

Organika
Sarzyna



Ciech

TECHNICAL INFORMATION



GELCOATS AND TOPCOATS

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Standard gelcoats for hand lay-up:

Group characteristics:

The surface gelcoats of general purpose for forming colourful coating on the surface of products made out of unsaturated polyester resin. For hand lay-up (with brush or roller).

Name of product	Type	Explanations	Gel time (min)	Viscosity, Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Gelcoats P	ORTHO	-	10 ÷ 20	35 000 ÷ 75 000	It forms colourful coating with good colour stability.	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Gelcoats 124 P	ORTHO/ISO	-			It forms colourful coating with good colour stability.	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Gelcoats Iso P	ISO	-			It forms colourful elastic stable coating resistant to water and other media present in the house, resistant to yellowing, fading after long time of usage.	Goods exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Gelcoats NPG P	NPG	*3			It forms colourful stable coating unfading after long time of usage, resistant to atmospheric conditions and media, UV radiation, ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Gelcoats NPG-2 White P		*3 *4			It forms white elastic stable coating resistant to atmospheric conditions, environment pollution, acids, solvents, UV radiation and ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.

Standard gelcoats for spraying:

Group characteristics:

The surface gelcoats of general purpose for forming colourful coating on the surface of products made out of unsaturated polyester resin. For spraying.

Name of product	Type	Explanations	Gel time (min)	Viscosity, Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Gelcoats P sp	ORTHO	-	10 ÷ 20	18 000 ÷ 40 000	It forms colourful coating with good colour stability.	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Gelcoats 124 P sp	ORTHO/ISO	-			It forms colourful coating with good colour stability.	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Gelcoats Iso P sp	ISO	-			It forms colourful elastic stable coating resistant to water and other media present in the house, resistant to yellowing, fading after long time of usage.	Goods exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Gelcoats NPG P sp	NPG	*3			It forms colourful stable coating unfading after long time of usage, resistant to atmospheric conditions and media, UV radiation, ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Gelcoats NPG-2 White P sp		*3 *4			It forms white elastic stable coating resistant to atmospheric conditions, pollution in the environment, acids, solvents, UV radiation and ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.

Standard gelcoats highly viscous for spraying:

Group characteristics:

Surface gelcoats of general purpose for forming colourful coating on the surface of products made out of unsaturated polyester resin. For spraying. Rheological properties enable simple spraying, and high viscosity ensures the possibility of spraying thick layer of gelcoats without curtaining.

Name of product	Type	Explanations	Gel time (min)	Viscosity Brookfield spindle 27/1 rpm (cP)	Characteristics	Recommended application
Gelcoats FP	ORTHO	-	8 ÷ 16	40 000 ÷ 80 000	It forms colourful coating with good colour stability.	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Gelcoats 124 FP	ORTHO /ISO	-			It forms colourful coating with good colour stability.	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Gelcoats Iso FP	ISO	-			It forms colourful elastic stable coating resistant to water and other media present in the house, resistant to yellowing, fading after long time of usage.	Goods exposed to long effect of atmospheric conditions, water, UV radiation, etc.
Gelcoats NPG FP	NPG	*3			It forms colourful stable coating unfading after long time of usage, resistant to atmospheric conditions and media, UV radiation, ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Gelcoats NPG-2 White FP		*3 *4			It forms white elastic stable coating resistant to atmospheric conditions, pollution in the environment, acids, solvents, UV radiation and ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.

Standard gelcoats, mechanical parameters:

Name of product	Flexural strength (MPa)	Flexural modulus (MPa)	Stress at break (MPa)	Tensile modulus (MPa)	HDT (°C)	Barcol hardness (°B)	Water absorbency after 10 days (%)
Gelcoat White P	83	5 100	40	4 200	54	44	0,44
Gelcoat 124 White P	99	4 900	50	4 400	69	47	0,42
Gelcoat Iso White P	80	4 600	44	4 100	73	50	-
Gelcoat NPG White P	100	4 300	55	4 500	92	52	0,40
Gelcoat White P sp	81	5 200	40	4 200	57	43	0,40
Gelcoat 124 White P sp	83	5 600	43	4 700	96	46	0,38
Gelcoat NPG-2 White P sp	97	4 900	50	4 700	85	44	0,25
Gelcoat red 3020 P	57	3 400	31	3 200	45	-	
Gelcoat blue 5015 P	86	4 600	43	4 100	50	34	

Transparent gelcoats:

Group characteristics:

Surface gelcoats of general purpose for forming transparent coating on the surface of products made out of unsaturated polyester resin. For hand lay-up (brush or roller) and for spraying.

