

POLYESTER

catalogue

About US

Eskim Kimya Sanayi ve Ticaret A.Ş. established in 1975 by Mr. Yılmaz Tezgoren and was founded as a collective company and began in May 2004 their commercial activities and continues with his title in the chemical Industry. Having more than 45 years of knowledge and experience in the industry and which takes a lot of attention to developing innovative products, customer expectation, service, exceptional quality, and on-time delivery.

Eskim, is placed on an area of 25.000 m2 which is 15.000 m2 closed with 130 personals and has an annual production capacity of 50.000 tons. All Eskim products "modern paints" and "polyester resins" are produced by using the latest automation technology machines.

In particular, we are producing furniture for various industrial groups of paints, preservatives semi-finished, varnishes, putty for car repair, in many different unsaturated polyester resins like vinyl ester, ISO, thixotropic, alkyds, pigment pastes, acrylic paints and gelcoats.

As an indicator of all these, the quality of our products has been registered in Europe and worldwide with the certificates shown below,

ISO 9001- Quality Management System

14001- Environmental Management Systems

45001- Health and Safety Management Systems

27001- Information Security Management System

TSE- Compliance with Turkish Standards

EN 71-3- Safety of Toys / Migration of Some Elements

Lloyd's Register- Certificate of Approval of a Polyester Resin

Eskim, works with international 80 companies and with more than 55-60 countries Worldwide and mostly exported to Asia, EU, USA, and Africa Countries.

Our factory puts contributing to manufacture products with accretion value and has an active role of innovation for the base of corporate strategy. Its leading R&D investments aim to provide the market with innovative products in Turkey. Eskim, provides products by supporting technical information and applications of paints and resins for their customers. Moreover, we also receive support from different national and international universities and research organizations in scientific studies.

Since 1975 which is open to developing day to day their product types with a solution-oriented team of experts and expanding their business relationship of import and export. Our main goal is to contribute to the sector by always striving better.

Eskim Kimya Sanayi ve Ticaret A.Ş.



CASTING TYPE POLYESTERS

Product Name	ES - 1043	ES - 1060	ES - 1070	ES - 1080	ES - 1090	ES - 1095
Product Description	Acrylic Modified Casting Type Solid Surface Polyester	Casting Type Polyester	Casting Type Polyester	Casting Type Solid Surface Polyester	Acrylic Modified Casting Type Solid Surface Polyester	Acrylic Modified Casting Type Solid Surface Polyester
Chemical Structure	Orthophthalic	Orthophthalic	Orthophthalic Terephthalic	Isophthalic	ISO/NPG	ISO/NPG
Density (20°C gr/cm ³)	1,14 ± 0,02	1,16 ± 0,02	1,12 ± 0,02	1,11 ± 0,02	1,09 ± 0,02	1,10 ± 0,02
Viscosity (cps)	550 ± 50	450 ± 50	350 ± 50	550 ± 100	1050 ± 100	650 ± 100
Monomer Content (%)	36 ± 3	34 ± 3	39 ± 3	37 ± 3	33 ± 3	36 ± 3
Gel time (min)	3 ± 1	5 ± 1	6 ± 1	9 ± 2	9 ± 1	10 ± 2
Tmax (°C)	200 ± 10	150 ± 10	175 ± 10	210 ± 10	165 ± 10	190 ± 10
Tensile Strenght (MPa)	60 ± 5	65 ± 6	65 ± 6	65 ± 5	135 ± 10	65 ± 5
E-Modulus Tensile (GPa)	4 ± 0,4	3 ± 0,3	3,3 ± 0,4	3,8 ± 0,1	4,4 ± 0,4	3,9 ± 0,1
Elongation at Break Tensile (%)	3 ± 0,3	7 ± 0,7	7 ± 0,7	3,7 ± 0,3	1,8 ± 0,2	4,7 ± 0,3
Flexural Strenght (MPa)	110 ± 10	120 ± 10	120 ± 10	115 ± 10	70 ± 5	140 ± 10
E-Modulus (GPa) Flexural	3,5 ± 0,4	2,7 ± 0,3	2,8 ± 0,3	3,7 ± 0,2	5,0 ± 0,5	4,0 ± 0,2
Heat Deflection Temperature (HDT), (°C)	52 ± 3	60 ± 5	70 ± 5	115 ± 5	70 ± 5	90 ± 5
Impact Strenght (kJ/m ²)	10 ± 2	-	11 ± 2	10 ± 5	14 ± 2	11 ± 5
Highlights	*High UV Resistance *High Heat Capacity *High Mechanical Resistance*High Filling Capacity *Suitable for Food Contact	*Medium Reactivity *Flexible * Accepts High Filler Ratio	*Medium Reactivity *Flexible *Accepts High Filler Ratio	*High UV Resistance *High Chemical and Heat Resistance *High Filling Capacity	*High Resistance to Atmospheric Conditions *Medium Reactivity *Works Well With ATH and Granule Solid Surface Chips *Excellent Heat and Chemical Resistant	*Good Mechanical Properties *Special ISO/NPG Structure *High Chemical Resistance
Remarks	ES10, ES20	ES10, ES20	ES9, ES26	ES20, ES28	ES5, ES20	ES5, ES20



GENERAL PURPOSE and FIBER TYPE

Product Name	ES - 2500	ES - 2590 LR	ES - 2592
Product Description	General Purpose Polyester	General Purpose Polyester	General Purpose Fiber Type Polyester
Chemical Structure	Orthophthalic	Orthophthalic	Orthophthalic
Density (20°C gr/cm ³)	1,16 ± 0,02	1,11 ± 0,02	1,13 ± 0,02
Viscosity (cps)	450 ± 50	450 ± 50	550 ± 50
Monomer Content (%)	35 ± 3	35 ± 3	37 ± 3
Gel time (min)	10 ± 1	12 ± 2	9 ± 2
Tmax (°C)	160 ± 10	175 ± 10	160 ± 10
Tensile Strenght (MPa)	60 ± 6	65 ± 5	75 ± 5
E-Modulus Tensile (GPa)	3,2 ± 0,3	3,6 ± 0,3	3,5 ± 0,3
Elongation at Break Tensile (%)	7 ± 0,7	5 ± 0,3	2,5 ± 0,2
Flexural Strenght (MPa)	100 ± 10	120 ± 10	120 ± 10
E-Modulus (GPa) Flexural	3,0 ± 0,3	3,4 ± 0,3	4,0 ± 0,2
Heat Deflection Temperature (HDT), (°C)	50 ± 5	60 ± 5	60 ± 5
Impact Strenght (kJ/m ²)	11 ± 2	11 ± 2	7 ± 1
Highlights	*Medium Reactivity *High Mechanical Resistance	*Lloyd's Register Approved *Medium Reactivity *High Mechanical Resistance	*Medium Reactivity *High Mechanical Resistance *Conformity to BS 6920-1, 2.6 Standard
Remarks	ES1, ES20	ES1, ES20	ES1, ES20



Certificate Of Approval Of A Vinyl Ester Resin

Manufacturer Eskim Kimya Sanayi ve Ticaret A.S.
Address Organize Sanayi Bolgesi 6. Cadde No:2, Eskisehir, 26110, Turkey
Type Vinyl Ester Resin
Resin ESVIN 1020
Application Laminating resin
Characteristics Base resin
Applicable LR Rules Lloyd's Register Rules for the Manufacture, Testing and Certification of Materials

Expiry Date: 03/07/2025



Certificate Of Approval Of A Gel Coat

Manufacturer Eskim Kimya Sanayi ve Ticaret A.S.
Address Organize Sanayi Bolgesi 6. Cadde No:2, Eskisehir, 26110, Turkey
Type Isophthalic / Neopentylglycol
Resin ES-6000
Application Gelcoat resin

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Certificate No: LR2006706ALP
Issue Date: 27/07/2020
Expiry Date: 26/07/2025

Certificate Of Approval Of A Polyester Resin

Manufacturer Eskim Kimya Sanayi ve Ticaret A.S.
Address Organize Sanayi Bolgesi 6. Cadde No:2, Eskisehir, 26110, Turkey
Product
Type
Resin
Applica
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Certificate Of Approval Of A Polyester Resin

Manufact

LLOYD'S REGISTER APPROVED
POLYESTERS



Product Name	ESVIN 1020	ES - 2590 LR	ES - 2620	ES - 6000 L
Product Description	Vinyl Ester Resin	General Purpose Polyester	Chemically Resistant Polyester	ISO/NPG Based Gelcoat Polyester
Chemical Structure	Bisphenol A-Epoxy	Orthophthalic	Isophthalic	ISO/NPG
Density (20°C gr/cm ³)	1,06 ± 0,02	1,11 ± 0,02	1,12 ± 0.02	1,10 ± 0.02
Viscosity (cps)	550 ± 50	450 ± 50	650 ± 50	750 ± 100
Monomer Content (%)	40 ± 3	35 ± 3	35 ± 3	35 ± 3
Gel time (min)	30 ± 10	12 ± 2	6 ± 1	6 ± 3
Tmax (°C)	165 ± 10	175 ± 10	190 ± 10	195 ± 10
Tensile Strenght (MPa)	65 ± 5	65 ± 5	65 ± 5	65 ± 5
E-Modulus Tensile (GPa)	3,6 ± 0,4	3,6 ± 0,3	3,9 ± 0,1	3.9 ± 0.1
Elongation at Break Tensile (%)	4,2 ± 0,2	5 ± 0,3	3,5 ± 0,3	5.3 ± 0.3
Flexural Strenght (MPa)	140 ± 10	120 ± 10	130 ± 10	136 ± 10
E-Modulus (GPa) Flexural	3,6 ± 0,3	3,4 ± 0,3	3,8 ± 0,2	3.5 ± 0.2
Heat Deflection Temperature (HDT), (°C)	120 ± 5	60 ± 5	85 ± 5	90 ± 5
Impact Strenght (kJ/m ²)	21 ± 2	11 ± 2	-	14 ± 2
Highlights	*Lloyd's Register Approved *Medium Viscosity *High Mechanical Properties *High Temperature Resistance	*Lloyd's Register Approved *Medium Reactivity *High Mechanical Resistance	*Lloyd's Register Approved *High Chemical Resistance *Withstand Long Periods at Temperatures Up to 150 °C *Conformity to BS6920-1	*Lloyd's Register Approved *Medium Reactivity *High Mechanical Resistance
Remarks	ES18, ES20	ES1, ES20	ES1, ES20	ES1, ES20



