Pipe Coating

Polyethylene Topcoat & Adhesive Products

Product Grades	Physical				Mechanical					Thermal		Features and Typical Customer Applications
	Morphology	Color	MFR 190°C/ 2.16kg ISO 1133 g/10min	Density ISO 1183/A kg/dm³	Modulus of Elasticity ISO 178 / ISO 527 MPa	Tensile Stress at Yield ISO 527-2 MPa	Tensile Strain at Break ISO 527-2 %	ESCR(3) ASTM D1693-A h	Hardness Shore D ISO 868	Vicat Softening Point (9.81N) ISO 306/A °C	Melting Point (DSC) ISO 3146 °C	
LUPOLEN PE TOPCOAT												**TYPICALLY USED WITH *LUCALEN* PE ADHESIVE PRODUCTS**
Lupolen 4552D black	Pellet	Black	0.42	0.956	900(2)	> 25	> 700	> 1000	62	124	130	Multimodal HDPE topcoat used in operating temperatures from -40°C up to 85°C. Optimum thermal ageing resistance and UV protection.
LUCALEN PE ADHESIVE												**TYPICALLY USED WITH *LUPOLEN* PE TOPCOAT PRODUCTS**
Lucalen G3710E	Pellet	Natural	1.5	0.931	400(2)	12	> 700		51	≥ 100	125	Benchmark PE grafted adhesive selected for three-layer systems at low and elevated service temperatures from -40°C up to +85°C. Typically used with PE topcoat LP 4552D BLACK.
Lucalen A3110M	Pellet	Natural	7	0.928	74(1)	5	600		32	65	99	LDPE copolymer adhesive selected for three-layer systems based on ethylene acrylate acrylic acid polymer for operating temperatures from -40°C up to +70°C.
Lucalen A2910M	Pellet	Natural	7	0.927	84(2)	6	550		38	72	97	LDPE copolymer adhesive selected for two-layer systems based on ethylene acrylate acrylic acid polymer for operating temperatures from -25°C up to +60°C.

Values shown are not to be considered as product specifications

(1) Flexural modulus properties (2) Tensile modulus properties (3) ESCR – Environmental Stress Crack Resistance

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Pipe Coating

Polypropylene Topcoat & Adhesive Products

Product Grades	Physical				Mechanical						Thermal		Features And Typical Customer Applications
							Notched Izod Impact						
							23°C	-20°C					
	Morphology	Color	MFR 230°C / 2.16kg ISO 1133 g/10min	Density ISO 1183/A kg/dm³	Modulus of Elasticity ISO 178 / ISO 527 MPa	Tensile Stress at Yield[3] ISO 527-2 MPa	ISO 180/1A kJ/m²		ESCR[5] 50°C ASTM D1693-A h	Hardness Shore D ISO 868	Vicat Softening Point (9.81N) ISO 306/A °C	Melting Point (DSC) ISO 3146 °C	
***MOPLEN* COAT PP TOPCOAT**													**TYPICALLY USED WITH *HIFAX* PP ADHESIVE**
Moplen Coat EP/60 BIANCO	Pellet	White	0.8	0.91	1000[1]	22	40	4	> 3000	≥ 60	145	164	PP topcoat selected for very high operating temperatures from -20°C up to +140°C. Optimum thermal ageing resistance and UV protection.
Moplen Coat EPR/60 BIANCO[4]	Pellet	White	4	0.91	900[1]	20	70	10	> 3000		135	164	PP topcoat with very high impact resistance selected for low laying temperatures and very high operating temperatures from -30°C up to +130°C. Optimum thermal ageing resistance and UV protection.
***HIFAX* PP ADHESIVE**													**TYPICALLY USED WITH *MOPLEN* COAT PP TOP COAT**
Hifax EPR 60/BIANCO	Pellet	White	4	0.91	900[1]	20		≥ 3		60	135	164	PP grafted adhesive selected for very high operating temperatures from -20°C up to +140°C.
Hifax EPR 60/M BIANCO	Powder[6]	White	4	0.91	900[1]	20		≥ 3		60	135	164	PP grafted adhesive powder selected for very high operating temperatures from -20°C up to +140°C.
Hifax EP2 015/60	Pellet	Natural	10	0.90	700[1]	22		≥ 3		55	125	148	PP grafted adhesive selected for high operating temperatures from -20°C up to +120°C.
Hifax EP2 015/60M	Powder[6]	Natural	10	0.90	700[1]	22		≥ 3		55	125	148	PP grafted adhesive powder selected for high operating temperatures from -20°C up to +120°C.
Hifax EP2A53	Pellet	Natural	10	0.90	600[1]	15		≥ 3		> 50	110	148	PP grafted adhesive selected for thick coating or for low laying temperatures and standard operating temperatures from -30°C up to +110°C.
Hifax EP5 10/60M BIANCO	Powder[6]	White	9	0.91	700[1]	16		≥ 3		55	110	140	PP grafted adhesive powder selected for standard operating temperatures from -20°C up to 110°C.