Name of product	Type	Explanation	Gel time (min)	Viscosity Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Polimal 140	ORTHO	*1	10 ÷ 30	35 000 ÷ 75 000	Orthophthalic, non-accelerated, it forms transparent hard rigid coating.	Goods not exposed to long intensive effect of atmospheric conditions, water, UV radiation, etc.
Polimal GE-124 P	ORTHO/ISO	-	10 ÷ 20		It forms transparent hard rigid coating	Goods not exposed to long intensive effect of atmospheric conditions, water, UV radiation, etc.
Polimal GE-122-1 P	ISO	-			It forms transparent elastic coating resistant to water and chemical media present in the house.	Goods exposed to the effect of atmospheric conditions, water, UV radiation, etc.
Polimal GE-123 P		-			It forms transparent hard rigid coating, resistant to water and chemical media present in the house.	Goods exposed to the effect of atmospheric conditions, water, UV radiation, etc.
Polimal GE-125 NPG P	NPG	-			It forms transparent rigid coating, resistant to atmospheric conditions, environment pollution, chemical media, ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Polimal GE-126 P		-			It forms transparent elastic coating, resistant to atmospheric conditions, environment pollution, chemical media, resistant to ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.

Transparent gelcoats cont.:

Name of product	Type	Explanation	Gel time (min)	Viscosity Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Polimal GE-124 P sp	ORTHO/ISO	-	10 ÷ 20	18 000 ÷ 40 000	It forms transparent hard rigid coating.	Goods not exposed to long intensive effect of atmospheric conditions, water, UV radiation, etc.
Polimal GE-122-1 P sp	ISO	-			It forms transparent elastic coating, resistant to water and chemical media present in the house.	Goods exposed to the effect of atmospheric conditions, water, UV radiation, etc.
Polimal GE-123 P sp		-			It forms transparent hard rigid coating, resistant to water and chemical media present in the house.	Goods exposed to the effect of atmospheric conditions, water, UV radiation, etc.
Polimal GE-125 NPG P sp	NPG	-			It forms transparent rigid coating, resistant to atmospheric conditions, environment pollution, chemical media, ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Polimal GE-126 P sp		-			It forms transparent elastic coating, resistant to atmospheric conditions, environment pollution, chemical media, resistant to ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.

Transparent gelcoats, mechanical parameters:

Name of product	Flexural strength (MPa)	Flexural modulus (MPa)	Stress at break (MPa)	Tensile modulus (MPa)	HDT (°C)	Barcol hardness (°B)	Water absorbency after 10 days (%)
Polimal 140	80-90	3500	45-50	3500	50	36	0,6
Polimal GE-124 P	100	4300	36	3800	100	41	0,6
Polimal GE-123 P	120	4000	65	3200	70	45	0,5
Polimal GE-125 NPG P	110	4300	64	3800	98	41	0,45
Polimal GE-126 P	136	4600	62	4200	80	39	0,3

Transparent gelcoats highly reactive:

Group characteristics:

Surface gelcoats, highly reactive, designed for forming transparent coating on the surface of products made out of unsaturated polyester resin. For hand lay-up (brush or roller) and for spraying.

Name of product	Type	Explanations	Gel time (minutes)	Viscosity, Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Polimal GE-126 RP	NPG	-	6÷14	35 000÷75 000	Transparent highly reactive gelcoat, fast cured. It forms transparent elastic coating, resistant to atmospheric conditions, environment pollution, chemical media, resistant to ageing processes.	Goods exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc. You should apply when fast processing under unfavourable conditions is required.
Polimal GE-126 RP sp		-		18 000÷40 000		

Transparent gelcoats, high-reactive mechanical parameters:

Name of product	Flexural strength (MPa)	Flexural modulus (MPa)	Stress at break (MPa)	Tensile modulus (MPa)	HDT (°C)	Barcol hardness (°B)	Water absorbency after 10 days (%)
Polimal GE-126 RP sp	125	3500	62	3700	80	42	0,3

Ground gelcoats for hand lay-up:

Group characteristics:

Ground gelcoats "under lacquer" for forming colourful coating on the surface of products made out of unsaturated polyester resin. For hand lay-up (brush or roller).

