ROTOFLEX COATINGS

ROTOFLEX

OVERVIEW COATINGS

PRIMERS

L-202-29	**PRIMER** For metallized films standard	Optimized for printing on a wide range of flexible packaging films, primarily for food packaging. It can be applied on aluminum and metallized films as well.
L-297-23	**PRIMER** For metallized films sterilization	Intended for aluminium or aluminium metallized plastic films for packaging, mainly for food packaging.
L-395	**PRIMER** For untreated polyolefin film	Intended for printing on flexible packaging films of PE or PP without corona pre-treatment. Normally used on the outside of food packaging films.
L-680	**PRIMER** For PET and Alu	Solvent based primer for aluminium foils and aluminium metallised plastic films for packaging materials, mainly food packaging. It is optimised for applications which require a high water resistance.
17-SF 58	**PRIMER** Waterbased for Alu	Intended for printing on a wide range of packaging films of aluminium or aluminium metallised plastic. It is mainly used for food packaging, but also suitable for other applications.
100-24	**PRIMER** 2K	Intended for printing on the outside of flexible plastic or aluminium films for packaging. First component of a 2-components varnish. The second component is the 2K Hardener 100-1000.

PRIMER for metallized films standard
L-202-29

The solvent based **L-202-29 Primer** is optimized for printing on a wide range of flexible packaging films, primarily for food packaging. It can be applied on aluminum and metallized films as well.

PROPERTIES
- Low residual solvents
- Low migration, therefore especially suitable for food packaging
- Based primarily on polyurethane and cellulose nitrate
- Free of migrating plasticizers, acrylates, and chlorine based binders such as PVC and PVdC

ADVANTAGES
- Very good tape adhesion and lamination bond strength on various film types
- Suitable for frontal and reverse printing

TECHNICAL DETAILS

Substrates frontal printing	Plastic packaging films with corona pre-treatment: PET, OPA, OPP, cPP, PE Plastic packaging films with functional coatings: AlO_x, EVOH, PVdC and acrylic coatings Aluminium with primer layer, Paper	
Substrates reverse printing	Plastic packaging films with corona pre-treatment: PET, OPA, OPP, cPP Plastic packaging films with functional coatings: AlO_x, EVOH, PVdC and acrylic coatings	
Coating Weight	0,5 g/m2 – 1,0g/m2 (dry)	
Appearance	Colourless slightly turbid liquid, slightly yellowish in high layer thickness	
Odour	Like ethanol and ethyl acetate	
Solid content	17,7 % - 19,7 %	
Viscosity	27 s – 33 s (Cup DIN 53211, 4 mm, 20 °C)	
Solvents	Accelerator	Ethyl acetate
	Thinner	Ethanol
	Retarder	Ethoxy propanol

PRIMER for metallized films sterilization
L-297-23

L-297-23 Primer for metallized films is based on the printing ink series 23. It is intended for aluminium or aluminium metallized plastic films for packaging, mainly for food packaging. After sufficient tests it can be used also for other films.

PROPERTIES
- Good lamination bond strength with suitable coloured inks
- Suitable also for reverse printing with lamination
- Low migration
- Contains a binder system of mainly polyurethanes
- Contains no chlorine based binders such as PVC or PVdC

ADVANTAGES
- Very good tape adhesion
- Good overprintability
- Very fast solvent release, causing low residual solvents

TECHNICAL DETAILS

Substrates	Aluminium films, Aluminium metallized plastic films, other films after preliminary tests: Plastic films with corona pre-treatment: Polypropylene, Polyester, Polyamide Plastic films with functional coatings: SiO_x, AlO_x, EVOH, PVOH, PVdC and acrylic coatings	
Coating Weight	0,5 g/m2 – 1,0 g/m2 (dry)	
Appearance	Colourless, clear liquid	
Odour	Mainly like ethanol and methoxypropanol	
Solid content	18,3 %	
Viscosity	17 s – 24 s flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	Ethyl acetate
	Thinner	Ethanol
	Retarder	Ethoxy propanol

PRIMER for untreated polyolefin film
L-395

L-395 Primer is a solvent based varnish intended for printing on flexible packaging films of PE or PP without corona pre-treatment. It is used normally on the outside of food packaging films.

