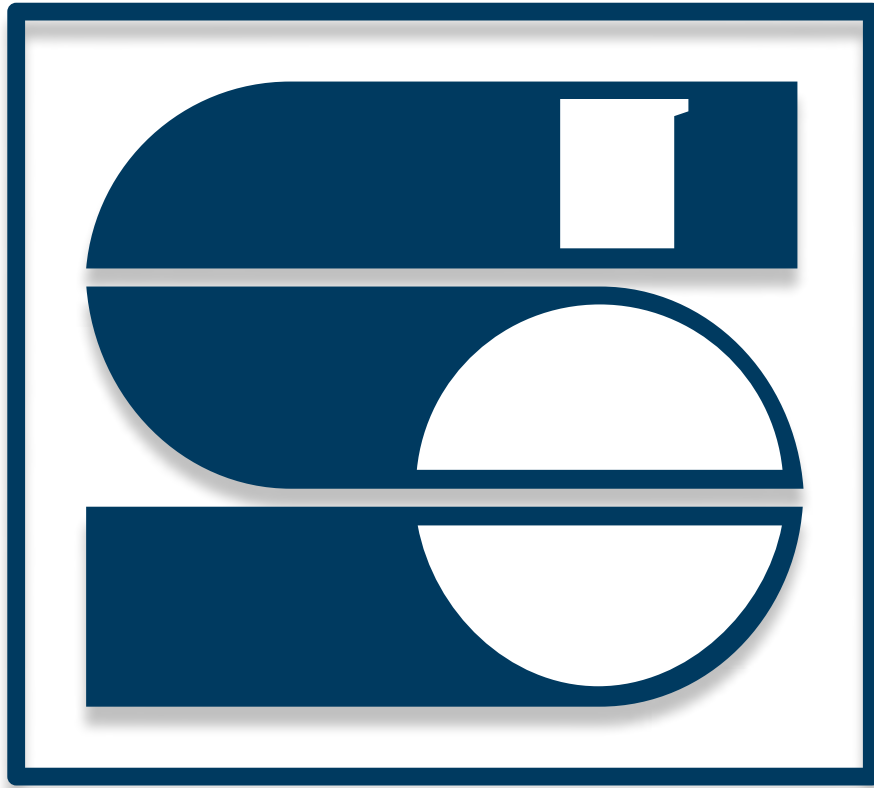


2020



**SAPICI**

▶▶ PRODUCT RANGE 2020 ▶▶

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high performance polymers technology

# PRODUCT RANGE 2020



diluents & notes

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# POLURGREEN

## Low Monomer Content Polyisocyanates

Exempted from the restriction proposal on diisocyanates under REACH Regulation.

product	% NV	type	solvent	type of isocyanate	% free monomer	% NCO	Vx mPa*s @ 23°C	max gardner color	characteristics & main applications
<b>POLURGREEN AD 01</b>	75	adduct	EA	TDI	< 0.1	12.5 - 13.5	1200 - 3000	1	Polyurethane adduct for general purposes. Suitable for 2K varnishes and enamels. It imparts good flexibility, fullness, brightness and solvent resistance.
<b>POLURGREEN AD BA 01</b>	67	adduct	BA	TDI	< 0.1	11.5 - 12.1	400 - 800	1	Polyurethane adduct for general purposes. Suitable for 2K varnishes and enamels. It imparts good flexibility, fullness, brightness and solvent resistance.
<b>POLURGREEN IR 01</b>	50	isocyanurate	BA	TDI	< 0.1	7.7 - 8.1	700 - 1400	1	Fast drying hardener for 2K PU system with limited yellowing. Suitable for the formulation of sealers and matt topcoats it gives hardness to the final coating.
<b>POLURGREEN 60T 01</b>	60	adduct	BA	TDI	< 0.1	9.5 - 9.9	1200 - 2000	1	High versatile polyisocyanate used for the formulation of polyurethane sealers and topcoats. It gives the right balance between fast drying and long pot-life.
<b>POLURGREEN OK 01</b>	60	mixed isocyanurate	BA	TDI HDI	< 0.1 < 0.1	9.8 - 10.3	500 - 1100	1	Aromatic-aliphatic hardener with good yellowing resistance. Suitable for polishable varnishes and enamels give to the final coating excellent hardness and good elasticity.
<b>POLURGREEN FP 75 01</b>	75	adduct	EA	TDI	< 0.1	12.5 - 13.5	1200 - 3000	1	Polyurethane adduct version in accordance with EU, BFR and FDA regulations for food packaging.

# POLURGREEN

Ultra Low Monomer Content Aliphatic Polyisocyanates

Exempted from the restriction proposal on diisocyanates under REACH Regulation.

product	% NV	type	solvent	type of isocyanate	% free monomer	% NCO	Vx mPa*s @ 23°C	max hazen color	characteristics & main applications
<b>POLURGREEN MT 75 01*</b>	75	aliphatic polyisocyanate	X PMA	HDI	< 0.1	16.0 - 17.0	50 - 200	< 40	Low monomer version of Polurene MT 75, aliphatic polyisocyanate with high toughness. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURGREEN MT 100 01*</b>	100	HDI trimer	-	HDI	< 0.1	21.5 - 22.5	1800 - 3300	< 40	Low monomer version of Polurene MT 100, aliphatic trimer with high toughness. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURGREEN MT 100 LV 01*</b>	100	HDI trimer	-	HDI	< 0.1	22.0 - 23.0	900 - 1500	< 40	Low monomer version of Polurene MT 100 LV, low viscosity version of the aliphatic trimer. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURGREEN MT 100 LLV 01*</b>	100	HDI trimer	-	HDI	< 0.1	22.0 - 24.0	550 - 850	< 60	Low monomer version of Polurene MT 100 LLV, ultra low viscosity version of the aliphatic trimer. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURGREEN MT 90 01*</b>	90	HDI trimer	BA N	HDI	< 0.1	19.1 - 20.5	400 - 700	< 40	Low monomer version of Polurene MT 90, aliphatic trimer with high toughness. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.

\*Available for customization

# POLURGREEN PRP

Ultra Low Free Monomer Prepolymers

Exempted from the restriction proposal on diisocyanates under REACH Regulation.

product	% NV	type	solvent	type of isocyanate	% free monomer	% NCO	Vx mPa*s	characteristics & main applications
<b>POLURGREEN PRP 350 01*</b>	100	aromatic	-	TDI	< 0.1	3.0 - 4.0	750 - 950 @ 40°C	Linear prepolymer with high elongation and tensile strength.
<b>POLURGREEN PRP 450 01*</b>	100	aromatic	-	TDI	< 0.1	4.0 - 5.0	840 - 1050 @ 40°C	Linear prepolymer with high elongation and tensile strength.
<b>POLURGREEN PRP 750 01*</b>	100	aromatic	-	TDI	< 0.1	7.0 - 8.0	6000 - 12000 @ 40°C	Linear prepolymer with high elongation and tensile strength.
<b>POLURGREEN PRP 940 01</b>	100	aromatic	-	TDI	< 0.1	8.9 - 9.7	4000 - 10000 @ 40°C	High NCO, low viscosity linear prepolymer for adhesives, elastomer and sealants formulation.
<b>POLURGREEN PRP F 930 01</b>	100	aromatic	-	TDI	< 0.1	8.8 - 9.7	10000 - 20000 @ 50°C	High NCO prepolymer for foams formulation.
<b>POLURGREEN PRP 6050 01</b>	100	aromatic	-	MDI	< 0.1	4.5 - 5.5	5000 - 15000 @ 40°C	Linear NCO terminated prepolymer for adhesives and sealants formulation.
<b>POLURGREEN PRP 4041 01*</b>	100	aliphatic	-	HDI	< 0.1	9.0 - 11.0	1500 - 3500 @ 40°C	Aliphatic prepolymer for applications where maximum yellowing resistance is needed.
<b>POLURGREEN PRP 5500 01</b>	100	aromatic	-	TDI	< 0.1	2.0 - 3.0	3500 - 8500 @ 23°C	Branched NCO terminated prepolymer for sealants formulation.