Name of product	Type	Explanations	Gel time (minutes)	Viscosity Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Gelcoats Ground P	ORTHO	-	10 ÷ 20	35 000 ÷ 75 000	It forms colourful ground coat under the varnish; it can be also used as standard gelcoat.	Goods not exposed to intensive and long effect of atmospheric conditions.
Gelcoats 124 Ground P	ORTHO/ISO	-			It forms colourful ground coat under the varnish; it can be also used as standard gelcoat.	Goods exposed to long effect of atmospheric conditions.
Gelcoats Iso Ground P	ISO	-			It forms colourful elastic ground coat under the varnish; it can be also used as standard gelcoat. It keeps its elasticity for long time of usage, resistant to ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions and mechanical factors.
Gelcoats NPG Ground P	NPG	*3			It forms colourful elastic ground coat under the varnish; it can be also used as standard gelcoat. It keeps its elasticity for long time of usage, resistant to ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions and mechanical factors.

Ground gelcoats for spraying:

Group characteristics:

Ground gelcoats "under lacquer" for forming colourful coating on the surface of products made out of unsaturated polyester resin. For spraying.

Name of product	Type	Explanations	Gel time (minutes)	Viscosity Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Gelcoats Ground P sp	ORTHO	-	10 ÷ 20	18 000 ÷ 40 000	It forms colourful ground coat under the varnish; it can be also used as standard gelcoat.	Goods not exposed to intensive and long effect of atmospheric conditions.
Gelcoats 124 Ground P sp	ORTHO/ISO	-			It forms colourful ground coat under the varnish; it can be also used as standard gelcoat.	Goods exposed to long effect of atmospheric conditions.
Gelcoats Iso Ground P sp	ISO	-			It forms colourful elastic ground coat under the varnish; it can be also used as standard gelcoat. It keeps its elasticity for long time of usage, resistant to ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions and mechanical factors.
Gelcoats NPG Ground P sp	NPG	*3			It forms colourful elastic ground coat under the varnish; it can be also used as standard gelcoat. It keeps its elasticity for long time of usage, resistant to ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions and mechanical factors.

Ground gelcoats highly viscous for spraying:

Group characteristics:

Ground gelcoats "under lacquer" for forming colourful coating on the surface of products made out of unsaturated polyester resin. For spraying. Rheological properties enable simple spraying, and high viscosity ensures the possibility of spraying thick layer of gelcoats without curtaining.

Name of product	Type	Explanations	Gel time (minutes)	Viscosity, Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Gelcoats Ground FP	ORTHO	-	8 - 16	40 000 - 80 000	It forms colourful ground coat under the varnish; it can be also used as standard gelcoat.	Goods not exposed to intensive and long effect of atmospheric conditions.
Gelcoats 124 Ground FP	ORTHO/ISO	-			It forms colourful ground coat under the varnish; it can be also used as standard gelcoat.	Goods exposed to intensive and long effect of atmospheric conditions.
Gelcoats Iso Ground FP	ISO	-			It forms colourful elastic ground coat under the varnish; it can be also used as standard gelcoat. It keeps its elasticity for long time of usage, resistant to ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions and mechanical factors.
Gelcoats NPG Ground FP	NPG	*3			It forms colourful elastic ground coat under the varnish; it can be also used as standard gelcoat. It keeps its elasticity for long time of usage, resistant to ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions and mechanical factors.

Fire retardant gelcoats:

Group characteristics:

Fire retardant gelcoats designed for forming colourful coating on the surface of products made out of unsaturated polyester resin that must meet relevant fire retardancy requirements.