CHEMICALLY RESISTANT POLYESTER

Product Name	ES - 1080	ES - 1090	ES - 1095
Product Description	Casting Type Solid Surface Polyester	Acrylic Modified Casting Type Solid Surface Polyester	Acrylic Modified Casting Type Solid Surface Polyester
Chemical Structure	Isophthalic	ISO/NPG	ISO/NPG
Density (20°C gr/cm ³)	1,11 ± 0,02	1,09 ± 0,02	1,10 ± 0,02
Viscosity (cps)	550 ± 100	1050 ± 100	650 ± 100
Monomer Content (%)	37 ± 3	33 ± 3	36 ± 3
Gel time (min)	9 ± 2	9 ± 1	10 ± 2
Tmax (°C)	210 ± 10	165 ± 10	190 ± 10
Tensile Strenght (MPa)	65 ± 5	135 ± 10	65 ± 5
E-Modulus Tensile (GPa)	3,8 ± 0,1	4,4 ± 0,4	135 ± 10
Elongation at Break Tensile (%)	3,7 ± 0,3	1,8 ± 0,2	4,7 ± 0,3
Flexural Strenght (MPa)	115 ± 10	70 ± 5	140 ± 10
E-Modulus (GPa) Flexural	3,7 ± 0,2	5,0 ± 0,5	4,0 ± 0,2
Heat Deflection Temperature (HDT), (°C)	115 ± 5	70 ± 5	90 ± 5
Impact Strenght (kJ/m ²)	10 ± 5	14 ± 2	11 ± 5
Highlights	*High UV Resistance *High Chemical and Heat Resistance *High Filling Capacity	*High Resistance to Atmospheric Conditions *Medium Reactivity *Works Well With ATH and Granule Solid Surface Chips *Excellent Heat and Chemical Resistant	*Good Mechanical Properties *Special ISO/NPG Structure *High Chemical Resistance
Remarks	ES20, ES28	ES5, ES20	ES5, ES20



Product Name	ES - 2620	ES - 2620 TIX	ES - 2620 PR	ES - 2630
Product Description	Chemically Resistant Polyester	IPA Based Thixotropic Chemically Resistant Polyester	IPA Based Thixotropic Pipe Relining Polyester	Chemically Resistant Polyester
Chemical Structure	Isophthalic	Isophthalic	Isophthalic	Isophthalic
Density (20°C gr/cm ³)	1,12 ± 0.02	1,10 ± 0,02	1,11 ± 0,02	1,11 ± 0,02
Viscosity (cps)	650 ± 50	2300 ± 200 (5 rpm) 800 ± 100 (50 rpm)	2600 ± 250 (5 rpm) 1000 ± 200 (50 rpm)	650 ± 50
Monomer Content (%)	35 ± 3	40 ± 3	36 ± 3	35 ± 3
Gel time (min)	6 ± 1	11 ± 1	27 ± 3 1 - 3 (80 °C)	10 ± 2
Tmax (°C)	190 ± 10	185 ± 10	120 ± 10	180 ± 10
Tensile Strenght (MPa)	65 ± 5	72 ± 5	65 ± 5	70 ± 5
E-Modulus Tensile (GPa)	3.9 ± 0.1	3,5 ± 0,3	3,9 ± 0,1	3,5 ± 0,3
Elongation at Break Tensile (%)	3.5 ± 0.3	3,5 ± 0,3	3,5 ± 0,3	2,0 ± 0,3
Flexural Strenght (MPa)	130 ± 10	135 ± 10	130 ± 10	115 ± 10
E-Modulus (GPa) Flexural	3.8 ± 0.2	3,6 ± 0,3	3,8 ± 0,2	4,3 ± 0,3
Heat Deflection Temperature (HDT), (°C)	85 ± 5	90 ± 5	85 ± 5	80 ± 5
Impact Strenght (kJ/m ²)	-	-	-	9 ± 5
Highlights	*Lloyd's Register Approved *High Chemical Resistance *Withstand Long Periods at Temperatures Up to 150 °C *Conformity to BS6920-1	*Lloyd's Register Approved *High Temperature Resistance *High Chemical Resistance *Low Styrene Emission	*High Temperature Resistance *High Chemical Resistance	*High Chemical Resistance *Withstand Long Periods at Temperatures Up to 150 °C
Remarks	ES1, ES20	ES4, ES21	ES1, ES14, ES21	ES1, ES20

Product Name	ES - 2635	ES - 3010	ES - 3015
Product Description	Chemically Resistant Polyester	Isophthalic Based SMC/BMC Polyester	ISO/NPG Based SMC/BMC Polyester
Chemical Structure	Isophthalic	Isophthalic	ISO/NPG
Density (20°C gr/cm³)	1,12 ± 0,02	1,11 ± 0,02	1,10 ± 0,02
Viscosity (cps)	500 ± 20	1200 ± 100	1100 ± 50
Monomer Content (%)	35 ± 3	35 ± 3	35 ± 3
Gel time (min)	5 ± 1	6 ± 1 / 12 ± 2	6 ± 1 / 20 ± 1
Tmax (°C)	155 ± 10	245 ± 5	245 ± 10
Tensile Strenght (MPa)	50 ± 2	70 ± 5	68 ± 5
E-Modulus Tensile (GPa)	3,0 ± 0,2	3,6 ± 0,1	3,8 ± 0,1
Elongation at Break Tensile (%)	5,0 ± 0,2	2,1 ± 0,2	2,6 ± 0,2
Flexural Strenght (MPa)	100 ± 10	125 ± 10	120 ± 10
E-Modulus (GPa) Flexural	3,2 ± 0,2	3,7 ± 0,1	3,9 ± 0,1
Heat Deflection Temperature (HDT), (°C)	50 ± 5	130 ± 5	125 ± 5
Impact Strenght (kJ/m²)	-	9 ± 2	11 ± 2
Highlights	*High Chemical Resistance *Medium Reactivity	*Very High Reactivity *Excellent Mechanical Properties *Suitable Use With Thermoplastic *Chemical Resistance	*Very Bright and Smooth Surface *Suitable Use With Thermoplastic *Chemical Resistance
Remarks	ES1, ES20	ES15, ES16, ES20	ES15, ES16, ES20



LAMINATION TYPE POLYESTER

Product Name	ES - 2454	ES - 2455	ES - 2456
Product Description	Continuous Lamination Type Polyester	Continuous Lamination Type Polyester	Continuous Flexible Lamination Type Polyester
Chemical Structure	Orthophthalic	Orthophthalic	Orthophthalic DCPD
Density (20°C gr/cm ³)	1,12 ± 0,02	1,12 ± 0,02	1,12 ± 0,02
Viscosity (cps)	200 ± 50	250 ± 50	200 ± 50
Monomer Content (%)	40 ± 3	40 ± 3	42 ± 3
Gel time (min)	10 ± 2	7 ± 2	10 ± 2
Tmax (°C)	220 ± 10	190 ± 10	230 ± 10
Tensile Strength (MPa)	50 ± 5	60 ± 5	65 ± 5
E-Modulus Tensile (GPa)	3,2 ± 0,3	3,5 ± 0,3	3,5 ± 0,3
Elongation at Break Tensile (%)	1,7 ± 0,2	1,8 ± 0,2	2,8 ± 0,3
Flexural Strength (MPa)	120 ± 10	130 ± 10	110 ± 10
E-Modulus (GPa) Flexural	3,3 ± 0,3	4,2 ± 0,4	2,8 ± 0,3
Heat Deflection Temperature (HDT), (°C)	80 ± 5	70 ± 5	85 ± 5
Impact Strength (kJ/m ²)	11 ± 2	12 ± 2	10 ± 2
Highlights	*High HDT *Low Viscosity *Brighter *High Reactivity	*Low Viscosity *High Reactivity	*Low Viscosity *High Reactivity
Remarks	ES2, ES20	ES2, ES20	ES2, ES20



DCPD TYPE
POLYESTER

Product Name	ES - 2146 A	ES - 2596	ES - 2599	ES - 2790
Product Description	DCPD Type Polyesters	DCPD Type Polyesters	DCPD Type Polyesters	DCPD Based RTM Type Polyester
Chemical Structure	DCPD	DCPD	DCPD	DCPD
Density (20°C gr/cm ³)	1,12 ± 0,02	1,13 ± 0,02	1,12 ± 0,02	1,11 ± 0,02
Viscosity (cps)	450 ± 50	350 ± 50	300 ± 50	250 ± 50
Monomer Content (%)	35 ± 3	35 ± 3	35 ± 3	38 ± 3
Gel time (min)	9 ± 1	5 ± 2	6 ± 2 3-8	5 ± 1
Tmax (°C)	185 ± 10	175 ± 15	215 ± 10	200 ± 10
Tensile Strenght (MPa)	50 ± 5	65 ± 6	60 ± 6	65 ± 5
E-Modulus Tensile (GPa)	5,5 ± 0,5	4,8 ± 0,4	4,1 ± 0,4	3,3 ± 0,3
Elongation at Break Tensile (%)	1,1 ± 0,2	1,3 ± 0,3	2,3 ± 0,3	4,0 ± 0,5
Flexural Strenght (MPa)	85 ± 10	90 ± 10	100 ± 10	120 ± 10
E-Modulus (GPa) Flexural	3,5 ± 0,3	3,8 ± 0,3	3,0 ± 0,3	3,0 ± 0,3
Heat Deflection Temperature (HDT), (°C)	80 ± 5	68 ± 5	110 ± 5	80 ± 5
Impact Strenght (kJ/m ²)	7 ± 2	9,6 ± 2	9,6 ± 2	7 ± 1
Highlights	*Medium Reactivity *Medium Viscosity *High Flexibility *High Filler Capacity	*Medium Reactivity *Low Viscosity *High Flexibility *High Filler Capacity *Not Leave Sticky	*High Reactivity *Low Viscosity *High Flexibility *High Filler Capacity *Not Leave Sticky *High Mechanical Properties	*Medium-High Reactivity *Low Viscosity *High Flexibility *High Mechanical Properties
Remarks	ES1, ES20	ES1, ES20	ES1, ES20, ES33, ES34	ES4, ES20