PROPERTIES

- Varying tape adhesion from good to insufficient, depen-dend on different parameters of the film and of the overly-ing inks
- Contains no migrating plasticizers
- Contains no acrylates, no cellulose nitrate and no chlorine based binders such as PVC or PVdC

ADVANTAGES

- Good overprintability
- Fast solvent release

TECHNICAL DETAILS

Substrates	Polyethylene and Polypropylene films without corona or other pre-treatment	
Coating Weight	0,5 g/m2 – 1,0 g/m2 (dry)	
Appearance	Colourless, slightly turbid liquid, in thick layer yellowish	
Odour	Like n-propyl acetate	
Solid content	12,5 % – 13,5 %	
Viscosity	23 s – 29 s flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	Ethyl acetate
	Thinner	n-Propyl acetate. No alcohols!
	Retarder	Ethoxy propyl acetate. No alcohols!

PRIMER for PET and Alu
L-680

L-395 Primer is a solvent based primer for aluminium foils and aluminium metallised plastic films for packaging materials, mainly food packaging. It is optimised for applications which require a high water resistance.

PROPERTIES

- The dried layer of the varnish is odourless
- Contains special binders and only ethyl acetate as solvent, this results in fast drying and low residual solvents
- Free from acrylates and cellulose nitrate
- Free from chlorine containing binders such as PVC or PVdC
- Free from migrating plasticizers
- Further applications are possible, for instance the heat sealing of paper with paper or of PET with PET etc., if a higher layer thickness is applied

ADVANTAGES

- Very good water resistance and water repellent effect
- Good overprintability, in low halftones

TECHNICAL DETAILS

Substrates	Aluminium foil, Aluminium metallised plastic film (printing on metallised side), Paper or PET films	
Coating Weight	0,5 g/m2 – 1,5 g/m2 (dry)	
Appearance	Colourless, clear liquid	
Odour	Like ethyl acetate	
Solid content	27,0 % – 29,0 %	
Viscosity	24 s – 32 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	-
	Thinner	Ethyl acetate or methyl ethyl ketone (MEK)
	Retarder	Retarder N-propyl acetate, ethoxy propyl acetate

PRIMER waterbased for Alu
17 SF-58

17 SF-58 for Alu is intended for printing on a wide range of packaging films of aluminium or aluminiummetallized plastic. It is mainly used for food packaging, but also suitable for other applications.

PROPERTIES
- Low content of volatile organic solvents (VOC: < 2.5% isopropanol)
- Contains no ethanol and no chlorine based binders such as PVC

ADVANTAGES
- Excellent tape adhesion on aluminium film
- Good to very good tape adhesion on aluminium-metallized plastic films
- Good overprintability with most water or solvent based ink types

TECHNICAL DETAILS

Substrates	Aluminium films, Aluminium metallized plastic films	
Coating Weight	0,5 g/m2 – 1,5 g/m2 (dry)	
Appearance	Cloudy, white liquid	
Odour	Mainly like ammonia	
Solid content	33,8 – 36,8 %	
Viscosity	19 s – 26 s flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	Water / Isopropanol = 1 /1 premixed
	Thinner	Water
	Retarder	-

PRIMER 2K Primer
L-100-24

100-24 2K Primer is intended for printing on the outside of flexible plastic or aluminium films for packaging. It is the first component of a 2-components varnish. The second component is the 2K Hardener 100-1000. Because of the chemical reaction between both components, good adhesion on various films and fastness properties will be obtained which are not possible with a 1-component varnish, e.g. fastness against organic solvents, high heat seal fastness and a good scratch resistance. The recommended mixing ratio is:

100 Parts by weight 100-24	2K Primer
15 Parts by weight 100-1000	2K Hardener

PROPERTIES
- Suitable for pasteurisation and sterilisation
- Free from acrylates and chlorine based binders such as PVC or PVdC
- The 100-1000 2K Hardener is free from aromatic isocyanates