Name of product	Explanations	Gel time (minutes)	Viscosity, Brookfield, spindle 27/1 rpm (cP)	Characteristics	General characteristics and recommended application	Classification of flammability (laminates)						
Polimal GE-1602 S	*1	10 ÷ 30	35 000 ÷ 90 000	Gelcoat resin for making hand lay-up gelcoat, non-accelerated.	Designed mainly for making stand-alone objects, outdoors elements. Example: switchgear centres. It contains antimony trioxide.	Certificate of Centrum Naukowo-Badawczego Ochrony Przeciwpozarowej [Research Centre for Fire Protection] admitting the laminate based on Polimal 1602 APyS for producing cladding, wall and ceiling lining as well as internal finishing elements.						
Polimal GE - 1602 PyS	-	8 ÷ 20	35 000 ÷ 90 000	Gelcoat resin for making hand lay-up gelcoat.								
Polimal GE - 1602 PyS sp	-		26 000 ÷ 66 000	Gelcoat resin for making spraying gelcoat.								
Gelcoats 1602 P	-	10 ÷ 20	35 000 ÷ 75 000	Hand lay-up gelcoat.								
Gelcoats 1602 P sp	-		18 000 ÷ 40 000	Spraying gelcoat.								
Polimal GE-1605 S	*1	10 ÷ 30	35 000 ÷ 90 000	Gelcoat resin for making hand lay-up gelcoat, non-accelerated.			Highly-filled fire retardant compositions with reduced smoke. They are designed among the others for railway fleet. It contains antimony trioxide.	<p style="text-align: center;">CNTK testing (laminate of Polimal 1605)</p> <table border="1" style="width: 100%;"> <tr> <td>flame retardant material</td> <td>P1</td> </tr> <tr> <td>Velocity of flame propagation on the surface</td> <td>R1</td> </tr> <tr> <td>smoke intensity</td> <td>D2</td> </tr> </table>	flame retardant material	P1	Velocity of flame propagation on the surface	R1
flame retardant material	P1											
Velocity of flame propagation on the surface	R1											
smoke intensity	D2											
Polimal GE - 1605 PyS	-	8 ÷ 20	35 000 ÷ 90 000	Gelcoat resin for making hand lay-up gelcoat.								
Polimal GE - 1605 PyS sp	-		26 000 ÷ 66 000	Gelcoat resin for making spraying gelcoat.								
Gelcoats 1605 P	-	10 ÷ 20	35 000 ÷ 75 000	Hand lay-up gelcoat.								
Gelcoats 1605 P sp	-		18 000 ÷ 40 000	Spraying gelcoat.								
Polimal GE - 1608 PyS	-	8 ÷ 20	35 000 ÷ 90 000	Gelcoat resin, isophthalic , for making hand lay-up gelcoat.	Highly-filled fire retardant compositions. They are designed among the others for railway fleet; they meet requirements for materials for production of ceilings. They contain antipirenes of new generation. They do not contain antimony trioxide, virtually halogen-free.	<p style="text-align: center;">acc. to DIN 5510 - 2 (laminate of Polimal 1608 with layer of Gelcoat 1608) :</p> <table border="1" style="width: 100%;"> <tr> <td>flammability:</td> <td>S4</td> </tr> <tr> <td>smoke formation class:</td> <td>SR2</td> </tr> <tr> <td>dropping class (dropping):</td> <td>ST2</td> </tr> </table>	flammability:	S4	smoke formation class:	SR2	dropping class (dropping):	ST2
flammability:	S4											
smoke formation class:	SR2											
dropping class (dropping):	ST2											
Polimal GE - 1608 PyS sp	-	26 000 ÷ 66 000	Gelcoat resin, isophthalic , for making spraying gelcoat.									
Polimal GE - 1608 FP		8 ÷ 16	18 000 ÷ 40 000	Gelcoat resin, isophthalic , for making spraying gelcoat, highly viscous								
Gelcoats 1608 P	-	10 ÷ 20	35 000 ÷ 75 000	Hand lay-up gelcoat based on isophthalic resin.								
Gelcoats 1608 P sp	-		18 000 ÷ 40 000	Spraying gelcoat based on isophthalic resin.								
Gelcoats 1608 FP	-	8÷16	40 000 ÷ 80 000	Spraying gelcoat highly viscous, based on isophthalic resin.								