PIPE TYPE
POLYESTER

Product Name	ES - 2800	ES - 2815	ES - 2830	ES - 2830 TIX	ES - 2620 PR
Product Description	General Purpose Pipe Type Polyester	High HDT Pipe Type Polyester	TPA Based Pipe Type Polyester	Terephthalic Based Thixotropic Pipe Type Polyester	IPA Based Thixotropic Pipe Relining Polyester
Chemical Structure	Orthophthalic	Orthophthalic	Terephthalic	Terephthalic	Isophthalic
Density (20°C gr/cm ³)	1,10 ± 0,02	1,10 ± 0,02	1,09 ± 0,02	1,09 ± 0,02	1,11 ± 0,02
Viscosity (cps)	180 - 270	180 - 225	200 - 300	1500 ± 200 (5 rpm) 600 ± 200 (50 rpm)	2600 ± 250 (5 rpm) 1000 ± 200 (50 rpm)
Monomer Content (%)	40 ± 3	45 ± 3	45 ± 3	45 ± 3	36 ± 3
Gel time (min)	10 - 20 (25-35 °C) 12-24 (25-max °C) mak 40	4 - 8 (25-35 °C) 5-9 (25-max °C) mak 25	8 - 20 (25-35 °C) 10-24 (25-max °C) mak 40	15 ± 2	27 ± 3 1 - 3 (80 °C)
Tmax (°C)	170 ± 10	210 ± 10	200 ± 10	180 ± 10	120 ± 10
Tensile Strenght (MPa)	70 ± 5	75 ± 5	70 ± 5	65 ± 5	65 ± 5
E-Modulus Tensile (GPa)	3,7 ± 0,4	3,6 ± 0,1	4,1 ± 0,4	4,8 ± 0,4	3,9 ± 0,1
Elongation at Break Tensile (%)	2,7 ± 0,3	3,4 ± 0,3	1,5 ± 0,1	1,3 ± 0,3	3,5 ± 0,3
Flexural Strenght (MPa)	130 ± 10	130 ± 5	130 ± 10	90 ± 10	130 ± 10
E-Modulus (GPa) Flexural	3,7 ± 0,4	3,5 ± 0,2	3,6 ± 0,4	3,8 ± 0,3	3,8 ± 0,2
Heat Deflection Temperature (HDT), (°C)	85 ± 5	95 ± 5	80 ± 5	68 ± 5	85 ± 5
Impact Strenght (kJ/m ²)	-	-	-	9,6 ± 2	-
Highlights	*Medium Reactivity *Excellent Mechanical Properties *Resistance to Atmospheric Conditions	*Medium-High Reactivity *Excellent Mechanical Properties *Resistance to Atmospheric Conditions	*Medium Reactivity *Excellent Mechanical Properties *High Chemical Resistance *Low Exotherm *Low Viscosity	*Very Bright and Smooth Surface *Good Mechanical Properties *Good Resistance To High Temperature	*High Temperature Resistance *High Chemical Resistance
Remarks	ES12, ES25	ES37, ES38	ES12, ES26	ES3, ES21	ES1, ES14, ES21



MOLD POLYESTER & GELCOAT

Product Name	ES - 2770	ES - 2780
Product Description	Filled Mold Polyester With Non-Shrinkage	Filled Mold Gelcoat With Non-Shrinkage
Chemical Structure	Orthophthalic / Filler	Vinyl Ester
Density (20°C gr/cm³)	1,39 ± 0,02	1,350 ± 0,02
Viscosity (cps)	5000 ± 1000 1300 ± 500	5500 ± 500
Monomer Content (%)	28 ± 3	23 ± 3
Gel time (min)	30 ± 5	16 ± 3
Tmax (°C)	105 ± 10	120 ± 10
Heat Deflection Temperature (HDT), (°C)	75 ± 5	120 ± 5
LOI	37 - 38	-
UL - 94	V0	-
Highlights	*Medium Reactivity *Halogen Free *Filler	*Matched Tooling System *Excellent Chemical and Heat Resistance *Good Impact Resistance *Excellent Surface Finish, can be polished to high gloss *Zero Shrinkage
Remarks	ES13, ES21	ES20, ES31



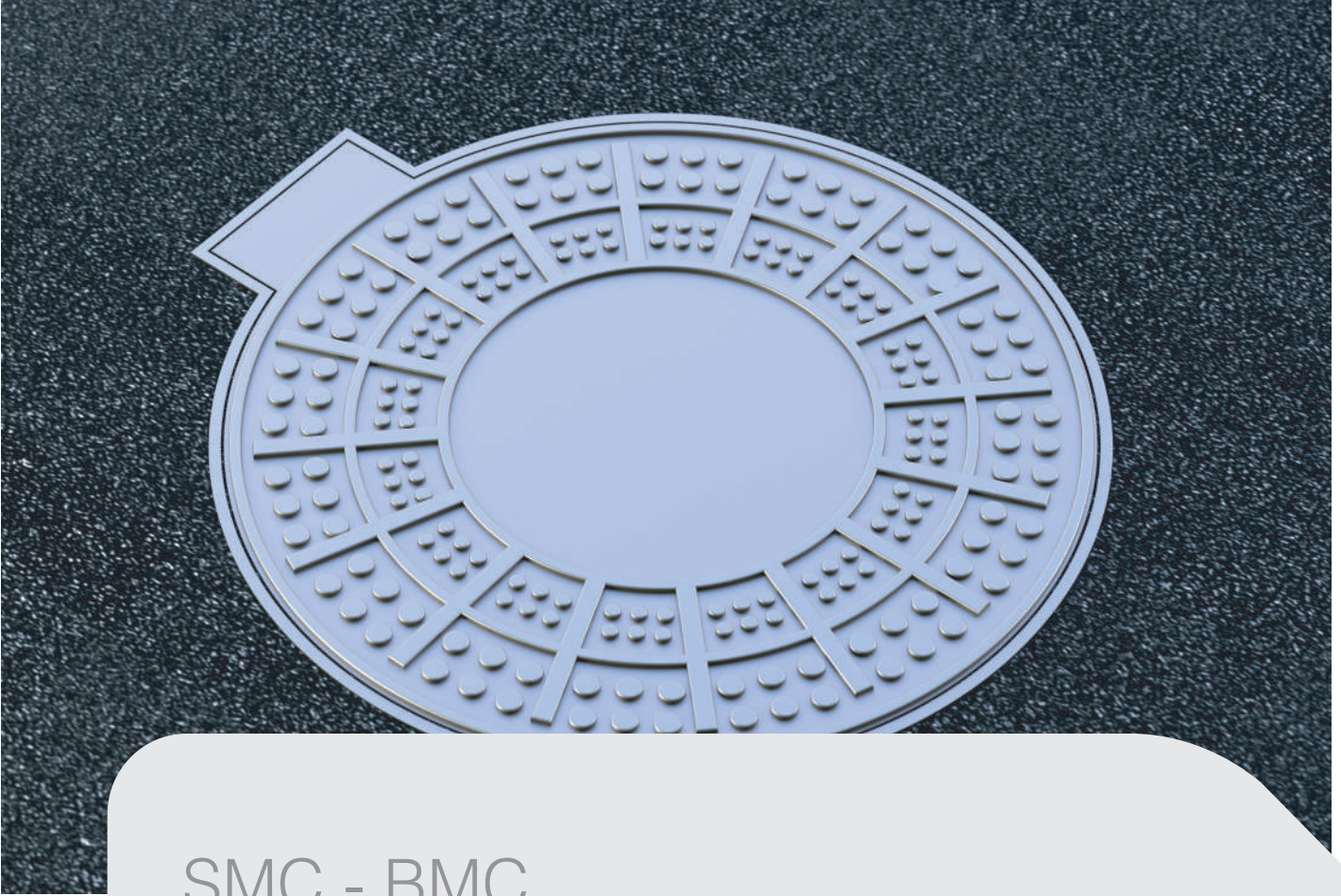
RTM - VARTM
TYPE POLYESTER

Product Name	ES - 2700	ES - 2720	ES - 2790
Product Description	RTM Type Polyester	RTM Type Polyester	RTM Type Polyester
Chemical Structure	ISO/NPG	Orthophthalic	DCPD
Density (20°C gr/cm³)	1,08 ± 0,02	1,10 ± 0,02	1,11 ± 0,02
Viscosity (cps)	350 ± 50	250 ± 50	250 ± 50
Monomer Content (%)	40 ± 2	40 ± 3	38 ± 3
Gel time (min)	6 ± 1	12 ± 2	5 ± 1
Tmax (°C)	210 ± 10	180 ± 10	200 ± 10
Tensile Strenght (MPa)	60 ± 5	65 ± 5	65 ± 5
E-Modulus Tensile (GPa)	3,3 ± 0,3	3,8 ± 0,3	3,3 ± 0,3
Elongation at Break Tensile (%)	4,5 ± 0,5	2,2 ± 0,2	4,0 ± 0,5
Flexural Strenght (MPa)	115 ± 10	120 ± 10	120 ± 10
E-Modulus (GPa) Flexural	3,0 ± 0,3	4,0 ± 1,0	3,0 ± 0,3
Heat Deflection Temperature (HDT), (°C)	115 ± 5	85 ± 5	80 ± 5
Impact Strenght (kJ/m²)	9,5 ± 1	11 ± 1	7 ± 1
Highlights	*High HDT and Tg *Medium Viscosity *Medium-High Reactivity *High Thermal Resistant	*Medium Reactivity *Low Viscosity	*Medium-High Reactivity *Low Viscosity *High Flexibility *High Mechanical Properties
Remarks	ES1, ES20	ES4, ES20	ES4, ES20