ADVANTAGES
- Excellent adhesion on many packaging films
- Very good chemical resistance against organic solvents
- Excellent heat seal resistance up to 220°C
- Good mechanical characteristics like scratch and rub resistance

TECHNICAL DETAILS

Substrates	Plastic packaging films with corona pre-treatment:	
	Polyethylene	Polyester
	Polypropylene	Polyamide
	Aluminium and aluminium side of laminates and aluminium-metallized plastic	
Coating Weight	1,0 g/m2 – 1,5 g/m2 (dry)	
Appearance	Colourless, slightly cloudy liquid, in thick layer yellowish. Becomes nearly clear after addition of the hardener	
Odour	Like ethyl acetate	
Solid content	25,0 %	
Viscosity	15 s – 17 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	-
	Thinner	Ethyl acetate
	Retarder	N-propyl acetate, ethoxy propyl acetate
	Attention: Never mix 100-24 with water, alcohols, glycols or any other solvent containing hydroxyl groups. These hydroxyl groups would react with the isocyanate groups of the hardener and thus make them useless for the intended curing reaction with the 100-24 components. The fastness characteristics of the cured layer would be deteriorated considerably.	

OVERPRINT VARNISHES

L-356	OVERPRINT VARNISH	Glossy, transparent, heat seal resistant overprint varnish for printing on flexible packaging films, mainly for food packaging.
L-505	HIGH GLOSS VARNISH 1K	Solvent-based, transparent varnish for printed packaging films to produce a high-gloss surface and to protect against mechanical effects (rubbing, scratching).
L-397	OVERPRINT VARNISH MATT 1K	Solvent based varnish intended for printing on flexible packaging films – mainly for food packaging – to achieve a matt surface and protection against mechanical impacts.
L-502	OVERPRINT VARNISH MATT 1K	Intended for printing on flexible packaging films – mainly food packaging – to achieve a matt surface and protection against mechanical impacts such as rubbing, scratching, chafing etc.
100-13	OVERPRINT VARNISH 2K	Intended for printing on the outside of flexible plastic films, primarily for food packaging.
105-13	OVERPRINT VARNISH 2K	First component of a 2-components varnish. The second component is the isocyanate based crosslinker 105-1065 2K-Hardener. 05-13 is intended for printing on the outside of flexible plastic films for packaging.
100-64	OVERPRINT VARNISH MATT 2K	Intended for printing on the outside of flexible plastic films for packaging.
105-64	OVERPRINT VARNISH MATT 2K	First component of a 2-components varnish. The second component is the isocyanate based crosslinker 105-1065 2K-Hardener. 105-64 is intended for printing on the outside of flexible plastic films for packaging.

OVERPRINT VARNISH L-356

L-356 is a glossy, transparent, heat seal resistant overprint varnish for printing on flexible packaging films, mainly for food packaging. It protects the overprinted inks from mechanical impacts such as scratching, chafing and rubbing. Also it enhances the gloss and the slip properties of the inks.

PROPERTIES

- High grade together with good transparency
- Heat sealing resistance up to 180 °C
- Free from acrylates and chlorine containing binders such as PVC or PVdC
- Free from migrating plasticizers

ADVANTAGES

- Good adhesion on many plastic film types

TECHNICAL DETAILS

Substrates	Printed packaging films of aluminium, plastic and paper, Plastic films with good corona pre-treatment, printed or unprinted paper, aluminium film with primer	
Coating Weight	1,5 g/m2 – 2,5 g/m2 (dry)	
Appearance	Colourless, slightly cloudy liquid	
Odour	Like ethanol and ethyl acetate	
Solid content	26,0% – 28,0 %	
Viscosity	26 s – 31 s, flow cup DIN 53211, 4 mm, at 20 °C	
Solvents	Accelerator	Ethyl acetate
	Thinner	Ethanol / ethyl acetate = 50 / 50 Caution: Thinning solely with ethanol can reduce the gloss of the varnish layer
	Retarder	n-Propanol, ethoxy propanol
Heat seal Resistance	180 °C	

HIGH GLOSS VARNISH 1K L-505

L-505 High Gloss Varnish is a solvent-based, transparent varnish for printed packaging films to produce a high-gloss surface and to protect against mechanical effects (rubbing, scratching).