\* Available also with standard monomer content <0.5

# POLURENE

## Aromatic Adducts

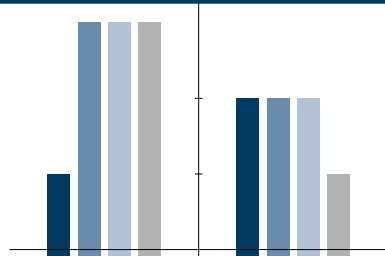
Polyurethane adducts with low free TDI content, for general purposes:  
long pot life, high body filling, high gloss and high flexibility.  
High compatibility with nitrocellulose, CAB, saturated polyesters, OH acrylic polyols and vinyl resins.

product	% NV	type	solvent	type of isocyanate	% free monomer	% NCO	Vx mPa*s @ 23°C	max gardner color
<b>POLURENE AD</b>	75	adduct	EA	TDI	< 0.5	12.5 - 13.5	1200 - 3000	1
<b>POLURENE FP 75</b>	75	adduct	EA	TDI	< 0.5	12.5 - 13.5	1200 - 3000	1
<b>POLURENE AD 67</b>	67	adduct	X PMA	TDI	< 0.5	10.8 - 11.8	1200 - 3000	2
<b>POLURENE AD 67 BA LV</b>	67	adduct	BA	TDI	< 0.5	11.5 - 12.3	400 - 800	1
<b>POLURENE 60T</b>	60	adduct	BA	TDI	< 0.5	9.5 - 9.9	1200 - 2000	1



**POLURENE AD**

**POLURENE 60T**



# POLURENE

## Aromatic Isocyanurates

Aromatic isocyanurates with low free TDI content: fast curing, high hardness, limited yellowing.  
Suitable for the formulation of high quality sealers and topcoats.

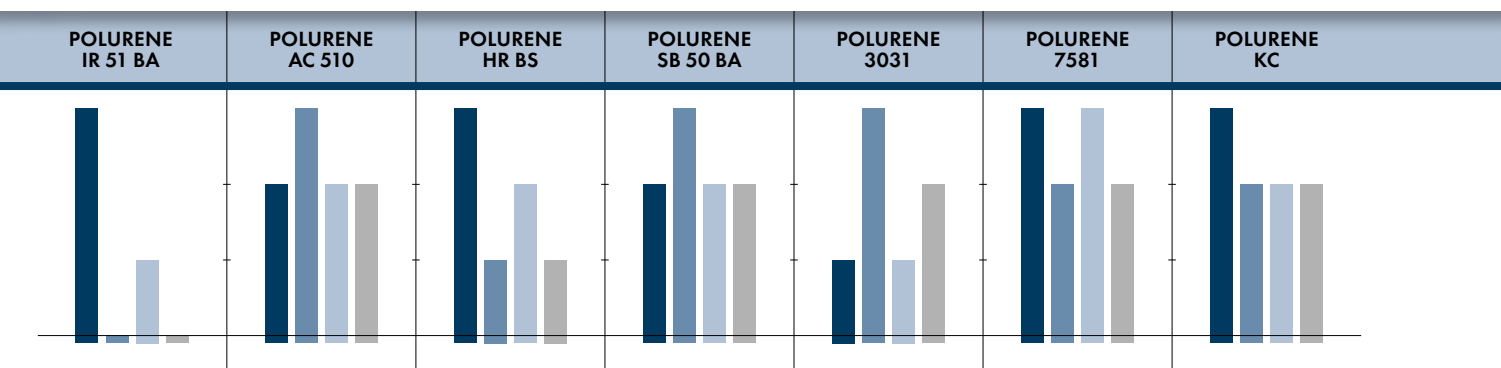
product	% NV	type	solvent	type of isocyanate	% free monomer	% NCO	Vx mPa*s @ 23°C	max gardner color
<b>POLURENE IR 51 BA</b>	50	isocyanurate	BA	TDI	< 0.5	7.8 - 8.2	700 - 1200	1
<b>POLURENE IR 51 EA</b>	50	isocyanurate	EA	TDI	< 0.3	7.8 - 8.2	100 - 400	1
<b>POLURENE AC 510</b>	50	isocyanurate	BA	TDI	< 1.0	7.0 - 7.4	50 - 300	1
<b>POLURENE HRBS</b>	50	isocyanurate	BA	TDI	< 0.5	7.0 - 7.4	400 - 800	1
<b>POLURENE SB 50 BA</b>	50	isocyanurate	BA	TDI	< 0.5	8.0 - 8.4	200 - 600	1
<b>POLURENE 3031</b>	50	isocyanurate	BA	TDI	< 0.5	8.5 - 9.0	250 - 650	1
<b>POLURENE 7581</b>	50	isocyanurate	BA	TDI	< 0.5	7.7 - 8.3	200 - 500	1
<b>POLURENE IR 70 BA</b>	70	isocyanurate	BA	TDI	< 0.5	12.5 - 13.5	800 - 2000	1
<b>POLURENE IR 65 EA</b>	65	isocyanurate	EA	TDI	< 0.5	11.1 - 11.5	250 - 450	1
<b>POLURENE KC</b>	50	mixed isocyanurate	BA	TDI MDI	< 0.5	7.8 - 8.0	200 - 400	1

■ reactivity

■ pot-life

■ fullness

■ NC compatibility



# POLURENE

## Aromatic Polyisocyanates MDI

product	% NV	type	solvent	type of isocyanate	% NCO	Vx mPa*s @ 23°C	max gardner color	characteristics & main applications
<b>POLURENE MD 50 EA</b>	50	prepolymer	EA	MDI	6.8 - 7.4	< 50	1	Polyisocyanate with high penetrability on porous substrate, it blocks the substances from the substrate and uniformize the adsorption for the overcoating. It improves adhesion on difficult substrate.
<b>POLURENE MD 60 BA</b>	60	prepolymer	BA	MDI	5.0 - 6.0	200 - 650	1	Polyisocyanate with high penetrability on porous substrate, it blocks the substances from the substrate and uniformize the adsorption for the overcoating. It improves adhesion on difficult substrate.
<b>POLURENE MD 610</b>	100	prepolymer	-	MDI	14.0 - 15.0	700 - 1400	3	Prepolymer for polyurea with excellent tear strength and high E-modulus.
<b>POLURENE MD 1500</b>	100	polyisocyanate	-	MDI	31.7 - 33.3	< 50	18	Polymeric MDI with excellent flexibility. Recommended for solvent free 2K PU coatings like self-levelings, synthetic mortars and adhesives. Fast drying and more flexible than POLURENE MD 1600.
<b>POLURENE MD 1600</b>	100	polyisocyanate	-	MDI	31.0 - 32.0	< 100	18	Polymeric MDI with excellent flexibility. Recommended for solvent free 2K PU coatings like self-levelings, synthetic mortars and adhesives.