BUTTON TYPE POLYESTERS

Product Name	ES - 5000	ES - 5010	ES - 5020
Product Description	Centrifuge Casting Button A Type Polyester	Rod Casting Button Type Polyester	Centrifuge Casting Button B Type Polyester
Chemical Structure	Orthophthalic	Orthophthalic	Orthophthalic
Density (20°C gr/cm ³)	1,13 ± 0,02	1,16 ± 0,02	1,15 ± 0,02
Viscosity (cps)	800 ± 50	1900 ± 100	750 ± 50
Monomer Content (%)	30 ± 3	35 ± 3	30 ± 3
Gel time (min)	4 ± 1	6 ± 1	5 ± 1
Tmax (°C)	145 ± 10	145 ± 10	145 ± 10
Tensile Strenght (MPa)	65 ± 5	65 ± 5	55 ± 5
E-Modulus Tensile (GPa)	3,5 ± 0,3	3,7 ± 0,3	3,9 ± 0,3
Elongation at Break Tensile (%)	2,0 ± 0,2	2,5 ± 0,2	2,1 ± 0,2
Flexural Strenght (MPa)	130 ± 10	120 ± 10	130 ± 10
E-Modulus (GPa) Flexural	2,9 ± 0,3	2,9 ± 0,3	3,0 ± 0,3
Heat Deflection Temperature (HDT), (°C)	55 ± 5	55 ± 5	55 ± 5
Impact Strenght (kJ/m ²)	-	-	-
Highlights	<ul style="list-style-type: none"> *Low-Medium Reactivity *It Allows Rapid Molding Because of Its Short Gel Time *Excellent Compatibility With Pigment Pastes and Pearlescent *It Does Not Contain Any Heavy Metal *Shiny Products *More Flexible 	<ul style="list-style-type: none"> *Low-Medium Reactivity *It Allows Rapid Molding Because of Its Short Gel Time *Excellent Compatibility With Pigment Pastes and Pearlescent *It Does Not Contain Any Heavy Metal 	<ul style="list-style-type: none"> *Low-Medium Reactivity *It Allows Rapid Molding Because of Its Short Gel Time *Excellent Compatibility With Pigment Pastes and Pearlescent *It Does Not Contain Any Heavy Metal
Remarks	ES19, ES20	ES19, ES20	ES19, ES20



SMC - BMC
TYPE POLYESTER

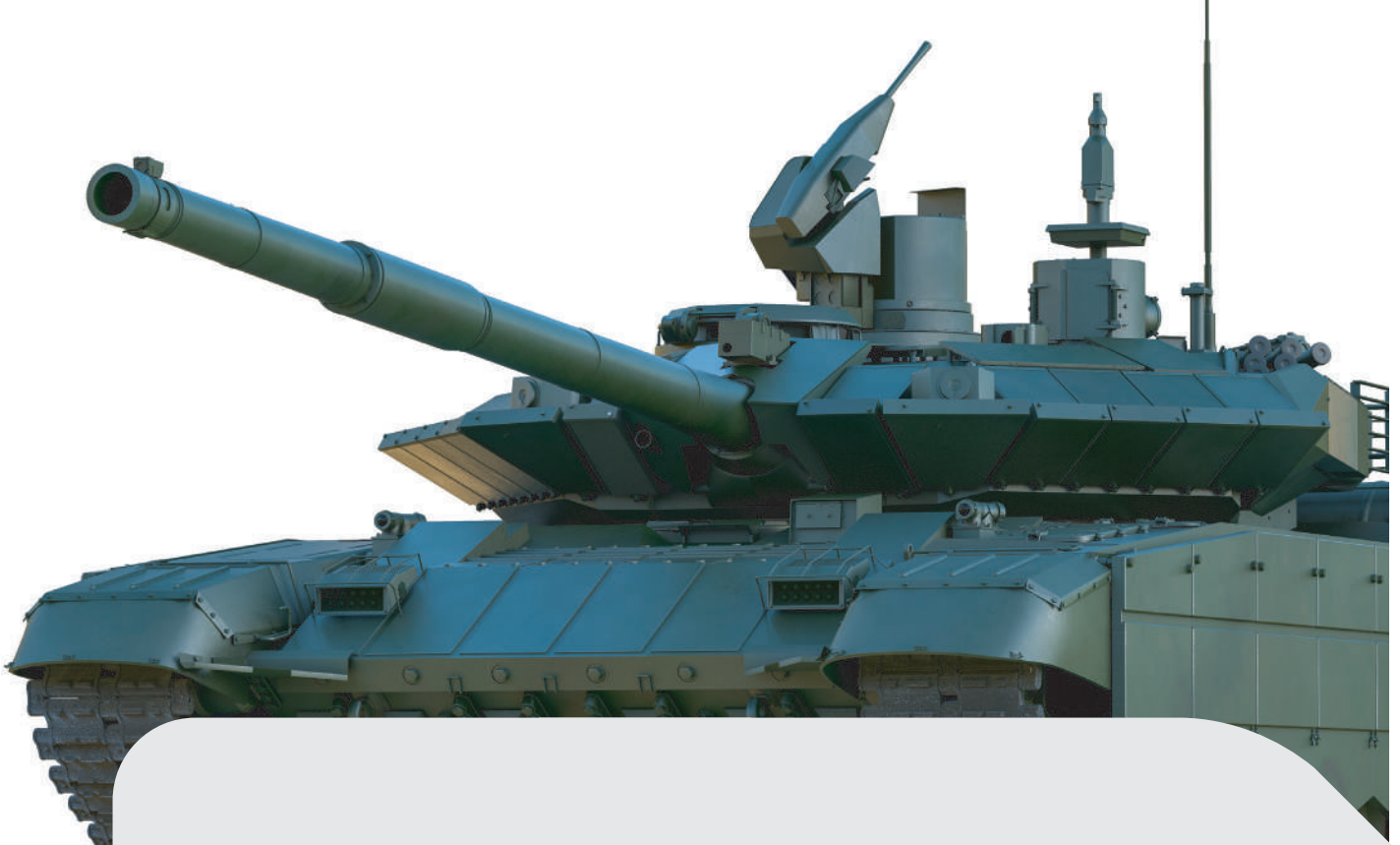
Product Name	ES - 3000	ES - 3003	ES - 3004	ES - 3006	ES - 3007
Product Description	High Reactivity SMC/BMC Polyester	General Purpose SMC/BMC Type Polyester	High Gloss SMC/BMC Type Polyester	General Purpose SMC/BMC Type Polyester	General Purpose SMC/BMC Type Polyester
Chemical Structure	Orthophthalic	Orthophthalic	Orthophthalic	Orthophthalic	Orthophthalic
Density (20°C gr/cm ³)	1,12 ± 0,02	1,11 ± 0,02	1,10 ± 0,02	1,11 ± 0,02	1,11 ± 0,02
Viscosity (cps)	1200 ± 100	1200 ± 100	1200 ± 100	1150 ± 100	1150 ± 100
Monomer Content (%)	35 ± 3	35 ± 3	37 ± 3	35 ± 3	35 ± 3
Gel time (min)	5 ± 1 / 14 ± 2	7 ± 1 / 14 ± 2	7 ± 1 / 14 ± 2	7 ± 1 / 14 ± 2	2 ± 0,5 / 6 ± 1
Tmax (°C)	210 ± 20	245 ± 5	245 ± 5	240 ± 10	240 ± 10
Tensile Strenght (MPa)	65 ± 5	68 ± 5	60 ± 5	65 ± 5	65 ± 5
E-Modulus Tensile (GPa)	3,1 ± 0,1	3,7 ± 0,1	3,4 ± 0,1	3,8 ± 0,1	3,8 ± 0,1
Elongation at Break Tensile (%)	2,0 ± 0,2	2,4 ± 0,2	2,7 ± 0,2	2,5 ± 0,2	2,5 ± 0,2
Flexural Strenght (MPa)	120 ± 10	120 ± 10	105 ± 10	110 ± 10	110 ± 10
E-Modulus (GPa) Flexural	3,7 ± 0,1	3,8 ± 0,1	3,7 ± 0,1	3,9 ± 0,1	3,9 ± 0,1
Heat Deflection Temperature (HDT), (°C)	115 ± 5	130 ± 5	130 ± 5	125 ± 5	130 ± 5
Impact Strenght (kJ/m ²)	7 ± 2	9 ± 2	13 ± 2	10 ± 2	10 ± 2
Highlights	*Very High Reactivity *Excellent Mechanical Properties *Suitable Use With Thermoplastic *Fast Thickening Behaviour With MgO	*Very High Reactivity *Excellent Mechanical Properties *Suitable Use With Thermoplastic *Fast Thickening Behaviour With MgO	*High Reactivity *Very Bright and Smooth Surface *Suitable Use With Thermoplastic *Fast Thickening Behaviour With MgO	*Suitable Use With Thermoplastic *Fast Thickening Behaviour With MgO *Shows Very Well Wetting Properties on Inorganic Fillers	*Excellent Mechanical Properties With High Filler Wetting *Suitable Use With Thermoplastic *Fast Thickening Behaviour With MgO
Remarks	ES15, ES16, ES20	ES15, ES16, ES20	ES15, ES16, ES20	ES15, ES16, ES20	ES15, ES16, ES20