Polimal GE – 1608-E Pys	-	8÷20	35 000 ÷ 90 000	Elastic gelcoat resin, isophthalic for making hand lay-up gelcoat	Highly-filled fire retardant compositions. They are designed among the others for railway fleet; they meet requirements for materials for production of ceilings. They contain antipirenes of new generation. They do not contain antimony trioxide, virtually halogen-free. They are provided for "difficult" forms with complicated shapes.	acc. to DIN 5510 - 2 (laminate of Polimal 1608 with layer of Gelcoat 1608) :	
Polimal GE – 1608-E Pys sp	-	8÷20	26 000 ÷ 66 000	Elastic gelcoat resin, isophthalic for making spraying gelcoat			
Polimal GE – 1608-E FP	-	8÷16	40 000 ÷ 90 000	Elastic gelcoat resin, isophthalic for making spraying gelcoat			
Gelcoats 1608-E P	-	10÷20	35 000 ÷ 75 000	Elastic hand lay-up gelcoat based on isophthalic resin		flammability:	S4
Gelcoats 1608-E P sp	-		18 000 ÷ 40 000	Elastic spraying gelcoat based on isophthalic resin		smoke formation class:	SR2
Gelcoats 1608-E FP	-	8÷16	40 000 ÷ 80 000	Elastic spraying gelcoat, highly viscous, without curtaining, based on isophthalic resin		dropping class (dropping):	ST2

Elastic gelcoats:

Elastic gelcoats are recommended particularly for the goods subject to some deformations of springing and elastic nature, etc. and exposed to the effect of atmospheric conditions, water, UV radiation at the same time.

Name of product	Type	Explanations	Gel time (minutes)	Viscosity Brookfield spindle 27/1 rpm (cP)	Characteristics	Recommended application
Gelcoats NPG-E P	NPG	*3	10 ÷ 20	35 000 ÷ 75 000	It forms elastic coating, resistant to atmospheric conditions and mechanical factors during long time of usage. Designed for hand lay-up	Goods of high quality with long time of usage, exposed to the effect of mechanical factors, atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Gelcoats NPG-E P sp		*3	10 ÷ 20	18 000 ÷ 40 000	It forms elastic coating, resistant to atmospheric conditions and mechanical factors during long time of usage. Designed for spraying.	
Gelcoats NPG-E FP		*3	8 ÷ 16	40 000 ÷ 80 000	Spraying highly viscous gelcoat. It forms elastic coating, resistant to atmospheric conditions and mechanical factors during long time of usage. Spraying, also for thick layers.	

Elastic gelcoats, exemplary mechanical parameters:

Name of product	Flexural strength MPa	Flexural modulus MPa	Stress at break MPa	Tensile modulus MPa	HDT °C	Barcol hardness °B
Gelcoat NPG-E grey 7032 P	98	3900	58	3700	70	42

Ecological gelcoats with reduced styrene emission:

Group characteristics:

Ecological gelcoats with reduced styrene emission. While processing and curing they emit 20 ÷ 50% of styrene lower than standard gelcoats. Moreover, they form coatings with significantly higher resistance to ageing processes, including ageing caused by UV radiation