# POLURENE

## Aliphatic Aromatic Isocyanurates

product	% NV	type	solvent	type of isocyanate	% free monomer	% NCO	Vx mPa*s @ 23°C	max gardner color
<b>POLURENE 2391</b>	70	mixed isocyanurate	BA	TDI IPDI	< 0.5	11.7 - 12.0	800 - 1400	2
<b>POLURENE OKD</b>	60	mixed isocyanurate	BA	TDI HDI	< 0.5	10.0 - 10.4	500 - 1100	1
<b>POLURENE OKD EA</b>	60	mixed isocyanurate	EA	TDI HDI	< 0.5	10.0 - 10.4	100 - 400	1
<b>POLURENE OKDS</b>	60	mixed isocyanurate	BA	TDI HDI	< 0.5	10.0 - 11.0	1100 - 3300	1
<b>POLURENE OK HP</b>	60	mixed isocyanurate	BA	TDI HDI	< 0.5	9.3 - 10.3	200 - 500	1

■ reactivity

■ pot-life

■ fullness

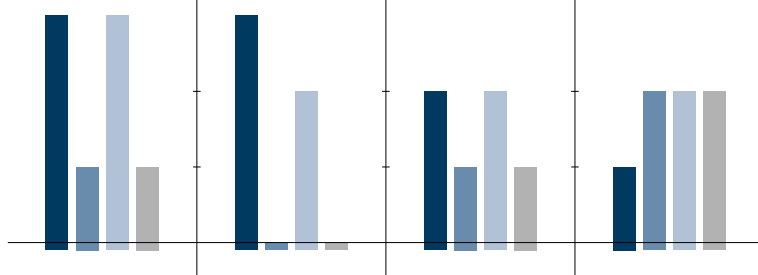
■ acrylic compatibility

**POLURENE 2391**

**POLURENE OKD**

**POLURENE OKDS**

**POLURENE OK HD**



# POLURENE

## Aliphatic Polyisocyanates

product	% NV	type	solvent	type of isocyanate	% free monomer	% NCO	Vx mPa*s @ 23°C	max hazen color	characteristics & main applications
<b>POLURENE T 70</b>	70	aliphatic polyisocyanate	BA	IPDI	< 0.5	11.8 - 12.2	800 - 1600	<80	Polyisocyanate trimer with high lightfastness and outdoor resistance. Suitable for the formulation of high demanding 2K PU coatings exhibits a good film formation.
<b>POLURENE T 70 EA</b>	70	aliphatic polyisocyanate	EA	IPDI	< 0.5	11.0 - 13.0	200 - 600	<80	Polyisocyanate trimer with high lightfastness and outdoor resistance. Suitable for the formulation of high demanding 2K PU coatings exhibits a good film formation.
<b>POLURENE M 75</b>	75	aliphatic polyisocyanate	X PMA	HDI	< 0.38	16.0 - 17.0	150 - 310	<40	Aliphatic biuret with high flexibility. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURENE M 75 BA</b>	75	aliphatic polyisocyanate	BA	HDI	< 0.38	16.0 - 17.0	150 - 300	<40	Aliphatic biuret with high flexibility. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURENE M 75 PMA</b>	75	aliphatic polyisocyanate	PMA	HDI	< 0.38	16.2 - 16.8	175 - 325	<40	Aliphatic biuret with high flexibility. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURENE MT 75*</b>	75	aliphatic polyisocyanate	X PMA	HDI	< 0.15	16.0 - 17.0	50 - 200	<40	Aliphatic polyisocyanate with high toughness. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURENE MT 100*</b>	100	HDI trymer	-	HDI	< 0.15	21.5 - 22.5	2000 - 3000	<30	Aliphatic trimer with high toughness. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURENE MT 100 LV*</b>	100	HDI trymer	-	HDI	< 0.15	22.0 - 24.0	900 - 1500	<40	Low viscosity version of the aliphatic trimer. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURENE MT 100 LLV*</b>	100	HDI trymer	-	HDI	< 0.15	22.0 - 24.0	550 - 850	<60	Ultra Low viscosity version of the aliphatic trimer. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURENE MT 90*</b>	90	HDI trymer	BA N	HDI	< 0.15	19.1 - 20.5	400 - 700	<40	Aliphatic trimer with high toughness. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.
<b>POLURENE MT 90 BA*</b>	90	HDI trymer	BA	HDI	< 0.15	19.1 - 20.5	300 - 700	<40	Aliphatic trimer with high toughness. Suitable for the formulation of no yellowing 2K PU coating and stoving enamel.

\*Available for customization

# POLURENE BK

## Blocked Polyisocyanates

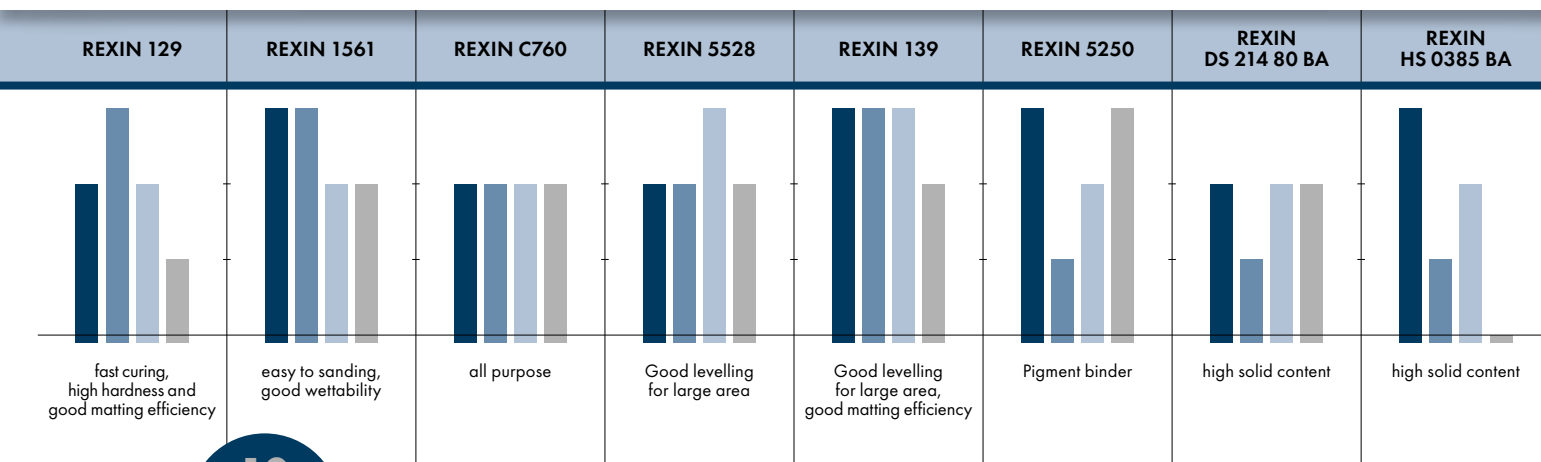
Solvent-borne blocked polyisocyanates  
for 1K PU stoving systems with high-performance properties.