Product Name	ES - 3010	ES - 3015	ES - 3020	ES - 3060
Product Description	Isophthalic Based SMC/BMC Polyester	ISO/NPG Based SMC/BMC Polyester	High Performance SMC/BMC Type Polyester	Economical SMC/BMC Type Polyester
Chemical Structure	Isophthalic	ISO/NPG	Full Maleic	Orthophthalic
Density (20°C gr/cm ³)	1,11 ± 0,02	1,10 ± 0,02	1,11 ± 0,02	1,11 ± 0,02
Viscosity (cps)	1200 ± 100	1100 ± 50	1900 ± 100	1050 ± 150
Monomer Content (%)	35 ± 3	35 ± 3	34 ± 3	37 ± 3
Gel time (min)	6 ± 1 / 12 ± 2	6 ± 1 / 20 ± 1	6 ± 1 / 18 ± 2	5 ± 1 / 12 ± 2
Tmax (°C)	245 ± 5	245 ± 10	255 ± 10	240 ± 10
Tensile Strenght (MPa)	70 ± 5	68 ± 5	55 ± 5	65 ± 5
E-Modulus Tensile (GPa)	3,6 ± 0,1	3,8 ± 0,1	3,5 ± 0,1	3,4 ± 0,1
Elongation at Break Tensile (%)	2,1 ± 0,2	2,6 ± 0,2	1,4 ± 0,2	2,0 ± 0,2
Flexural Strenght (MPa)	125 ± 10	120 ± 10	95 ± 10	140 ± 10
E-Modulus (GPa) Flexural	3,7 ± 0,1	3,9 ± 0,1	3,5 ± 0,1	3,9 ± 0,1
Heat Deflection Temperature (HDT), (°C)	130 ± 5	125 ± 5	140 ± 5	100 ± 5
Impact Strenght (kJ/m ²)	9 ± 2	11 ± 2	7 ± 2	10 ± 2
Highlights	<ul style="list-style-type: none"> *Very High Reactivity *Excellent Mechanical Properties *Suitable Use With Thermoplastic *Chemical Resistance 	<ul style="list-style-type: none"> *Very Bright and Smooth Surface *Suitable Use With Thermoplastic *Chemical Resistance 	<ul style="list-style-type: none"> *High Reactivity *Suitable Use With Thermoplastic *Fast Thickening Behaviour With MgO 	<ul style="list-style-type: none"> *Very Bright and Smooth Surface *Good Mechanical Properties *Good Resistance To High Temperature
Remarks	ES15, ES16, ES20	ES15, ES16, ES20	ES15, ES16, ES20	ES15, ES16, ES20



PUTTY TYPE POLYESTERS

Product Name	ES - 7010	ES - 7030	ES - 7035
Product Description	DCPD Based Putty Type Polyester	DCPD Based Putty Type Polyester	DCPD Based Putty Type Marble Adhesive Polyester
Chemical Structure	DCPD	DCPD	DCPD
Density (20°C gr/cm ³)	1,11 ± 0,02	1,11 ± 0,02	1,13 ± 0,02
Viscosity (cps)	450 ± 50	450 ± 50	350 ± 50
Monomer Content (%)	36 ± 2	38 ± 3	37 ± 3
Gel time (min)	8 ± 1	6 ± 1	5 ± 1
Tmax (°C)	85 ± 10	130 ± 10	-
Highlights	<ul style="list-style-type: none"> *Amine Accelerated *Medium Reactivity *Flexible *High Filler Capacity *Ability to Cure in Low Temperature *Excellent Shelf Life *Can be easily sticks to the galvanized, aluminum and polyester surfaces 	<ul style="list-style-type: none"> *Amine Accelerated *Medium Reactivity *Flexible *High Filler Capacity *Ability to Cure in Low Temperature *Excellent Shelf Life *Can be easily sticks to the galvanized, aluminum and polyester surfaces 	<ul style="list-style-type: none"> *Amine Accelerated *Medium Reactivity *Flexible *High Filler Capacity *Ability to Cure in Low Temperature *Excellent Shelf Life *Can be easily sticks to the galvanized, aluminum and polyester surfaces
Remarks	ES11, ES20	ES11, ES20	ES11, ES20



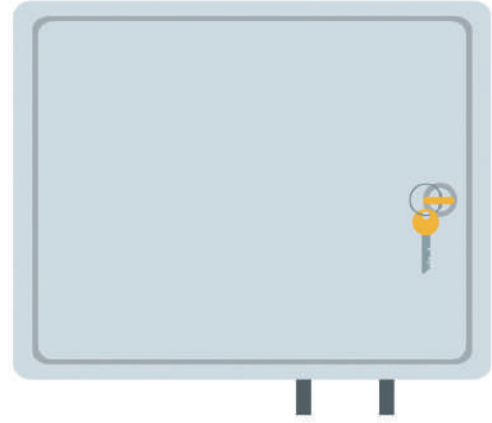
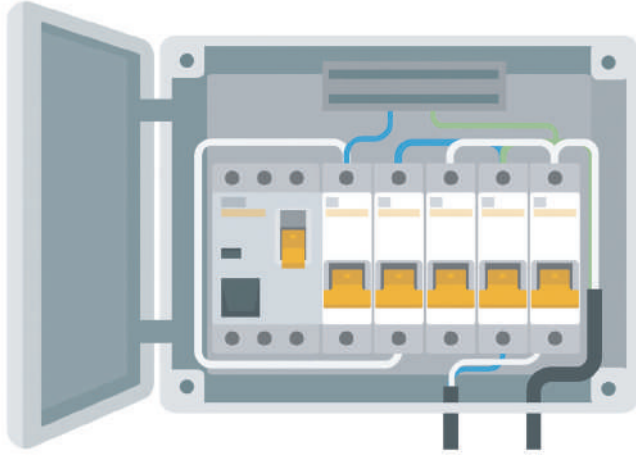
VINYL ESTER RESINS

Product Name	ESVIN - 1020	ES - 1020 TIX	ES - 1025	ES - 1025 TIX
Product Description	Vinyl Ester Resin	Thixotropic Vinyl Ester Resin	DCPD/Vinyl Ester Hybrid Resin	Thixotropic DCPD/Vinyl Ester Hybrid Resin
Chemical Structure	Bisphenol A - Epoxy	Bisphenol A - Epoxy	DCPD/VE	DCPD/VE
Density (20°C gr/cm³)	1,06 ± 0,02	1,05 ± 0,02	1,08 ± 0,02	1,07 ± 0,02
Viscosity (cps)	550 ± 50	2400 ± 200 (5 rpm) 850 ± 200 (50 rpm)	450 ± 50	2300 ± 200 (5 rpm) 750 ± 200 (50 rpm)
Monomer Content (%)	40 ± 3	43 ± 3	38 ± 3	43 ± 3
Gel time (min)	30 ± 10	30 ± 5	30 ± 5	25 ± 5
Tmax (°C)	165 ± 10	170 ± 10	200 ± 10	195 ± 10
Tensile Strenght (MPa)	65 ± 5	65 ± 5	65 ± 5	65 ± 5
E-Modulus Tensile (GPa)	3,6 ± 0,4	3,6 ± 0,4	3,6 ± 0,4	3,6 ± 0,4
Elongation at Break Tensile (%)	4,2 ± 0,2	4,2 ± 0,2	2,4 ± 0,2	2,4 ± 0,2
Flexural Strenght (MPa)	140 ± 10	140 ± 10	130 ± 10	130 ± 10
E-Modulus (GPa) Flexural	3,6 ± 0,3	3,6 ± 0,3	3,1 ± 0,3	3,1 ± 0,3
Heat Deflection Temperature (HDT), (°C)	120 ± 5	120 ± 5	105 ± 5	105 ± 5
Impact Strenght (kJ/m²)	21 ± 2	21 ± 2	10 ± 2	10 ± 2
Highlights	*Lloyd's Register Approved *Medium Viscosity *High Mechanical Properties *High Temperature Resistance	*Lloyd's Register Approved *Medium Viscosity *High Mechanical Properties *High Temperature Resistance	*Medium Viscosity *High Mechanical Properties *High Temperature Resistance	*Medium Viscosity *High Mechanical Properties *High Temperature Resistance
Remarks	ES18, ES20	ES1, ES4, ES21	ES18, ES20	ES5, ES21



PLASTICIZER -SOFTENER
TYPE POLYESTERS

	ES - 7050	ES - 7051	ES - 7052
Product Name	ES - 7050	ES - 7051	ES - 7052
Product Description	Plasticizer – Softener Type Polyester	Plasticizer – Softener Type Polyester	Plasticizer – Softener Type Polyester
Chemical Structure	Orthophthalic	Orthophthalic	Orthophthalic
Density (20°C gr/cm³)	1,10 ± 0,02	1,13 ± 0,02	1,13 ± 0,02
Viscosity (cps)	700 ± 100	250 ± 50	250 ± 50
Monomer Content (%)	15 ± 3	35 ± 3	34 ± 2
Gel time (min)	15 ± 3	15 ± 2	12 ± 2
Highlights	*Low Viscosity *High Flexibility	*Low Viscosity *High Flexibility *High Filler Capacity *Not Leave Sticky	*Low Viscosity *High Flexibility *High Filler Capacity *No Tackiness
Remarks	ES1, ES20	ES1, ES20	ES1, ES20



FLAME RETARDANT POLYESTERS

Product Name	ES - 2750	ES - 2760	ES - 2768	ES - 2770
Product Description	HET Acid Based Flame Retardant Polyester	Rod Casting Button Type Polyester	Flame Retardant Filler White Polyester	Filled Mold Polyester With Non-Shrinkage
Chemical Structure	HET	Orthophthalic /Filler	Orthophthalic /Filler	Orthophthalic /Filler
Density (20°C gr/cm ³)	1,25 ± 0,02	1,52 ± 0,02	1,52 ± 0,02	1,39 ± 0,02
Viscosity (cps)	500 ± 100	4100 ± 200 1000 ± 100	850 ± 150	5000 ± 1000 1300 ± 500
Monomer Content (%)	37 ± 3	24 ± 3	25 ± 3	28 ± 3
Gel time (min)	7 ± 1	14 ± 2	14 ± 2	30 ± 5
Tmax (°C)	195 ± 10	-	-	105 ± 10
Tensile Strenght (MPa)	45 ± 5	50 ± 5	50 ± 5	-
E-Modulus Tensile (GPa)	4,0 ± 0,4	4,0 ± 0,4	4,0 ± 0,4	-
Elongation at Break Tensile (%)	1,5 ± 0,3	1,2 ± 0,1	1,2 ± 0,1	-
Flexural Strenght (MPa)	65 ± 5	95 ± 10	95 ± 10	-
E-Modulus (GPa) Flexural	3.0 ± 0.3	4.3 ± 0.3	4.3 ± 0.3	-
Heat Deflection Temperature (HDT), (°C)	75 ± 5	90 ± 5	90 ± 5	75 ± 5
Impact Strenght (kJ/m ²)	7 ± 2	8 ± 2	8 ± 2	-
LOI	27-29	35 - 37	37 - 38	37 - 38
UL - 94	V0	V0	V0	V0
Highlights	*Medium Reactivity *Halogenated *Unfilled	*Medium Reactivity *Halogen Free *Filler	*Medium Reactivity *Halogen Free *Filler	*Medium Reactivity *Halogen Free *Filler
Remarks	ES1, ES20	ES3, ES21	ES30, ES31	ES13, ES21