PROPERTIES

- Good protection against mechanical influences such as rubbing, chafing and scratching

ADVANTAGES

- Very high Gloss
- Good heat seal resistance
- Good printability

TECHNICAL DETAILS

Substrates	Printed packaging films made of paper, aluminum or plastic. For direct printing on plastic films, they must be corona pre-treated to achieve a good adhesion	
Coating Weight	1,5 g/m2 – 3,0 g/m2 (dry)	
Appearance	Colourless, slightly cloudy liquid	
Odour	Like solvents, mainly ethanol and methoxy propanol	
Solid content	29,7 % – 31,7 %	
Viscosity	40 s – 46 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	Ethyl acetate
	Thinner	Ethanol
	Retarder	Methoxy propanol / Ethoxy propanol
Heat seal Resistance	160 °C – 180 °C	

OVERPRINT VARNISH MATT 1K L-397

L-397 Overprint Varnish Matt is a solvent based varnish intended for printing on flexible packaging films – mainly for food packaging – to achieve a matt surface and protection against mechanical impacts.

PROPERTIES

- High matt grade together with good transparency
- Heat sealing resistance up to 180 °C
- Free from acrylates and chlorine containing binders such as PVC or PVdC
- Free from migrating plasticizers

ADVANTAGES

- Good adhesion on many plastic film types

TECHNICAL DETAILS

Substrates	Printed packaging films of plastic and paper, Plastic films with good corona pre-treatment, printed or unprinted paper, printed aluminium foil and aluminium foil with primer	
Coating Weight	1,5 g/m2 – 2,5 g/m2 (dry)	
Appearance	Colourless, slightly cloudy liquid	
Odour	Like ethyl acetate and ethoxy propanol	
Solid content	33,0 % – 35,0 %	
Viscosity	75 s – 90 s, flow cup DIN 53211, 4 mm, at 20 °C	
Solvents	Accelerator	Ethyl acetate
	Thinner	Ethanol / ethoxy propanol = 50 / 50
	Retarder	Ethoxy propanol
Heat seal Resistance	up to 180 °C	

OVERPRINT VARNISH MATT 1K L-502

L-502 Overprint Varnish Matt is intended for printing on flexible packaging films – mainly food packaging – to achieve a matt surface and protection against mechanical impacts such as rubbing, scratching, chafing etc.

PROPERTIES

- Good matting
- Relatively good transparency for matt varnishes
- Good protection against mechanical effects such as rubbing, scuffing and scratching
- Heat Seal Resistance up to 180°C

ADVANTAGES

- Good adhesion to many different substrates

TECHNICAL DETAILS

Substrates	Printed packaging films of plastic and paper, Plastic films with corona pre-treatment, Printed or unprinted paper, Printed aluminium foil and aluminium foil with primer	
Coating Weight	1,5 g/m2 – 2,5 g/m2 (dry)	
Appearance	White, cloudy liquid	
Odour	Like ethyl acetate and ethanol	
Solid content	27,2 % – 29,2 %	
Viscosity	45 s – 58 s, flow cup DIN 53211, 4 mm, at 20 °C	
Solvents	Accelerator	Ethyl acetate
	Thinner	Ethanol
	Retarder	Ethoxy propanol
Heat seal Resistance	up to 180 °C	

OVERPRINT VARNISH 2K
100-13

100-13 2K-Overprint Varnish is intended for printing on the outside of flexible plastic films, primarily for food packaging.100-13 is the first component of a 2-components varnish. The second component is the isocyanate based crosslinker 100-1000 2K Hardener. Because of the chemical reaction between the both components («curing» or «hardening»), fastness properties can be obtained which are not possible using a 1-component varnish. The recommended mixing ratio of the two components is:

100 Parts by weight	100-13	2K Overprint Varnish
15 Parts by weight	100-1000	2K Hardener

PROPERTIES

- Suitable for pasteurisation and sterilisation
- Free from acrylates and chlorine based binders such as PVC or PVdC
- The 100-1000 2K Hardener is free from aromatic isocyanates