product	blocking agent	% NV	solvent	type of isocyanate	% free monomer	% blocked NCO	Vx mPa*s @ 23°C	max gardner color	characteristics & main applications
<b>POLURENE BK 1175</b>	MEKO	75	N	HDI	< 0.2	10.6 - 11.6	2500 - 5000	1	Blocked isocyanate suitable for the formulation of non yellowing 1K stoving enamels; it flexibilize and to increase the adhesion.
<b>POLURENE BK 1177</b>	MEKO	77	N	HDI	< 0.2	10.9 - 11.9	4000 - 10000	1	Low hazardousness blocked polyisocyanate suitable for the formulation of non yellowing 1K stoving enamels; it flexibilize and increase the adhesion.
<b>POLURENE BK 1375</b>	DMP	75	N BA	HDI	< 0.2	10.0 - 11.0	2600 - 4600	1	Blocked isocyanate suitable for the formulation of light stable stoving enamels. The main application is OEM and industrial finishes for metal.
<b>POLURENE BK 5150 EA</b>	MEKO	50	EA	TDI	< 0.1	6.0 - 6.5	<100	2	TDI based polymer containing blocked and curable isocyanic groups. Recommended for nonwoven, PVC and fabric laminations.

Short oil alkyd resins based on vegetable fatty acids: fast drying, excellent solvent release.  
In combination with flexible resins they can improve the sandability of the sealers.  
Used alone can improve the surface hardness and the levelling of matt top coats.

product	% NV	solvent	% oil	Vx mPa•s @ 23°C	N.A.max	N° OH	% OH	max gardner color
REXIN 129	60	X	32	10000 - 22000	16	60	1.82	3
REXIN 129 70 BA	70	BA	32	3000 - 7000	18	90	2.70	3
REXIN 129 70 X	70	X	33	45000 - 65000	18	70	2.12	3
REXIN 1561	60	X	39	4500 - 8500	9	80	2.42	3
REXIN C760	60	X	35	4000 - 8000	7	80	2.42	3
REXIN 5528	70	X	35	45000 - 65000	15	80	2.42	3
REXIN 139	70	X	35	20000 - 38000	11	85	2.58	3
REXIN 5250	70	X	31	10000 - 20000	13	80	2.42	2
REXIN DS 214 80 BA	80	BA	31	500 - 1000	10	110	3.33	5
REXIN HS 0385 BA	85	BA	33	1000 - 2000	15	150	4.54	5

■ sandability    
 ■ matting efficiency    
 ■ fullness    
 ■ flexibility



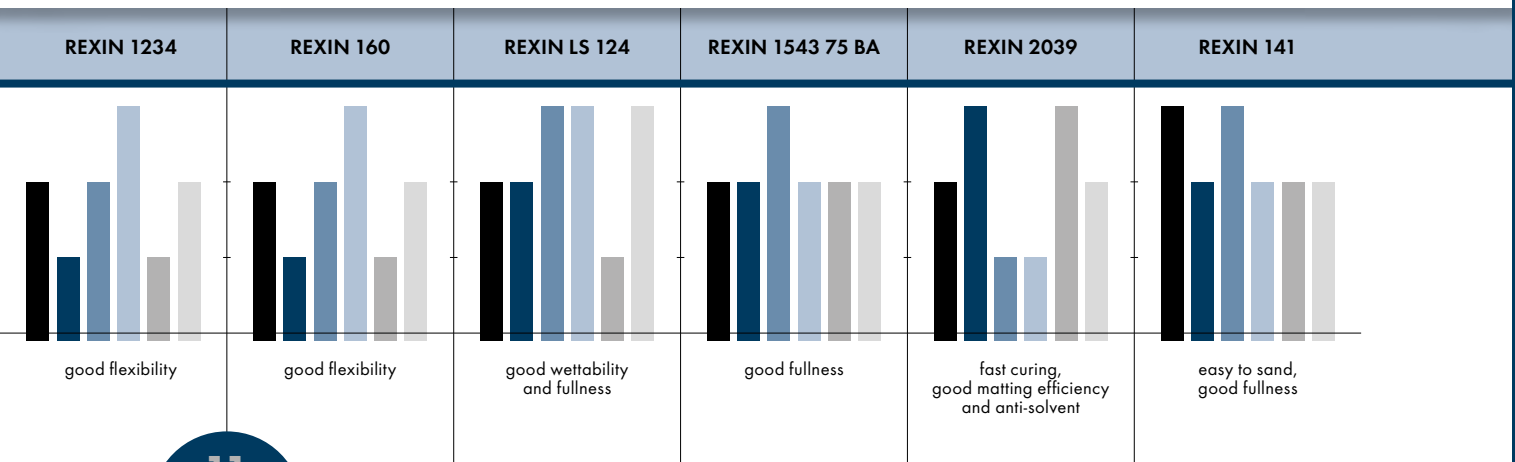
# REXIN

## Castor Oil Alkyd Resins

Short oil alkyd resins based on castor oil: good elasticity, low viscosity, good solvent release and fast drying. High wetting properties. For clear and pigmented PU coating.

product	% NV	solvent	% oil	Vx mPa*s @ 23°C	N.A.max	N° OH	% OH	max gardner color
REXIN 1234	60	X	43	1500 - 3500	15	90	2.72	3
REXIN 160	60	X	57	1500 - 2500	9	85	2.58	3
REXIN LS 124	70	X	60	800 - 1600	10	100	3.03	3
REXIN 1543 75 BA	75	BA	52	4000 - 8000	12	130	3.90	3
REXIN 2039	50	X MEK	31	7000 - 13000	20	80	2.42	3
REXIN 141	60	X	40	3000 - 5000	14	90	2.72	3