THIXOTROPIC POLYESTERS

Product Name	ES - 1020 TIX	ES - 1025 TIX	ES - 2141 TIX	ES - 2142 TIX	ES - 2143 TIX
Product Description	Thixotropic Vinyl Ester Resin	Thixotropic DCPD/Vinyl Ester Hybrid Resin	Fiber Type Thixotropic Polyester	Low Styrene Emission Thixotropic Polyester	Fiber Type Ortho-DCPD Based Thixotropic Polyester
Chemical Structure	Bisphenol A - Epoxy	DCPD/VE	Orthophthalic	Orthophthalic	Ortho-DCPD
Density (20°C gr/cm³)	1,05 ± 0,02	1,07 ± 0,02	1,11 ± 0,02	1,11 ± 0,02	1,11 ± 0,02
Viscosity (cps)	2400 ± 200 (5 rpm) 850 ± 200 (50 rpm)	2300 ± 200 (5 rpm) 750 ± 200 (50 rpm)	2200 ± 200 (5 rpm) 600 ± 150 (50 rpm)	2100 ± 200 (5 rpm) 700 ± 100 (50 rpm)	1700 ± 500 (5 rpm) 550 ± 150 (50 rpm)
Monomer Content (%)	43 ± 3	43 ± 3	45 ± 3	45 ± 3	40 ± 3
Gel time (min)	30 ± 5	25 ± 5	12 ± 3	14 ± 2	25 ± 5
Tmax (°C)	170 ± 10	195 ± 10	165 ± 10	95 ± 10	145 ± 10
Tensile Strenght (MPa)	65 ± 5	65 ± 5	65 ± 5	50 ± 5	60 ± 5
E-Modulus Tensile (GPa)	3,6 ± 0,4	3,6 ± 0,4	3,7 ± 0,4	3,3 ± 0,3	3,7 ± 0,4
Elongation at Break Tensile (%)	2,0 ± 0,2	2,4 ± 0,2	2,1 ± 0,2	2,5 ± 0,2	2,0 ± 0,2
Flexural Strenght (MPa)	140 ± 10	130 ± 10	130 ± 10	100 ± 10	130 ± 10
E-Modulus (GPa) Flexural	3,6 ± 0,3	3,1 ± 0,3	3,8 ± 0,4	4,0 ± 0,4	3,5 ± 0,3
Heat Deflection Temperature (HDT), (°C)	120 ± 5	105 ± 5	60 ± 5	60 ± 5	75 ± 5
Impact Strenght (kJ/m²)	21 ± 2	10 ± 2	6,5 ± 2	5 ± 1	-
Highlights	*Lloyd's Register Approved *Medium Viscosity *High Mechanical Properties *High Temperature Resistance	*Medium Viscosity *High Mechanical Properties *High Temperature Resistance	*Good Mechanical Properties *Low Styrene Emission Type Available *Low Deformation	*Suitable for Thick Layer Application due to Low Peak Exotherm *Low Styrene Emission Type Available	* Good mechanical Properties *Low Styrene Emission Type Available *Low Deformation
Remarks	ES1, ES4, ES21	ES5, ES21	ES4, ES21	ES4, ES21	ES5, ES21

Product Name	ES - 2144 TIX	ES - 2145 TIX	ES - 2146 TIX	ES - 2146 TIX White	ES - 2150 TIX
Product Description	Fiber Type Thixotropic Polyester	IPA Based Thixotropic Chemically Resistant Polyester	Fiber Type Ortho-DCPD Based Thixotropic Polyester	Fiber Type Ortho-DCPD Based White Thixotropic Polyester	General Purpose Thixotropic Polyester
Chemical Structure	Orthophthalic	Isophthalic	Ortho-DCPD	Ortho-DCPD	Orthophthalic
Density (20°C gr/cm³)	1,14 ± 0,02	1,10 ± 0,02	1,13 ± 0,02	1,13 ± 0,02	1,12 ± 0,02
Viscosity (cps)	1350 ± 200 (5 rpm) 500 ± 200 (50 rpm)	2300 ± 200 (5 rpm) 800 ± 100 (50 rpm)	1800 ± 500 (5 rpm) 650 ± 100 (50 rpm)	1800 ± 500 (5 rpm) 650 ± 100 (50 rpm)	2400 ± 200 (5 rpm) 900 ± 100 (50 rpm)
Monomer Content (%)	39 ± 3	40 ± 3	40 ± 3	40 ± 3	40 ± 3
Gel time (min)	25 ± 5	11 ± 1	25 ± 5	25 ± 5	25 ± 5
Tmax (°C)	140 ± 10	185 ± 10	155 ± 15	155 ± 15	155 ± 10
Tensile Strenght (MPa)	60 ± 5	72 ± 5	65 ± 6	65 ± 6	65 ± 6
E-Modulus Tensile (GPa)	3,2 ± 0,4	3,5 ± 0,3	4,8 ± 0,4	4,8 ± 0,4	4,8 ± 0,4
Elongation at Break Tensile (%)	3,0 ± 0,3	3,5 ± 0,3	1,3 ± 0,3	1,3 ± 0,3	1,3 ± 0,3
Flexural Strenght (MPa)	100 ± 10	135 ± 10	90 ± 10	90 ± 10	90 ± 10
E-Modulus (GPa) Flexural	3,2 ± 0,4	3,6 ± 0,3	3,8 ± 0,3	3,8 ± 0,3	3,8 ± 0,3
Heat Deflection Temperature (HDT), (°C)	50 ± 5	90 ± 5	68 ± 5	68 ± 5	68 ± 5
Impact Strenght (kJ/m²)	8 ± 2	-	9,6 ± 2	9,6 ± 2	8 ± 2
Highlights	*Good Mechanical Properties *Low Styrene Emission	*High Temperature Resistance *High Chemical Resistance *Low Styrene Emission	*Good Mechanical Properties *Low Styrene Emission	*Good Mechanical Properties *Low Styrene Emission	*Good Mechanical Properties *Low Styrene Emission
Remarks	ES3, ES23	ES4, ES21	ES5, ES21	ES5, ES21	ES4, ES21