Values shown are not to be considered as product specifications

(1) Flexural modulus properties (2) Tensile modulus properties (3) Tensile strain at Break: ≥ 400% for all listed products (ISO 527-2) (4) Izod notched at -30°C: 6 KJ/m² (ISO 180/1A) (5) ESCR – Environmental Stress Crack Resistance (6) Powder particle size distribution range= 90–500 µm (ASTM D1921)

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Pipe Coating

Polypropylene for Special Coating Applications

Product Grades	Physical				Mechanical						Thermal		Features and Typical Customer Applications
								Notched Izod Impact					
								23°C	-20°C				
	Morphology	Color	MFR 230°C / 2.16kg ISO 1133 g/10min	Density ISO 1183/A kg/dm³	Modulus of Elasticity ISO 178 / ISO 527 MPa	Tensile Stress at Yield ISO 527-2 MPa	Tensile Strain at Break ISO 527-2 %	ISO 180/1A kJ/m²		Hardness Shore D ISO 868	Vicat Softening Point (9.81 N) ISO 306/A °C	Melting Point (DSC) ISO 3146 °C	
FIELD JOINT													
Hifax EPR 60/M BIANCO	Powder[4]	White	4.0	0.91	900[1]	20	> 400			60	135	164	Grafted PP powder selected for field joint coating applied by flame spray under very high operating temperatures ≤140°C.
Hifax EP5 10/60M BIANCO	Powder[4]	White	9.0	0.91	700[1]	16	> 400			55	110	140	Grafted PP powder selected for field joint coating applied by flame spray under standard operating temperatures ≤110°C.
Hifax CA197J WHITE	Pellet	White	8.0	0.91	500[1]	16	> 400	18	≥ 3	55	105	140	PP resin selected for field joint coating using injection molding under standard operating temperatures ≤100°C.
MULTILAYER COATING FOR DEEP WATER APPLICATION													
Hifax EBS153D NAT	Pellet	Natural	4.5	0.90	650[1]	13	> 400	60		50	115	> 140	PP compound selected for improved thermal insulation in multilayer syntactic coating.
Hifax EKS157D NAT	Pellet	Natural	6.0	0.90	1300[1]	17.0	> 150	10	5	60	140	> 160	PP compound selected for improved thermal insulation in multilayer syntactic coating.
Hifax TBD 100 DZ	Pellet	Brown	4.5	2.3[3]	400[1]	4.5	> 200	NB				140	High density PP selected for weight coating.
Moplen EP340K	Pellet	Natural	4.0	0.90	1100[2]	20	> 50	66	13	46	140	165	PP impact copolymer selected for improved thermal insulation in multilayer syntactic coating.
Moplen EP240H	Pellet	Natural	2.0	0.90	1100[2]	23	> 50	60	8		148	165	PP impact copolymer selected for improved thermal insulation in foamed multilayer coating.[5]

Values shown are not to be considered as product specifications

(1) Flexural modulus properties (2) Tensile modulus properties (3) Density of *Hifax* TBD100DZ natural resin= 0.9 kg/dm³ (4) Powder particle size distribution range= 90–500 µm (ASTM D1921)
(5) Alternative impact copolymers for improved thermal insulation in foamed multi-layer coating are *Moplen* EP310D, and the high stiffness *Hostalen* H2464 and *Hostalen* H2483 impact copolymer products.

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