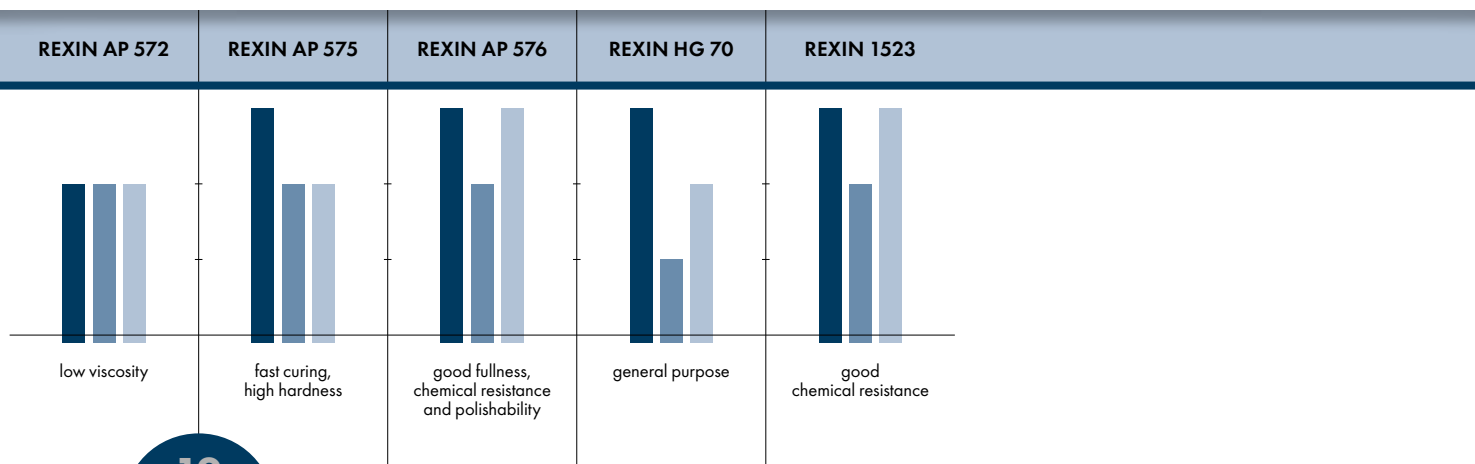
sandability
  matting efficiency
  fullness
  flexibility
  anti-solvent
  wettability



Short oil alkyd resins based on saturated fatty acids: excellent gloss, excellent hardness and yellowing resistance. For clear and pigmented PU coatings. Stoving enamels with high flexibility, hardness and high solid content.

product	% NV	solvent	% oil	Vx mPa•s @ 23°C	N.A.max	N° OH	% OH	max gardner color
REXIN AP 572	80	X	27	7000 - 12000	12	118	3.56	1
REXIN AP 575	80	X	32	35000 - 45000	20	110	3.33	1
REXIN AP 576	80	X	27	30000 - 45000 @ 25°C	13	127	3.85	1
REXIN HG 70	70	X	27	1300 - 3000	15	90	2.73	3
REXIN 1523	70	BA	33	3000 - 6000	10	130	3.94	3

polishability
  fullness
  chemical resistance



# REXIN

## Special Alkyd Resins

product	% NV	solvent	% oil	type of oil	Vx mPa*s @ 23°C	N.A. max	N° OH	% OH	max gardner color	characteristics & main applications
<b>REXIN 2268</b>	80	x	27	saturated fatty acids	3000 - 6000	15	110	3.33	2	Special aliphatic resin with excellent yellowing resistance. It is suitable for clear and pigmented non yellowing high gloss top coats with excellent fullness, leveling and pigments wettability. Complete compatibility with acrylic resins.
<b>REXIN 2281 70 X</b>	70	x	40	vegetable fatty acids	800 - 1400	12	85	2.58	5	Binder for universal pigmented paste. Compatible with short - medium - long oil alkyd resins, saturated polyesters, acrylic, epoxy, urea and melamine resins, chetonic and maleic resins. Not compatible with unsaturated polyester and waterborne resins.

# REXIN DP

## Saturated Polyesters

product	% NV	solvent	Vx mPa*s @ 23°C	N.A. max	N° OH	% OH	max gardner color	characteristics & main applications
<b>REXIN HSP 05100</b>	100	-	24000 - 32000	15	210	6.36	3	Excellent hardness. High chemical resistance. Excellent abrasion resistance. Excellent leveling. High gloss clear and pigmented 2K PU coatings. Product suitable for high solid formulations.
<b>REXIN HSP 411</b>	100	-	20000 - 40000	4	180	5.45	2	Slightly branched solventless polyester resin. Good chemical resistance. Good hardness and excellent flexibility. It is recommended for 2K PU parquet coatings.
<b>REXIN HSP 412</b>	100	-	3500 - 6500	4	185	5.60	2	Slightly branched solventless polyester resin. High chemical resistance. Excellent elasticity. For coatings and enamels for metal, wood, plastic and rubber.
<b>REXIN HSP 430</b>	100	-	7000 - 11000 @ 25°C	4	50	1.51	1	Solventless polyester resin. Excellent elasticity. Suitable for coatings and enamels for paper, leather, plastic and rubber. It is used for the formulation of coatings with soft touch effect.
<b>REXIN HSP 50</b>	100	-	500 - 1300	2	160	4.84	4	Saturated polyester resin with high wettability and flexibility. Suitable for high filled two-pack coatings and adhesives formulations.
<b>REXIN DP 127</b>	70	BA	1800 - 3500	15	125	3.79	3	Excellent hardness. Good abrasion resistance. Excellent yellowing resistance. Excellent wetting properties. High gloss and fast drying clear and pigmented 2K PU coatings. It is recommended for pigmented paste.
<b>REXIN DP 328</b>	70	BA	3000 - 5000	13	110	3.33	3	Good hardness and flexibility. Good abrasion resistance. Good filling and solvent release. Good compatibility with Nitrocellulose. It can be used in combination with urea and melamine resins. Clear and pigmented 2K PU coatings.
<b>REXIN DP 390</b>	60	X	2000 - 3500	10	85	2.58	3	Good flexibility and hardness. Fast drying. Long Pot-life. Good overspraying resistance. Suitable for clear and pigmented matt and high gloss 2K PU sealer and top coats.
<b>REXIN DP 390 70 BA</b>	70	BA	2600 - 3600	12	100	3.03	3	Good flexibility and hardness. Fast drying. Long Pot-life. Good overspraying resistance. Suitable for clear and pigmented matt and high gloss 2K PU sealer and top coats.
<b>REXIN DP 408 80 BA</b>	80	BA	1000 - 1800	4	240	7.28	3	Highly branched polyester resin. High chemical resistance. Excellent hardness and abrasion resistance. It is recommended for 2K PU parquet coatings and enamels for metal.
<b>REXIN DP 315</b>	75	X	17000 - 25000	15	125	3.79	3	Saturated polyester resin for pigmented and high gloss topcoat. Fast drying, good levelling, excellent hardness and fullness, especially designed for black finish.
<b>REXIN DP 500</b>	70	N	4000 - 9000	6	55	1.72	1	Saturated polyester resin that exhibits good balance between hardness and flexibility. Can be used in combination with melaminic resins to improve flexibility, adhesion and chip resistance in stoving enamels. Recommended for industrial coatings, baking enamel, and general purpose metal applications with high gloss retention and high scratch resistance.