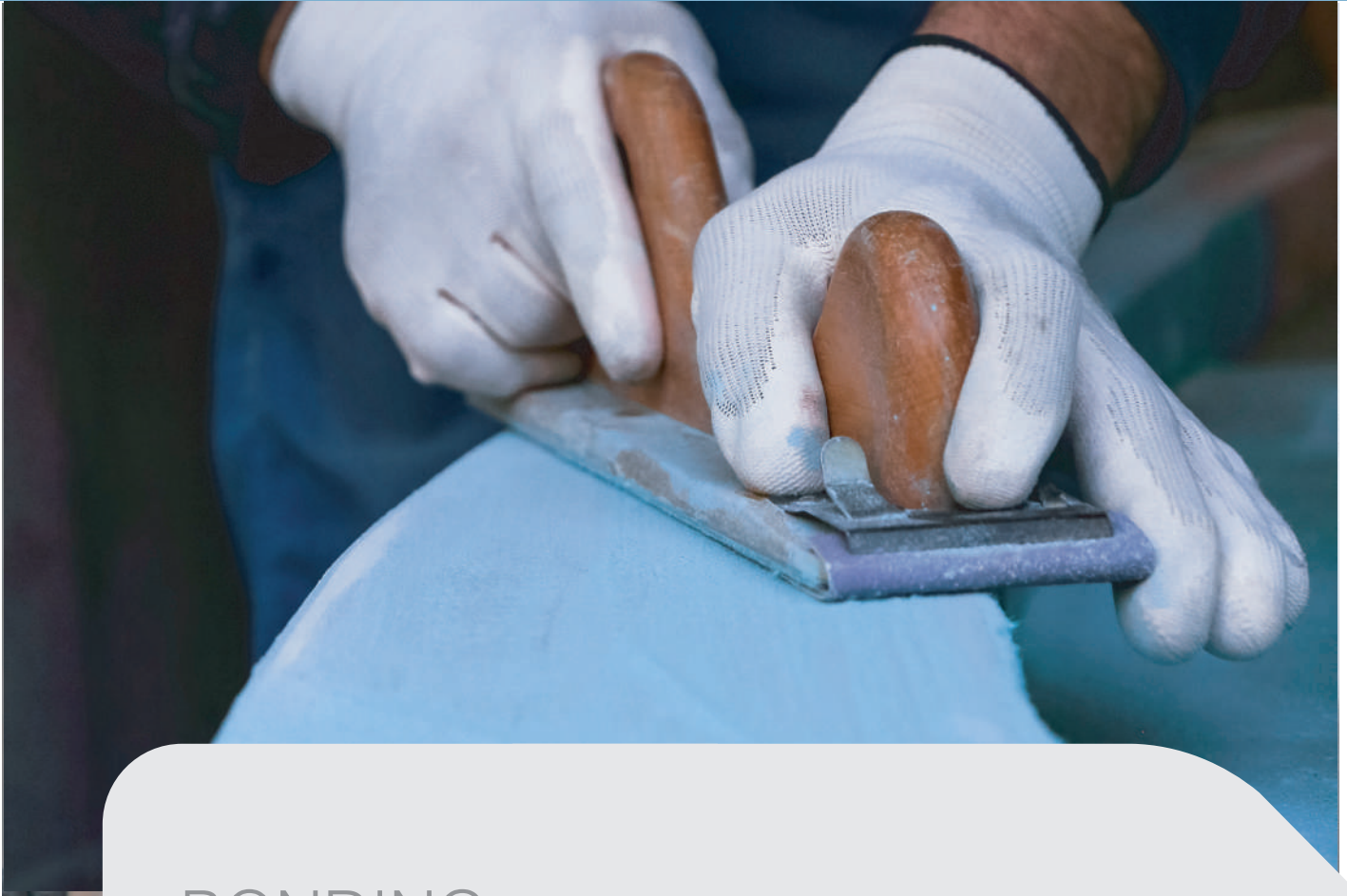
Product Name	ES - 2505 TIX	ES - 2590 TIX	ES - 2620 TIX	ES - 2620 PR	ES - 2815 TIX	ES - 2830 TIX
Product Description	Ortho-DCPD Based Thixotropic Polyester	Fiber Type Thixotropic Polyester	IPA Based Thixotropic Chemically Resistant Polyester	IPA Based Thixotropic Pipe Relining Polyester	High HDT Thixotropic Polyester	Terephthalic Based Thixotropic Pipe Type Polyester
Chemical Structure	Ortho-DCPD	Orthophthalic	Isophthalic	Isophthalic	Orthophthalic	Terephthalic
Density (20°C gr/cm ³)	1,13 ± 0,02	1,11 ± 0,02	1,10 ± 0,02	1,11 ± 0,02	1,10 ± 0,02	1,09 ± 0,02
Viscosity (cps)	1850 ± 200 (5 rpm) 800 ± 100 (50 rpm)	1400 ± 200 (5 rpm) 500 ± 100 (50 rpm)	2300 ± 200 (5 rpm) 800 ± 100 (50 rpm)	2600 ± 250 (5 rpm) 1000 ± 200 (50 rpm)	4000 ± 1000 (2 rpm) 700 ± 100 (20 rpm)	1500 ± 200 (5 rpm) 600 ± 200 (50 rpm)
Monomer Content (%)	38 ± 3	40 ± 3	40 ± 3	36 ± 3	43 ± 3	45 ± 3
Gel time (min)	15 ± 3	20 ± 3	11 ± 1	27 ± 3 1 - 3 (80 °C)	20 ± 5	15 ± 2
Tmax (°C)	170 ± 10	170 ± 10	185 ± 10	120 ± 10	195 ± 10	180 ± 10
Tensile Strenght (MPa)	65 ± 6	65 ± 5	72 ± 5	65 ± 5	75 ± 5	65 ± 5
E-Modulus Tensile (GPa)	4,8 ± 0,4	3,6 ± 0,3	3,5 ± 0,3	3,9 ± 0,1	3,6 ± 0,1	4,8 ± 0,4
Elongation at Break Tensile (%)	1,3 ± 0,3	5,0 ± 0,3	3,5 ± 0,3	3,5 ± 0,3	3,4 ± 0,3	1,3 ± 0,3
Flexural Strenght (MPa)	95 ± 10	120 ± 10	135 ± 10	130 ± 10	130 ± 5	90 ± 10
E-Modulus (GPa) Flexural	3,8 ± 0,3	3,4 ± 0,3	3,6 ± 0,3	3,8 ± 0,2	3,5 ± 0,2	3,8 ± 0,3
Heat Deflection Temperature (HDT), (°C)	65 ± 5	60 ± 5	90 ± 5	85 ± 5	95 ± 5	68 ± 5
Impact Strenght (kJ/m ²)	6 ± 2	-	-	-	-	9,6 ± 2
Highlights	*Good Mechanical Properties *Low Styrene Emission	*Lloyd's Register Approved *Good Mechanical Properties *Low Styrene Emission *Low Deformation	*Lloyd's Register Approved *High Temperature Resistance *High Chemical Resistance *Low Styrene Emission	*High Temperature Resistance *High Chemical Resistance	*Good Mechanical Properties *Good Resistance To High Temperature	*Very Bright and Smooth Surface *Good Mechanical Properties *Good Resistance To High Temperature
Remarks	ES21, ES32	ES3, ES23	ES4, ES21	ES1, ES14, ES21	ES5, ES23	ES3, ES21



ACRYLIC TYPE POLYESTERS

Product Name	ES - 4300	ES - 4303	ES - 4303 R	ES - 4310	ES - 4320
Product Description	Unfilled Acrylic Baking Type Polyester	Unfilled Acrylic Baking Type Polyester	Unfilled Acrylic Baking Type Polyester	% 10 Filled Acrylic Baking Type Polyester	Unfilled Acrylic Baking Type Polyester
Chemical Structure	Orthophthalic	Orthophthalic	Orthophthalic	Orthophthalic	Orthophthalic
Density (20°C gr/cm³)	1,11 ± 0,02	1,14 ± 0,02	1,11 ± 0,02	1,19 ± 0,02	1,11 ± 0,02
Viscosity (cps)	2000 ± 200 (5 rpm) 600 ± 100 (50 rpm)	2800 ± 200 (5 rpm) 700 ± 200 (50 rpm)	2800 ± 200 (5 rpm) 700 ± 200 (50 rpm)	1900 ± 200 (5 rpm) 600 ± 100 (50 rpm)	300 ± 100 (2 rpm) 150 ± 50 (20 rpm)
Monomer Content (%)	45 ± 3	37 ± 3	43 ± 3	39 ± 3	49 ± 3
Gel time (min)	10 ± 1	6 ± 1	8 ± 1	10 ± 1	9 ± 1
Tmax (°C)	165 ± 10	120 ± 10	120 ± 10	155 ± 10	175 ± 10
Highlights	*Excellent Adhesion to the Thermoplastic Acrylic Sanitary Materials *Can be Modified to Contain 100 % filler	*Excellent Adhesion to the Thermoplastic Acrylic Sanitary Materials *Can be Modified to Contain 100 % filler *Low Peak Temperature	*Excellent Adhesion to the Thermoplastic Acrylic Sanitary Materials *Can be Modified to Contain 100 % filler *Low Peak Temperature	*Excellent Adhesion to the Thermoplastic Acrylic Sanitary Materials *Can be Modified to Contain 100 % filler	*Excellent Adhesion to the Thermoplastic Acrylic Sanitary Materials *Can be Modified to Contain 100 % filler
Remarks	ES3, ES21	ES3, ES21	ES5, ES21	ES3, ES21	ES3, ES29

Product Name	ES - 4330	ES - 4337	ES - 4340	ES - 4342
Product Description	% 30 Filled Acrylic Baking Type Polyester	% 37 Filled Acrylic Baking Type Polyester	% 40 Filled Acrylic Baking Type Polyester	% 42 Filled Acrylic Baking Type Polyester
Chemical Structure	Orthophthalic	Orthophthalic	Orthophthalic	Orthophthalic
Density (20°C gr/cm ³)	1,14 ± 0,02	1,40 ± 0,02	1,40 ± 0,02	1,50 ± 0,02
Viscosity (cps)	6800 ± 100 (5 rpm) 1200 ± 100 (50 rpm)	7500 ± 500 (5 rpm) 1150 ± 200 (50 rpm)	2800 ± 200 (5 rpm) 700 ± 200 (50 rpm)	3400 ± 200 (5 rpm) 1100 ± 200 (50 rpm)
Monomer Content (%)	44 ± 3	35 ± 3	35 ± 3	25 ± 3
Gel time (min)	8 ± 1	13 ± 2	10 ± 2	15 ± 1
Tmax (°C)	155 ± 10	100 ± 10	135 ± 10	80 ± 10
Highlights	*Excellent Adhesion to the Thermoplastic Acrylic Sanitary Materials *Can be Modified to Contain 100 % filler	*Excellent Adhesion to the Thermoplastic Acrylic Sanitary Materials *Can be Modified to Contain 100 % filler	*Excellent Adhesion to the Thermoplastic Acrylic Sanitary Materials *Can be Modified to Contain 100 % filler	*Excellent Adhesion to the Thermoplastic Acrylic Sanitary Materials *Can be Modified to Contain 100 % filler
Remarks	ES3, ES21	ES3, ES21	ES3, ES21	ES3, ES21



BONDING PASTES



GELCOATS

Product Name	ES - 5930	ES - 5935	ES - 5936	ES - 5937 EW	ES - 5940
Product Description	ISO/NPG Based Acrylic Modified Spray Type Transparent Gelcoat	ISO/NPG Based Acrylic Modified Spray Type White Gelcoat	ISO/NPG Based Acrylic Modified Spray Type Clear White Gelcoat	ISO/NPG Based Acrylic Modified Spray Type Clear White Gelcoat	Orthophthalic Based Spray Type Sandable Flexible Grey Gelcoat
Chemical Structure	ISO/NPG	ISO/NPG	ISO/NPG	ISO/NPG	Orthophthalic
Density (20°C gr/cm ³)	1,09 ± 0,02	1,19 ± 0,02	1,19 ± 0,02	1,12 ± 0,02	1, 25 ± 0,02
Viscosity (cps)	8000 ± 1000 (5 rpm) 2000 ± 200 (50 rpm)	6000 ± 1000 (5 rpm) 1500 ± 500 (50 rpm)	6000 ± 1000 (5 rpm) 1500 ± 500 (50 rpm)	5500 ± 1000 (5 rpm) 1300 ± 300 (50 rpm)	8500 ± 500 (5 rpm) 1800 ± 300 (50 rpm)
Monomer Content (%)	39 ± 3	36 ± 3	36 ± 3	38 ± 3	34 ± 3
Gel time (min)	12 ± 2	14 ± 2	14 ± 2	14 ± 2	7 ± 2
Tmax (°C)	195 ± 10	190 ± 10	190 ± 10	180 ± 10	150 ± 10
Tensile Strenght (MPa)	70 ± 10	70 ± 10	70 ± 10	70 ± 10	70 ± 10
Elongation at Break Tensile (%)	2,5 ± 0,2	2,5 ± 0,2	2,5 ± 0,2	2,5 ± 0,2	2,5 ± 0,2
Flexural Strenght (MPa)	120 ± 10	120 ± 10	120 ± 10	120 ± 10	120 ± 10
Heat Deflection Temperature (HDT), (°C)	90 ± 5	90 ± 5	90 ± 5	90 ± 5	90 ± 5
Highlights	*High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*Excellent Compatibility With Pigment Pastes *High Temperature and Physical Resistance *Non-Yellowing and Non-matting *Easy Sandable
Remarks	ES3, ES21	ES3, ES21	ES3, ES21	ES3, ES21	ES3, ES4, ES21