Name of product	Type	Explanations	Gel time (minutes)	Viscosity Brookfield spindle 27/1 rpm (cP)	Characteristics	Recommended application
Gelcoats Iso Eko P	ISO	-	10 ÷ 20	35 000 ÷ 75 000	It forms coating, resistant to atmospheric conditions and mechanical factors during long time of usage. Low styrene emission while processing the gelcoat.	Goods with longer time of usage, exposed to the effect of mechanical factors, atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Gelcoats Iso Eko P sp		-	10 ÷ 20	18 000 ÷ 40 000		
Gelcoats Iso Eko FP		-	8 ÷ 16	40 000 ÷ 80 000		
Gelcoats NPG Eko P	NPG	-	10 ÷ 20	35 000 ÷ 75 000	It forms coating, resistant to atmospheric conditions and mechanical factors during long time of usage. Low styrene emission while processing the gelcoat.	Goods of high quality, with longer time of usage, exposed to the effect of mechanical factors, atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Gelcoats NPG Eko P sp		-	10 ÷ 20	18 000 ÷ 40 000		
Gelcoats NPG Eko FP		-	8 ÷ 16	40 000 ÷ 80 000		
Gelcoats NPG-2 Eko White P		*3 *4	10 ÷ 20	35 000 ÷ 75 000	It forms elastic coating, resistant to long-lasting effect of atmospheric conditions and mechanic factors. Low styrene emission while processing the gelcoat.	Goods of high quality, with longer time of usage, exposed to the effect of mechanical factors, atmospheric conditions, water. Particularly resistant to UV radiation, they can be used in the polluted environment, etc. They are mainly recommended for the goods subject to springing elastic deformations, etc. High resistance to ageing processes.
Gelcoats NPG-2 Eko White P sp		*3 *4	10 ÷ 20	18 000 ÷ 40 000		
Gelcoats NPG-2 Eko White FP		*3 *4	8 ÷ 16	40 000 ÷ 80 000		

Ecological gelcoats, exemplary mechanical parameters:

Name of product	Flexural strength (MPa)	Flexural modulus (MPa)	HDT, (°C)	Barcol hardness (°B)
Gelcoats NPG Eko White P	85	5 000	95	50
Gelcoats NPG-2 Eko White P	90	4 800	85	50

Chemical resistant gelcoats:

Group characteristics:

Gelcoats with increased chemical resistance, recommended for production of the goods that are particularly exposed to the effect of chemical factors*.

Name of product	Type	Explanations	Gel time (minutes)	Viscosity Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Polimal GE-VE 2MM	VINYL ESTER	*2	15÷35	35 000 ÷ 75 000	Transparent chemical resistant, non-accelerated, it forms transparent coating resistant to acids, organic solvents and other chemical agents.	Chemical fittings, materials and goods exposed to aggressive chemical environment.
Gelcoats VE	VINYL ESTER	*2	10 ÷ 30	18 000 ÷ 40 000	Chemical resistant, non-accelerated, it forms colourful coating resistant to acids, organic solvents and other chemical agents.	

* Under the effect of non-typical chemical agents, mixtures etc. it is recommended to control the usage of gelcoat under certain conditions.

Topcoats for hand lay-up:

Group characteristics:

Surface topcoats of general purpose for forming colourful finishing coating on the surface of products made out of unsaturated polyester resin. For hand lay-up laminating.

Name of product	Type	Explanations	Gel time (minutes)	Viscosity Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Topcoats P	ORTHO	-	10 ÷ 20	-	It forms „dusty-dry” colourful coating o with good colour stability.	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Topcoats 124 P	ORTHO/ISO	-			It forms „dusty-dry” colourful coating o with good colour stability	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Topcoats Iso P	ISO	-			It forms „dusty-dry” colourful elastic stable coating, resistant to water and other media present in the house, resistant to yellowing and fading after long time of usage.	Goods exposed to long effect of atmospheric conditions, water, UV radiation, etc.
Topcoats NPG P	NPG	-			It forms „dusty-dry” colourful stable coating, not fading during long time of usage, resistant to atmospheric conditions and media, UV radiation, ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Topcoats NPG-E P		-			It forms elastic „dusty-dry” colourful stable coating, not fading during long time of usage, resistant to atmospheric conditions and media, UV radiation, ageing processes.	

Topcoats for spraying:

Group characteristics:

Surface topcoats of general purpose for forming colourful finishing coating on the surface of products made out of unsaturated polyester resin. For spraying.

Name of product	Type	Explanations	Gel time (minutes)	Viscosity, Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Topcoats P sp	ORTHO	-	10 ÷ 20	18 000 ÷ 58 000	It forms „dusty-dry” colourful coating with good colour stability	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Topcoats 124 P sp	ORTHO /ISO	-			It forms „dusty-dry” colourful coating with good colour stability	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Topcoats Iso P sp	ISO	-			It forms „dusty-dry” colourful elastic stable coating, resistant to water and other media present in the house, resistant to yellowing and fading after long time of usage.	Goods exposed to long effect of atmospheric conditions, water, UV radiation, etc.
Topcoats NPG P sp		-			It forms „dusty-dry” colourful stable coating, not fading during long time of usage, resistant to atmospheric conditions and media, UV radiation, ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Topcoats NPG-E P sp	NPG	*3			It forms elastic „dusty-dry” colourful stable coating, not fading during long time of usage, resistant to atmospheric conditions and media, UV radiation, ageing processes.	