# BLUEPUR

## Polyurethane Waterborne Dispersions

product	% NV	type of isocyanate	solvent	Vx mPa*s @ 23°C	pH	characteristics & main applications
<b>BLUEPUR 2937</b>	35.5	aliphatic	coalescent free	250 max	7.0 - 9.0	Resin for application in 1K and 2K waterborne system. This resin have a self crosslinking beavhiour that confer high hardness. Very fast drying. It can be used to formulate transparent and pigmented coating.
<b>BLUEPUR 3037</b>	38	aliphatic	coalescent free	500 max	7.0 - 8.0	Resin for application in 1K and 2K waterborne system. This resin have a self crosslinking beavhiour that confer high hardness. The high flexibility of the resin let it suitable for the formulation of coating for metal and plastic.
<b>BLUEPUR 3070</b>	40	aliphatic	coalescent free	200 max	7.0 - 9.0	Tough and flexible. Good abrasion resistance. Good adhesion on plastic and metal beside wood and porous substrate. High lightfast resistance. Main application plastic and wood coating.
<b>BLUEPUR 3080</b>	40	aliphatic	coalescent free	500 max	7.0 - 8.0	Resin for application in 1K and 2K waterborne system. It's special structure let the possibility to use this resin for coalescing aid with PUD and acrylic emulsion. The high elasticity let it suitable for the formulation of coating for metal and plastic.

# BLUEPUR T

## Polyurethane Waterborne High Elasticity Dispersions

product	% NV	type of isocyanate	solvent	tensile strength MPa	% elongation at break	100% elongation modulus MPa	Vx mPa*s @ 23°C	pH	characteristics & main applications
<b>BLUEPUR T 52</b>	50	aliphatic	coalescent free	35	750	2.5	< 200	7.0 - 9.0	PUD with good soft-handle. It exhibits excellent hydrolysis and alkali resistance. It shows good mechanical properties, high tensile strength, high elongation at break and good modulus.
<b>BLUEPUR T 53</b>	43	aliphatic	coalescent free	30	600	3.5	< 500	7.0 - 9.0	Good adhesion on different substrate. It exhibits good rub resistance at low temperature. It shows good mechanical properties, high tensile strength, high elongation at break and good modulus.

# BLUECRYL

## Acrylic Waterborne Resins

### Self Crosslinking Emulsions

product	% NV	pH	MFFT °C	Vx mPa*s @ 23°C	characteristics & main applications
<b>BLUECRYL 012</b>	40	7.0 - 9.0	32	10 - 200	Good scratch. Good yellowing resistance. Good water and chemical resistance. Good anti-blocking effect. Good sandability. Main application: decorative.
<b>BLUECRYL 090</b>	40	7.0 - 9.0	42	10 - 200	Clarity and transparency. Fast drying. Fast blocking resistance coatings. Good chemical resistance and flexibility. Main application: general industry.
<b>BLUECRYL 092</b>	40	7.0 - 9.0	44	10 - 200	Fast blocking resistance. Excellent elasticity & flexibility. Excellent chemical resistance. High scratch resistance. Main application: furniture.
<b>BLUECRYL 098</b>	42	7.0 - 9.0	5	10 - 200	Fast drying. Fast blocking resistance. Excellent elasticity & flexibility. Yellowing resistance. Good early water resistance. Low water absorption. Excellent chemical resistance. Main application: joinery.

### OH Acrylic Dispersions

product	% NV	pH	MFFT °C	% OH	Vx mPa*s @ 23°C	characteristics & main applications
<b>BLUECRYL 213</b>	47	3.5 - 5.5	40 - 42	1.3	< 1000	Good adhesion on different substrate. Good mechanical properties. Good resistance to solvent and water, once crosslinked. High lightfast resistance. Main application: Industrial flooring and general industry.
<b>BLUECRYL 233</b>	46	7.0 - 9.0	-	3.3	< 2000	Good wetting property, is suitable for the formulation of pigmented system. Tough and flexible surface. Good resistance to water and solvent. Main application: industrial flooring and general industry.
<b>BLUECRYL 242</b>	46	7.0 - 9.0	-	4.2	< 3000	Good wetting property, is suitable for the formulation of pigmented system. Tough and flexible surface. Good resistance to water and solvent. Can be formulated in 1K stoving enamel with melamine resin or in combination with blocked isocyanate. Main application: industrial flooring and general industry.

# HYDRORENE

## Hydrodispersible Polyisocyanates

product	% NV	type of isocyanate	solvent	% NCO	Vx mPa*s @ 23°C	characteristics & main applications
<b>HYDRORENE AW 1</b>	100	aliphatic	free	16.0 - 18.0	2000 - 4000	High dispersibility isocyanate for the formulation of 2K waterborne varnishes with good chemical and abrasion resistance.
<b>HYDRORENE AW 4</b>	100	aliphatic	free	20.0 - 21.0	1000 - 3000	High dispersibility isocyanate for the formulation of 2K waterborne varnishes with good body filling and gloss.
<b>HYDRORENE AW 5</b>	100	aliphatic	free	15.5 - 16.5	5000 - 9000	2K waterborne varnishes with excellent chemical and abrasion resistance. Suitable for acrylic and PU waterborne systems. Recommended in high gloss topcoat.

# HYDRORENE 01

## Low Monomer Content Hydrodispersible Polyisocyanates

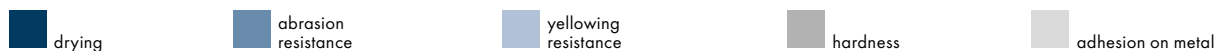
product	% NV	type of isocyanate	solvent	% free monomer	% NCO	Vx mPa*s @ 23°C	characteristics & main applications
<b>HYDRORENE AW 1 01</b>	100	aliphatic	free	< 0.1	16.0 - 18.0	2000 - 4000	Low free monomer version of HYDRORENE AW 1.
<b>HYDRORENE AW 4 01</b>	100	aliphatic	free	< 0.1	20.0 - 21.0	1000 - 3000	Low free monomer version of HYDRORENE AW 4.
<b>HYDRORENE AW 6 01</b>	100	aliphatic	free	< 0.1	22.0 - 24.0	550 - 850	High dispersibility and hydrophobicity low viscosity polyisocyanate for the formulation of 2K waterborne varnishes with good chemical and abrasion resistance.