ADVANTAGES

- Excellent adhesion on many packaging films
- Very good chemical resistance against organic solvents
- Excellent heat seal resistance
- Good mechanical characteristics like scratch and rub resistance

TECHNICAL DETAILS

Substrates	Plastic packaging films with corona pre-treatment:	
	Polyethylene, Polyester, Polypropylene, Polyamide	
	Plastic packaging films with functional coatings (after preliminary tests):	
	SiO_x, AlO_x, EVOH, PVOH, PVdC and acrylic coatings	
	Paper, Aluminium, Aluminium side of laminates and aluminium-metallized plastic films. The adhesion on the aluminium side is good on the most film types.	
Coating Weight	2,0 g/m2 – 3,0 g/m2 (dry)	
Appearance	Colourless, slightly cloudy liquid	
Odour	Like ethyl acetate	
Solid content	23,1 % – 25,1 %	
Viscosity	15 s – 17 s, flow cup DIN 53211, 4 mm, 20 °C (Form of delivery)	
	15 s – 17 s, flow cup DIN 53211, 4 mm, 20 °C (Mixture with 100-1000, 100 /15)	
Solvents	Accelerator	-
	Thinner	Ethyl acetate
	Retarder	N-propyl acetate, ethoxy propyl acetate
Heat seal Resistance	> 220 °C	

OVERPRINT VARNISH 2K
105-13

105-13 2K-Overprint Varnish is the first component of a 2-components varnish. The second component is the isocyanate based crosslinker 105-1065 2K-Hardener. Because of the chemical reaction («curing» or «hardening») between the both components, fastness properties can be obtained which are not possible using a 1-component varnish. 105-13 is intended for printing on the outside of flexible plastic films for packaging. The recommended mixing ratio of the two components is:

100 Parts by weight	105-13	2K Overprint Varnish
15 Parts by weight	105-1065	2K Hardener

PROPERTIES

- Suitable for pasteurisation and sterilisation
- Free from acrylates and chlorine based binders such as PVC or PVdC
- The 105-1065 hardener is free from aromatic isocyanates

ADVANTAGES

- Excellent adhesion on many packaging films
- Very good chemical resistance against organic solvents
- Very good seal resistance
- Good mechanical characteristics like scratch and rub resistance

TECHNICAL DETAILS

Substrates	Plastic packaging films with corona pre-treatment:	
	Polyethylene, Polypropylene, Polyester, Polyamide	
	Plastic packaging films with functional coatings:	
	SiO_x, AlO_x, EVOH, PVOH, PVdC and acrylic coatings	
	Paper, Aluminium and aluminium side of laminates and aluminium-metallized plastic films. The adhesion on the aluminium side is good on the most film types.	
Coating Weight	1,5 g/m2 – 3,0 g/m2 (dry)	
Appearance	Slightly turbid liquid	
Odour	Like isopropanol and ethyl acetate	
Solid content	21,6 % – 23,6 %	
Viscosity	23 s – 29 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	Isopropanol / Ethyl acetate = 7/3
	Thinner	Isopropanol
	Retarder	Ethoxy propyl acetate
Heat seal Resistance	200 °C	

OVERPRINT VARNISH MATT 2K 100-64

100-64 2K Overprint Varnish Matt is intended for printing on the outside of flexible plastic films for packaging. The dried layer of 100-64 has a very matt surface. 100-64 is the first component of a 2-components varnish. The second component is the crosslinker 100-1065 2K Hardener, based on an aliphatic isocyanate. Because of the chemical reaction between both components, resistance properties can be obtained which are not possible using a 1-component varnish. The recommended mixing ratio of the two components is:

100 Parts by weight	100-64	2K Overprint Varnish Matt
15 Parts by weight	100-1065	2K Hardener

PROPERTIES

- High matt grade and relatively high transparency
- Suitable for pasteurisation and sterilization
- Free from acrylates and chlorine based binders such as PVC or PVdC
- The 100-1065 hardener is free from aromatic isocyanates

