wire & cable, pressureless sewage pipes, cable conduits, microducts, extruded sheets, injection molded fittings
LR52800E	1.1	21	0.950	900	23	61				30	40	HDPE, natural colour, good heat ageing resistance	jacketing of wire & cable, pressureless sewage pipes, cable conduits, microducts, extruded sheets, injection molded fittings

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# Pipe & Industrial Sheet: Crosslinkable HDPE and PE-RT

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TYPICAL PROPERTIES	PHYSICAL				MECHANICAL				THERMAL		SPECIFIC CHARACTERISTICS	TYPICAL APPLICATIONS
	MFR 190 °C/ 2.16 kg	MFR 190 °C/ 5 kg	MFR 190 °C/ 21.6 kg	Density	Tensile Modulus (sec., v=1mm/ min)	Tensile Stress at Yield (v=50mm/min)	Hardness shore D (3 sec.)	Ball indentation hardness H132/30	Vicat Softening Point (9.8 N)	Vicat Softening Point (49 N)		
Test Method	ISO 1133-1			ISO 1183 A	ISO 527	ISO 527	ISO 868	ISO 2039-1	ISO 306/A	ISO 306/B		
Units	g/10 min			g/cm <sup>3</sup>	MPa	MPa		MPa	°C			
<b>Product grades – Lupolen</b>												
4261A Q416		0.5	8.5	0.946	850	24	62	40	125	75	x-linkable (Radiation); PE-Xc; HDPE; natural colour; pellets	Heating; plumbing and multilayer pipes (EN ISO 15875 / DIN 16892 / EN ISO 21003)
5261Z Q456			2.0	0.954	1100	27	65	52	132	80	x-linkable (Peroxide); PE-Xa; HDPE; natural colour; powder	Heating; plumbing; large bore pipes for gas/water; compression-molded sheets
5261Z Q456 B			3.0	0.954	1200	27	65	52	132	80	x-linkable (Peroxide); PE-Xa; HDPE; natural colour; powder; lower viscosity than 5261Z Q456	Heating; plumbing and multilayer pipes
5461B Q471		0.5	10.0	0.953	1100	28	64	49	130	79	x-linkable (Peroxide); PE-Xa; HDPE; natural colour; powder	Heating; plumbing and multilayer pipes
5461B Q471 B		0.7	15	0.953	1100	28	64	49	130	79	x-linkable (Peroxide); PE-Xa; HDPE; colour: natural; powder; lower viscosity than 5461B Q471	Heating; plumbing and multilayer pipes
UHM 5000				0.931	800	20	65			82	UHMW-PE with a typical average molar mass of 5 million g/mol; natural colour; powder	Compression moulded sheets and ram extruded products
<b>Product grades – Hostalen</b>												
4731B		0.45	9.5	0.947	850	22	59		128	70	PE-RT Type II; PE 100; natural colour; pellets; good processability, extremely high resistance to ageing	Heating; plumbing; multilayer pipes (ISO 24033 / EN ISO 22391 / DIN 16833 / EN ISO 21003)
4131B		2.2	18	0.941	650	23	58		125	70	PE-RT Type II with higher flexibility; natural colour; pellets; good processability, extremely high resistance to ageing	Underfloor heating; plumbing; multilayer pipes (ISO 24033 / EN ISO 22391 / DIN 16833 / EN ISO 21003)

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# Pipe & Industrial Sheet: *Hostalen PP*