product	% NV	type	solvent	type of isocyanate	% free monomer	% NCO	Vx mPa*s @ 23°C	max gardner color	characteristics & main applications
<b>UCOPOL M 505</b>	53	prepolymer	EA BA	TDI	< 0.5	4.4 - 5.2	< 50	1	Ready to use. Excellent flexibility. Coating for wood, plastic, concrete, rubber, textile and leather.
<b>UCOPOL M 33 60</b>	60	prepolymer	X PMA	TDI	< 0.5	5.5 - 6.5	250 - 500	1	Fast curing. Excellent hardness. Coating for parquet.
<b>UCOPOL M 33 60 PMA</b>	60	prepolymer	PMA	TDI	< 0.5	5.5 - 6.5	250 - 450	1	Fast curing. Excellent hardness. Coating for parquet.
<b>UCOPOL M 34 60 LV</b>	60	prepolymer	X PMA	TDI	< 0.3	6.8 - 7.8	800 - 1600	1	Abrasion resistance. Good balance between hardness and flexibility. Coating for parquet.
<b>UCOPOL M 4054</b>	60	prepolymer	X PMA	TDI	< 0.5	6.25 - 6.75	250 - 750	2	Hardness and good brightness. Coating for parquet and plastic.
<b>UCOPOL M 2851</b>	60	prepolymer	X PMA	TDI	< 0.5	5.0 - 6.0	600 - 1200	1	Adhesion. Coating for parquet, metal and plastic.
<b>UCOPOL W 708</b>	65	prepolymer	X PMA N	HDI	< 0.5	10.0 - 11.0	300 - 700	2	Yellowing resistance. High chemical and weather resistance. Coating for wood, plastic, concrete and metal.
<b>UCOPOL M 601</b>	100	prepolymer	-	MDI		22.0 - 24.0	< 200	18	1K Primer for concrete solventless and odourless. Ready to use product with good wettability and penetration into the substrate. Shorter cross-linking time than UCOPOL M 602.
<b>UCOPOL M 602</b>	100	prepolymer	-	MDI		22.0 - 24.0	< 200	18	1K Primer for concrete solventless and odourless. Ready to use product with good wettability and penetration into the substrate.
<b>UCOPOL M 621</b>	100	prepolymer	-	MDI		15.0 - 17.0	4500 - 7500	18	It can be used as impregnating agent of porous substrate as cement screed. It can also be used as a binder in the formulation of solvent-free moisture curing one-component adhesives or in combination with polyols for the formulation of 2K sealants. It has excellent adhesion on different substrate, e.g. wood, metal and plastic.

## UCOPOL OL

## Urethane Oil And Urethane Alkyd Resins

product	% NV	solvent	type of isocyanate	type of oil	Vx mPa*s @ 23°C	N.A. max	max gardner color	characteristics & main applications
UCOPOL OL 17 60 WD	60	WD	aromatic	drying	3000 - 7000	1	6	Good outdoor and abrasion resistance. Coating for window frames and boats. Impregnating agent for wood, anti corrosive paints. Resin obtained from renewable raw materials.
UCOPOL OL 18 50 X	50	X	aromatic	drying	4000 - 7000	0.3	6	Good hardness, fast drying. Outdoor resistance. Easily matting properties. Impregnating agent for wood, anti corrosive paints. Resin obtained from renewable raw materials.
UCOPOL OL 89 55 WD	55	WD	aromatic	special fatty acids	800 - 1600	3	6	Good outdoor and abrasion resistance. Coating for window frames and boats. Impregnating agent for wood, anti corrosive paints. Resin obtained from renewable raw materials.
UCOPOL OL 51 60 WD	60	WD	aromatic	special fatty acids	4000 - 7000	4	6	Good outdoor resistance. Fast drying. For high quality glossy and mat coating. Good overcoating performances. Resin obtained from renewable raw materials.
UCOPOL OL W 41 55 WD	55	WD	aliphatic	special fatty acids	4000 - 7000	4	6	Excellent outdoor resistance and hardness. Good chemical resistance. Suitable for white and light coloured enamels in building and nautical field. Non yellowing enamels with excellent filling power. Resin obtained from renewable raw materials.



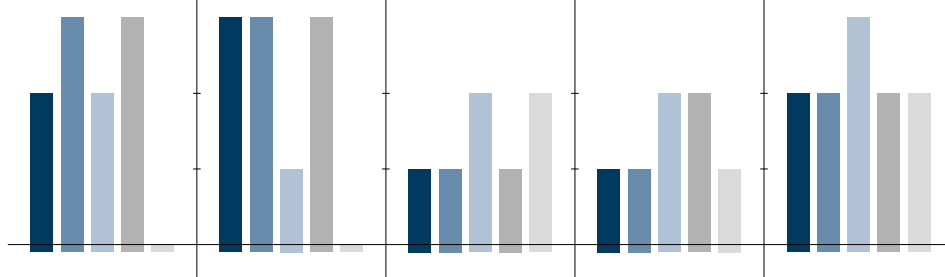
UCOPOL OL 17 60 WD

UCOPOL OL 18 50 X

UCOPOL OL 89 55 WD

UCOPOL OL 51 60 WD

UCOPOL OL W 41 55 WD



# UCOFLEX

Solvent Based Elastomer

product	% NV	type	solvent	type of isocyanate	Vx mPa*s @ 23°C	max gardner color	characteristics & main applications
<b>UCOFLEX 630 IB</b>	30	elastomer	IB	IPDI	1000 - 2000	1	Clear and pigmented paints for ABS, PVC, PUR, Polystyrene and Paper. Good yellowing, abrasion and shock resistance.

# POLURENADD

Additives

product	characteristics & main applications
<b>POLURENADD S 51</b>	Catalyst to accelerate 2K PU curing, it promotes the reaction between hydroxyl groups and isocyanic groups.
<b>POLURENADD BF 5</b>	Moisture scavenger for 1K and 2K polyurethane coatings, it acts on long term therefore advisable for in can storage.
<b>POLURENADD PTSI</b>	Moisture scavenger for 1K and 2K polyurethane coatings, it reacts quickly with residual moisture trapped in formulation step (mixing and filler addition).
<b>POLURENADD 20 X</b>	Anti-sagging and anti-settling additive for solvent based coatings.

# POLURENE TPI

Adhesion Promoter

product	% NV	type	solvent	type of isocyanate	% NCO	Vx mPa*s @ 23°C	max gardner color	characteristics & main applications
<b>POLURENE TPI 27 EA</b>	27	polyisocyanate	EA	TPTI	7.0 - 7.4	< 50	18	Special polyisocyanate developed for the formulation of products with good adhesion on melamine paper, it can help also on substrate contaminated by residual release agent.

# POLURENE LP

Prepolymers for Flexible Sealants

product	% NV	% NCO max	Vx mPa*s @ 23°C	max gardner color	characteristics & main applications
<b>POLURENE LP 100 NPF</b>	100	0.2	20000 - 35000	< 10	PU TDI based polymer containing blocked isocyanic groups. Excellent for improving the flexibility of epoxy systems. Excellent rheology. This product don't release Nonyl Phenol.
<b>POLURENE LP 90 NPF</b>	90	0.2	7000 - 15000	< 10	PU TDI based polymer in DOA containing blocked isocyanic groups. Excellent for improving the flexibility of epoxy systems. Excellent rheology. This product don't release Nonyl Phenol.

# POLURENE LPI

## Industrial Adhesives

product	% NV	% NCO	Vx mPa*s @ 23°C	max gardner color	characteristics & main applications
<b>POLURENE LPI 2572</b>	100	12.5 - 14.5	3000 - 7000	18	Solvent free MDI based 1K PU adhesive. It is recommended for sandwich panels for thermic and acoustic insulation.
<b>POLURENE LPI 34 NT</b>	100	14.0 - 16.0	2000 - 4000	18	1K adhesive for wood D4 approved recommended for finger joint bonding of outdoor furnitures. Highly resistant to acid and alkaline hydrolysis. Short Pot life. Very crystalline adhesive resistant to heatshock.
<b>POLURENE LPI 604</b>	100	9.0 - 10.0	4000 - 8000	3	MDI based 1K PU binder for moulded-on rubber grains, cork and agglomerates in general. Good mechanical and chemical resistance. Fast curing.
<b>POLURENE LPI 3719</b>	68	1.6 - 2.2	6000 - 10000	2	MDI based 1K PU adhesive in ethyl acetate. Excellent initial bond, recommended for PVC, expanded PU and natural and synthetic fabrics.