Topcoats highly viscous for spraying:

Group characteristics:

Surface topcoats of general purpose for forming colourful finishing coating on the surface of products made out of unsaturated polyester resin. For spraying. Rheological properties enable simple spraying, and high viscosity ensures the possibility of spraying thick layer of gelcoats without curtaining

Name of product	Type	Explanations	Gel time (minutes)	Viscosity, Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Topcoats FP	ORTHO	-	8 - 16	40 000 - 80 000	It forms „dusty-dry” colourful coating with good colour stability.	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Topcoats 124 FP	ORTHO /ISO	-			It forms „dusty-dry” colourful coating with good colour stability.	Goods not exposed to intensive and long effect of atmospheric conditions, water, UV radiation, etc.
Topcoats Iso FP	ISO	-			It forms „dusty-dry” colourful elastic stable coating, resistant to water and other media present in the house, resistant to yellowing and fading after long time of usage.	Goods exposed to long effect of atmospheric conditions, water, UV radiation, etc.
Topcoats NPG FP		-			It forms „dusty-dry” colourful stable coating, not fading during long time of usage, resistant to atmospheric conditions and media, UV radiation, ageing processes.	Goods of high quality with long time of usage, exposed to the effect of atmospheric conditions, water, UV radiation, they can be exposed to polluted environment, etc.
Topcoats NPG-E FP	NPG	*3			It forms elastic „dusty-dry” colourful stable coating, not fading during long time of usage, resistant to atmospheric conditions and media, UV radiation, ageing processes.	

Chemical resistant topcoats:

Group characteristics:

Surface topcoats with increased chemical resistance designed for forming colourful finishing coating on the surface of products made out of unsaturated polyester resin.

Name of product	Type	Explanations	Gel time (minutes)	Viscosity, Brookfield, spindle 27/1 rpm (cP)	Characteristics	Recommended application
Topcoats VE	vinyl ester	*2	10 ÷ 30	18 000 ÷ 40 000	Chemical resistant, non-accelerated, it forms coating resistant to acids, organic solvents and other chemical agents.	Chemical fittings, materials and goods expose to aggressive chemical environment

EXPLANATIONS:

Explanation	Referring to		Scope of application
-	All products "accelerated" – marked with P letter.	Hardening system: 2% MEKP medium-active.	MEKP (Luperox K-1): 0,8 - 2%; it is possible to add 0,2 ÷ 0,6% of cobalt dryer Co 1%
*1	GELCOATS AND TOPCOATS non-accelerated.	Hardening system: 1% cobalt dryer Co 1%, 2% MEKP medium-active.	Cobalt dryer Co 1%: 1 ÷ 2% MEKP (Luperox K-1): 0,8 - 2%
*2	GELCOATS AND TOPCOATS requiring special hardening systems (vinyl ester).	Example: 0,6% cobalt dryer Co 1%, 1,2% dimethylaniline 10%, 2% MEKP medium-active.	Or other system provided in the technical materials
*3	Gelcoats NPG White, Gelcoats NPG-2 White.	Standard white colours at RAL scale and its own tint palette.	
*4	Gelcoats NPG-2 White.	Only white. The white colours are based on RAL scale and own tint palette.	
	Hand lay-up colourful gelcoats (according to the quality standard for those products, the curtaining is determined and this parameter is given in the KJ certificate).	Hand lay-up gelcoats have viscosity given in the brochure. The quality standard gives this parameter only for white gelcoats.	

Letter nomenclature in the name of product.

P	gelcoat (topcoat) accelerated
sp	spraying
F	spraying highly viscous
R	highly reactive
E	elastic
Eco	ecological (LSE)

Grupa Chemiczna **Ciech**



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