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TYPICAL PROPERTIES	PHYSICAL		MECHANICAL						THERMAL	SPECIFIC CHARACTERISTICS	TYPE	COLOUR	TYPICAL APPLICATIONS
	MFR 230 °C/ 2.16 kg	MFR 230 °C/ 5 kg	Tensile Modulus (sec., v=1mm/ min)	Tensile Stress at Yield (v=50mm/min)	Tensile Strain at Yield (v=50mm/min)	Notched Charpy Impact			Vicat Softening Point A				
	ISO 1133-1		ISO 527-2			ISO 179/1eA			ISO 306/A				
Test Method	ISO 1133-1		ISO 527-2			ISO 179/1eA			ISO 306/A				
Units	g/10 min		MPa		%	kJ/m²			°C				
<b>Product grades – Hostalen PP</b>													
H2150	0.3	1.5	1500	36	11	30	4.3	-	158	High heat and extraction stability	PP-H	natural	Pipes; sheets; rods; fittings; profiles; punching boards; filterplates; blow molded parts
H2150 304850	0.3	1.3	1500	36	10	38	5	-	156	High heat and extraction stability	PP-H	grey (RAL 7032)	Pipes; sheets; rods; fittings; profiles; punching boards; filterplates; blow molded parts
H2450	0.3	1.3	1450	36	11	20	5	-	157	High heat and extraction stability; non-nucleated	PP-H	natural	Pipes; sheets; rods; fittings; profiles; punching boards; filterplates; blow molded parts
H2250 36	0.3	1.3	1500	36	12	26	6	-	157	High heat and extremely high extraction stability	PP-H	grey (RAL 7032)	Press. pipes; sheets; rods; housings; filterplates; fittings
H7350FLS 303064	0.4	2.0	1500	35	11	18	5	-	158	Flame retardant; not food approved	PP-H	grey (RAL 7037)	House drain-pipes; semifinished products
EPD60R	0.4	1.6	1100	26	15	54	18	3.5	151	Exc. impact strength; long-term heat & detergent resistance	PP-B	natural	Sheets; corrugated hoses; industrial pipes; conduits; profiles
H2464	0.3	1.3	1350	28	13	55	34	5	155	Excellent balance rigidity/impact; dimensional stability	PP-B	natural	Sewage/drainage pipes (EN1852/EN13476) profiles; blown and injection molded parts
H2483	0.3	1.3	1800	32	8	67	20	4.3	159	High stiffness, high impact; dimensional stability;	PP-B	natural	Sewage/drainage pipes (EN1852/EN13476) profiles; blown and injection molded parts
H2493	0.25	1.3	2000	38	8	50	4	2.5	-	Very high stiffness; impact; dimensional stability	PP-B	natural	Sewage/drainage pipes (EN1852/EN13476) profiles; blown and injection molded parts
H1022	0.3	1.3	1300	30	13	50	15	3	159	Basic stabilization; good heat aging resistance	PP-B	natural	Pipes; fittings; sheets; profiles; blow molded parts
H1022 12	0.3	1.3	1400	31	12	117	21	4	158	Basic stabilization; good heat aging resistance	PP-B	black	Pipes; fittings; sheets; profiles; blow molded parts
H2222 36	0.3	1.3	1350	30	12	50	13	5.8	158	High heat stability; extreme extraction stability	PP-B	grey (RAL 7032)	Press. pipes; sheets; profiles; filterplates; fittings
H2142 12	0.3	1.4	1500	34	12	54	5	2	150	High heat stability; weather resistance; low creep	PP-B	black	Mechanical-joint compression fittings (ISO14236); classified by ISO9080 as PP100
H4122 103220	0.3	1.3	1400	30	13	110	20	5.8	159	High heat, weather and extreme extraction stability	PP-B	black	Pipes; solar heat absorbers; corrugated pipes; fittings
N2122	2	-	1750	25	-	20	8	-	-	High stiffness, high impact at room temperature	PP-B	natural	Pipes, extrusion and injection moulding for sewage and electric cable conduit
XN125-P	0.2	1.1	850	26	12	60	8	-	-	High heat stability; extreme extraction stability;	PP-RCT	natural	Press. pipes (EN ISO15874); hot/cold water pipes; sheets and parts in chemical apparatus; classified by ISO9080 as PP125/PP-RCT
XN112-I	0.2	1.1	800	24	12	70	9.5	-	-	High heat stability; extreme extraction stability;	PP-RCT	natural	Press. pipes (EN ISO15874); hot/cold water pipes; sheets and parts in chemical apparatus; classified by ISO9080 as PP112/PP-RCT
H5416	0.3	1.3	850	24	13	89	12	-	132	High heat stability; extreme extraction stability; good impact	PP-R	natural	Press. pipes (EN ISO15874); hot/cold water pipes; sheets and parts in chem. apparatus; classified by ISO9080 as PP100

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**Mechanical properties tested on Injection molded Specimen, molding conditions acc. to ISO 1873-2**  
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# Pipe and Industrial Sheet: Polybutene-1

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TYPICAL PROPERTIES	PHYSICAL		MECHANICAL				THERMAL	COLOUR	SPECIFIC CHARACTERISTICS	TYPICAL APPLICATIONS
	MFR 190 °C/ 2.16 kg	Density	Flexural Modulus	Tensile Stress at Yield	Tensile stress at Break	Tensile strain at Break	Melting Temperature			
Test Method	ISO 1133-1	ISO 1183 A	ISO 178	ISO 527			DSC			
Units	g/10min	g/cm <sup>3</sup>	MPa	MPa	MPa	%	°C			
<b>Product grades</b>										
<i>Akoafloor</i> PB R509 Brown	0.7	0.93	370	15	35	300	124 - 126	Brown	Random copolymer	Underfloor heating pipe
<i>Akoafloor</i> PB R509	0.7	0.92	370	15	35	300	124 - 125	Natural	Random copolymer	Underfloor heating pipe
<i>Akoafloor</i> PB 4235-1 Ivory	0.6	0.93	450	17	30	225	127 - 129	Ivory	Homopolymer	Non-potable heating water pipe for radiator connections or underfloor heating
<i>Akoalit</i> PB 4237 Grey	0.4	0.938	450	17	30	200	127 - 129	Grey	Homopolymer	High-performance pipe material for potable hot and cold water distribution applications
<i>Akoalit</i> PB 4238 White	0.4	0.938	450	17	30	200	127 - 129	White	Homopolymer	High-performance pipe material for potable hot and cold water distribution applications
<i>Akoalit</i> PB 4267 Grey	0.6	0.925	450	17	30	225	127 - 129	Grey	Homopolymer	High-performance pipe material for potable hot and cold water distribution applications where improved organoleptic properties are required
<i>Akoalit</i> PB 4268 White	0.6	0.925	450	17	30	225	127 - 129	White	Homopolymer	High-performance pipe material for potable hot and cold water distribution applications where improved organoleptic properties are required
<i>Akoalit</i> PB DKG 300	2.0	1.325	6000	75	72	4.5	127 - 129	Natural	Homopolymer	Glass fibre reinforced high flow polybutene-1, typically used for fitting applications such as fitting bodies, support rings, etc. in combination with hot and cold potable water pipe installations

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