## INKS

## Polyisocyanates, Polyesters and Polyurethanes for Inks

## Inks Modifiers

product	% NV	solvent	Vx mPa*s @ 23°C	characteristics & main applications
<b>POLURENE 5870 K</b>	75	EA	1300 - 2300	Soft polyurethane plasticizer to be used in the formulation of flexo and gravure solvent based NC-PU inks. Excellent compatibility with pigments and NC resins, good solvent release and jaw properties, and high solubility in alcohols and ethyl acetate.
<b>POLURENE 5580 K</b>	75	EA	2200 - 3600	Medium hard polyurethane plasticizer to be used in the formulation of flexo and gravure solvent based NC-PU inks. Characterized by good thermal resistance, high adhesion on polyolefinic substrates and solubility in alcohols and ethyl acetate.
<b>POLURENE 0780 K</b>	55	EA EtOH	1000 - 2500	Film-forming, aliphatic polyurethane resin to be used in the formulation of flexo and gravure NC-PU, PVB-PU and full-PU solvent based inks. Characterized by good printing quality even in high speed processes and higher adhesion compared to plasticizer PUs.

## Polyisocyanates

product	% NV	solvent	Vx mPa*s @ 23°C	% NCO	characteristics & main applications
<b>POLURENE FP 75 K</b>	75	EA	1200 - 3000	13.0	Aromatic polyisocyanate to be used in 2K inks as hardener or/and adhesion promoter. When used in 2K over print varnish, POLURENE FP 75 K is recommended to impart elastomeric properties.
<b>POLURENE IR 51 K</b>	50	EA	100 - 400	8.0	Aromatic polyisocyanate to be used in the formulation of fast curing 2K overprint varnish. POLURENE IR51 K is recommended to impart crystalline properties to the varnish.
<b>POLURENE OK K</b>	60	EA	100 - 400	10.2	Aliphatic-aromatic polyisocyanate to be used in the formulation of fast curing 2K overprint varnish. POLURENE OK K is recommended for high gloss system.

## Low Monomer Polyisocyanates

product	% NV	solvent	Vx mPa*s @ 23°C	% NCO	characteristics & main applications
<b>POLURGREEN FP 75 01 K</b>	75	EA	1200 - 3000	13.0	Low monomer version of POLURENE FP 75K.
<b>POLURGREEN IR 51 01 K</b>	50	EA	400 - 1000	7.4	Low monomer version of POLURENE IR 51K.
<b>POLURGREEN OK K 01</b>	60	EA	350 - 850	10.0	Low monomer version of POLURENE OK K.

## Polyester Resin for OPV

product	% NV	solvent	Vx mPa*s @ 23°C	N° OH (mg KOH)	characteristics & main applications
<b>REXIN 6302 K</b>	70	EA	100 - 500	100	Aromatic polyester to be used in the formulation of fast drying 2K matt/gloss overprint varnish in combination either with Polurene IR51 K or FP 75 K.
<b>REXIN 6258 K</b>	60	EA	50 - 250	180	Highly branched aliphatic polyester to be used in the formulation of fast drying 2K matt/gloss overprint varnish. It can be used in combination with Polurene IR51 K and FP75 K, or POLURENE OK K to improve UV resistance.
<b>REXIN 1939 K</b>	75	EA	3000 - 4000	165	Saturated aromatic polyester to be used in the formulation of 2K overprint varnish in combination either with Polurene IR51 K or FP 75 K. High compatibility with other polymer resins (Vinyl copolymer, NC, polyesters).

# UNI-DUR

## Polyisocyanates for Footwear

product	appearance	Vx mPa•s @ 23°C	% NV	solvent	% NCO	max gardner color	characteristics & main applications
<b>UNI - DUR WB 7000 01</b>	clear	2000 - 4000	100	-	16.0 - 18.0	2	<p>Low free monomer hardener for high-quality water based polyurethane systems.</p> <p>It can improve the resistance of adhesive bonds towards moisture, heat and solvents.</p> <p>Thanks to its hydrophilic character it is easily dispersible by mechanical stirrer.</p>
<b>UNI - DUR WB 8000 01</b>	clear	1000 - 3000	100	-	20.0 - 21.0	1	<p>Low free monomer hardener for high quality water based polyurethane systems.</p> <p>Excellent hydrolysis and heat resistance.</p>
<b>UNI - DUR E 2008 RC</b>	clear	< 50	35	EA	5.7 - 6.3	1	<p>Crosslinker for the formulation of adhesives for natural or synthetic rubber, leather and shoes manufacturing.</p> <p>Good drying time and good pot-life; excellent balance between hardness and elasticity of the adhesive; excellent greentack; good yellowing resistance.</p>
<b>UNI - DUR E 1001 RN</b>	clear	< 50	40	EA	7.0 - 7.6	1	<p>Recommended to improve the adhesion, cohesion and heat resistance of the final bond.</p> <p>It yields bonds that undergo to minimal colour modification.</p>
<b>UNI - DUR E 2002 ARFE</b>	clear	< 50	27	EA	7.2 - 8.2	18	<p>Recommended for crosslinking industrial polyurethane adhesives for natural or synthetic rubber.</p> <p>It improves significantly the adhesion, cohesion and mainly the heat resistance of the final bond.</p>

## glossary

## isocyanates

<b>HDI</b>	HEXAMETHYLENE DIISOCYANATE
<b>IPDI</b>	ISOPHORONE DIISOCYANATE
<b>MDI</b>	DIPHENYLMETHANE DIISOCYANATE
<b>TDI</b>	TOLUENE DIISOCYANATE
<b>TPTI</b>	TRIS (P-ISOCYANATOPHENYL) THIOPHOSPHATE

## diluent

<b>BA</b>	BUTYL ACETATE
<b>DOA</b>	DIOCTYL ADIPATE
<b>EA</b>	ETHYL ACETATE
<b>EtOH</b>	ETHANOL
<b>IB</b>	iso-BUTANOL
<b>N</b>	SOLVESSO 100
<b>MEK</b>	METHYL ETHYL KETONE
<b>PMA</b>	METHOXYPROPYLACETATE
<b>WD</b>	D40 WHITE SPIRIT
<b>X</b>	XYLENE

## notes

<b>N.A. max</b>	Acid Number
<b>N° OH</b>	Hydroxyl Number MG/KOH
<b>% OH</b>	Hydroxyl Percentage
<b>% NCO</b>	Nco
<b>% NV</b>	Non Volatile
<b>TYPE</b>	Type of Product
<b>Vx mPa*s @ 23 °C</b>	Viscosity at 23°C
NB: All specifications refer to the delivery form	



Italy

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