Product Name	ES - 5950	ES - 5960	ES - 6000	ES - 6001	ES - 6002
Product Description	ISO/NPG Based Acrylic Modified Spray Type Transparent Gelcoat	Isophthalic Based Spray Type Transparent Gelcoat	ISO/NPG Based Acrylic Modified Spray Type Transparent Gelcoat	ISO/NPG Based Acrylic Modified Brush Type Transparent Gelcoat	ISO/NPG Based Acrylic Modified Spray Type White Gelcoat
Chemical Structure	ISO/NPG	Isophthalic	ISO/NPG	ISO/NPG	ISO/NPG
Density (20°C gr/cm ³)	1,06 ± 0,02	1,17 ± 0,02	1,09 ± 0,02	1,10 ± 0,02	1,20 ± 0,02
Viscosity (cps)	7500 ± 200 (5 rpm) 1400 ± 200 (50 rpm)	7500 ± 500 (5 rpm) 2000 ± 300 (50 rpm)	10500 ± 1000 (5 rpm) 2200 ± 300 (50 rpm)	16000 ± 3000 (5 rpm) 3500 ± 1000 (50 rpm)	9500 ± 1500 (5 rpm) 2500 ± 500 (50 rpm)
Monomer Content (%)	50 ± 3	31 ± 3	41 ± 3	35 ± 3	30 ± 3
Gel time (min)	10 ± 2	10 ± 2	15 ± 2	14 ± 2	14 ± 2
Tmax (°C)	220 ± 10	180 ± 10	190 ± 10	185 ± 10	190 ± 10
Tensile Strenght (MPa)	70 ± 10	75 ± 10	70 ± 10	70 ± 10	70 ± 10
Elongation at Break Tensile (%)	2,5 ± 0,2	3,0 ± 0,2	2,5 ± 0,2	2,5 ± 0,2	2,5 ± 0,2
Flexural Strenght (MPa)	120 ± 10	130 ± 10	120 ± 10	120 ± 10	120 ± 10
Heat Deflection Temperature (HDT), (°C)	90 ± 5	75 ± 5	90 ± 5	90 ± 5	90 ± 5
Highlights	*High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*Lloyd's Register Approved *High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*Lloyd's Register Approved *High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*Lloyd's Register Approved *High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting
Remarks	ES3, ES21	ES3, ES21	ES3, ES21	ES3, ES27	ES3, ES21



ANTIMICROBIAL GELCOATS

Product Name	ES - 5937 EW	ES - 6000	ES - 6001	ES - 6002
Product Description	Antimicrobial Protected ISO/NPG Based Acrylic Modified Spray Type Clear White Gelcoat	Antimicrobial Protected ISO/NPG Based Acrylic Modified Spray Type Transparent Gelcoat	Antimicrobial Protected ISO/NPG Based Acrylic Modified Brush Type Transparent Gelcoat	Antimicrobial Protected ISO/NPG Based Acrylic Modified Spray Type White Gelcoat
Chemical Structure	ISO/NPG	ISO/NPG	ISO/NPG	ISO/NPG
Density (20°C gr/cm ³)	1,12 ± 0,02	1,09 ± 0,02	1,10 ± 0,02	1,20 ± 0,02
Viscosity (cps)	5500 ± 1000 (5 rpm) 1300 ± 300 (50 rpm)	10500 ± 1000 (5 rpm) 2200 ± 300 (50 rpm)	16000 ± 3000 (5 rpm) 3500 ± 1000 (50 rpm)	9500 ± 1500 (5 rpm) 2500 ± 500 (50 rpm)
Monomer Content (%)	38 ± 3	41 ± 3	35 ± 3	30 ± 3
Gel time (min)	14 ± 2	15 ± 2	14 ± 2	14 ± 2
Tmax (°C)	180 ± 10	190 ± 10	185 ± 10	190 ± 10
Tensile Strenght (MPa)	70 ± 10	70 ± 10	70 ± 10	70 ± 10
Elongation at Break Tensile (%)	2,5 ± 0,2	2,5 ± 0,2	2,5 ± 0,2	2,5 ± 0,2
Flexural Strenght (MPa)	120 ± 10	120 ± 10	120 ± 10	120 ± 10
Heat Deflection Temperature (HDT), (°C)	90 ± 5	90 ± 5	90 ± 5	90 ± 5
Highlights	*Up to 99.99% Antimicrobial Protection *High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*Up to 99.99% Antimicrobial Protection *Lloyd's Register Approved *High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*Up to 99.99% Antimicrobial Protection *Lloyd's Register Approved *High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting	*Up to 99.99% Antimicrobial Protection *Lloyd's Register Approved *High Chemical and Thermal Shock Resistant *High Atmospheric Resistance *Excellent Compatibility With Pigment Pastes *Non-Yellowing and Non-matting
Remarks	ES3, ES21	ES3, ES21	ES3, ES27	ES3, ES21

Notes Explanations

- ES1** - At 25 °C, Gel time is measured by adding 0,25 ml Co 6% and 2 ml MEK-P (Akperox A60) for 100 gram sample.
- ES2** - At 25 °C, Gel time is measured by adding 1 ml Co 1% and 1 ml MEK-P (Akperox A60) for 100 gram sample.
- ES3** - At 25 °C, Gel time is measured by adding 1 ml MEK-P (Akperox A60) for 100 gram sample.
- ES4** - At 25 °C, Gel time is measured by adding 2 ml MEK-P (Akperox A60) for 100 gram sample.
- ES5** - At 25 °C, Gel time is measured by adding 1,5 ml MEK-P (Akperox A50) for 100 gram sample.
- ES6** - At 23 °C, Gel time is measured by adding 1,5 ml MEK-P (Akperox A50) for 100 gram sample.
- ES7** - At 25 °C, Gel time is measured by adding 1 ml MEK-P (Akperox A50) for 100 gram sample.
- ES8** - At 25 °C, Gel time is measured by adding 1 gr Co 6% and 2 ml MEK-P (Akperox A50) for 100 gram sample.
- ES9** - At 25 °C, Gel time is measured by adding 1 gr Co 1% and 2 ml MEK-P (Akperox A60) for 100 gram sample.
- ES10** - At 80 °C, Gel time is measured by adding 0,2 gr Co 6% and 2 gr TBPB for 100 gram sample.
- ES11** - At 25 °C, Gel time is measured by adding 2 gr Benzoyl Peroxide for 100 gram sample.
- ES12** - At 25 °C, Gel time is measured by adding 1 ml Co 1% and 1,1 ml MEK-P (Akperox A50) for 100 gram sample.
- ES13** - At 23 °C, Gel time is measured by adding 1 ml MEK-P (Akperox A50) for 100 gram sample.
- ES14** - At 80 °C, Gel time is measured by adding 1 gr Perkadox16 for 100 gram sample.
- ES15** - At 25 °C, Gel time is measured by adding 0,4 ml Co 6% and 2 ml MEK-P (Akperox A60) for 100 gram sample.
- ES16** - At 82,2 °C, Gel time is measured by adding 3 ml Trigonox 29 C 50 for 100 gram sample.
- ES17** - At 50 °C, Gel time is measured by adding 0,4 ml Co 1% and 3 ml MEK-P (Akperox A60) for 200 gram sample.
- ES18** - At 25 °C, Gel time is measured by adding 0,2 ml Co 6% and 2 ml MEK-P (Akperox A60) for 100 gram sample.
- ES19** - At 25 °C, Gel time is measured by adding 0,6 ml Co 1% and 1 ml MEK-P (Akperox A60) for 100 gram sample.
- ES20** - At 25 °C, Viscosity is measured 10 rpm with 3 spindle.
- ES21** - At 25 °C, Viscosity is measured 5/50 rpm with 4 spindle.
- ES22** - At 23 °C, Viscosity is measured 5/50 rpm with 4 spindle.
- ES23** - At 25 °C, Viscosity is measured 2/20 rpm and 5/50 rpm with 2 spindle.
- ES24** - At 25 °C, Viscosity is measured 60 rpm with 3 spindle.
- ES25** - At 25 °C, Viscosity is measured 20 rpm with 2 spindle.
- ES26** - At 23 °C, Viscosity is measured 10 rpm with 3 spindle.
- ES27** - At 25 °C, Viscosity is measured 5/50 rpm with 5 spindle.
- ES28** - At 25 °C, Gel time is measured by adding 0,1 ml Co 6% and 1,5 ml MEK-P (Akperox A50) for 100 gram sample.
- ES29** - At 25 °C, Viscosity is measured 2/20 rpm with 3 spindle.
- ES30** - At 25 °C, Viscosity is measured 50 rpm with 3 spindle.
- ES31** - At 25 °C, Gel time is measured by adding 2 ml MEK-P (Akperox A50) for 100 gram sample.
- ES32** - At 25 °C, Gel time is measured by adding 1,5 ml MEK-P (Akperox A60) for 100 gram sample.
- ES33** - At 25 °C, Viscosity is measured 60 rpm with 2 spindle.
- ES34** - At 82,2 °C, Gel time is measured by adding 2 g Trigonox 21S for 100 gram sample.
- ES35** - At 25 °C, Gel time is measured by adding 1 g MEK-P (Akperox A60) for 100 gram sample.
- ES36** - At 25 °C, Gel time is measured by adding 2 g MEK-P (Akperox A60) for 100 gram sample.
- ES37** - At 23 °C, Viscosity is measured 100 rpm with 2 spindle.
- ES38** - At 25 °C, Gel time is measured by adding 0,167 g Co 6% and 2,36 g MEK-P (Akperox A50) for 100 gram sample.



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