ADVANTAGES

- Excellent adhesion on many packaging films
- Very good heat seal resistance
- Good chemical resistance to organic solvents
- Good mechanical characteristics like scratch and rub resistance

TECHNICAL DETAILS

Substrates		Plastic packaging films with corona pre-treatment: Polyethylene, Polyester, Polypropylene, Polyamide Paper, Aluminium, Aluminium side of laminates and aluminium-metallized plastic films. The adhesion on the aluminium side is good on the most film types
Coating Weight		1,5 g/m2 – 2,5 g/m2 (dry)
Appearance		White, turbid liquid
Odour		Like ethyl acetate
Solid content		31,0 % – 33,0 %
Viscosity		24 s – 34 s, flow cup DIN 53211, 4 mm, 20 °C (Form of delivery) 19 s – 27 s, flow cup DIN 53211, 4 mm, 20 °C (Mixture with 100-1065, 100 / 15)
Solvents	Accelerator	-
	Thinner	Ethyl acetate
	Retarder	n-Propyl acetate, ethoxy propyl acetate
Heat seal Resistance		240 °C

OVERPRINT VARNISH MATT 2K 105-64

105-64 2K-Overprint Varnish Matt is the first component of a 2-components varnish. The second component is the isocyanate based crosslinker 105-1065 2K-Hardener. Because of the chemical reaction («hardening» or «curing») between the both components, fastness properties can be obtained which are not possible using a 1-component varnish. 105-64 is intended for printing on the outside of flexible plastic films for packaging. The recommended mixing ratio of the two components is:

100 Parts by weight	105-64	2K Overprint Varnish Matt
15 Parts by weight	105-1065	2K Hardener

PROPERTIES

- High matt grade
- Suitable for pasteurisation and sterilisation
- Free from acrylates and chlorine based binders such as PVC or PVdC
- The 105-1065 hardener is free from aromatic isocyanates

ADVANTAGES

- Excellent adhesion on many packaging films
- Excellent heat sealing resistance
- Very good chemical resistance against organic solvents
- Good mechanical characteristics like scratch and rub resistance

TECHNICAL DETAILS

Substrates		Layers of commonly used printing inks, for example cellulose nitrate based inks Plastic packaging films with corona pre-treatment: Polyethylene, Polypropylene, Polyester, Polyamide Plastic packaging films with functional coatings: SiO_x, AlO_x, EVOH, PVOH, PVdC and acrylic coatings Paper, Aluminium and aluminium side of laminates and aluminium-metallized plastic films The adhesion on the aluminium side is good on the most film types
Coating Weight		2,0 g/m2 – 3,0 g/m2 (dry)
Appearance		White, turbid liquid
Odour		Like isopropanol and ethyl acetate
Solid content		25,0 %
Viscosity		23 s – 29 s, flow cup DIN 53211, 4 mm, at 20 °C
Solvents	Accelerator	Isopropanol /Ethyl acetate = 7/3
	Thinner	Isopropanol, ethanol, n-propanol
	Retarder	Methoxy propyl acetate, ethoxy propyl acetate
Heat seal Resistance		220 °C

SPECIAL COATINGS

L-35	RELEASE VARNISH	Intended as overprint varnish for printed films, which come into contact with a cold-seal adhesive or similar tacky substances
L-521	SOFT TOUCH VARNISH	Solvent-based, transparent varnish with a special soft touch surface for printed packaging films, mainly for food packaging.
L-641	STRUCTURE VARNISH 40	Intended for printing on the outside of flexible plastic films, mainly for food packaging.
L-643	STRUCTURE VARNISH MATT 40	Intended for printing on the outside of flexible plastic films, mainly for food packaging.

RELEASE VARNISH L-35

L-35 Release Varnish is intended as overprint varnish for printed films, which come into contact with a cold-seal adhesive or similar tacky substances. It reduces the adhesion of the cold-seal adhesive on the printing ink layer on the surface of the film. Thus it prevents problems during the unwinding of the roll such as damage of the ink layer by partially tearing off the ink by a strong coldseal adhesive. Usually it is used for food packaging, for instance for chocolate bars.

PROPERTIES

- Contains special binders and solvents which give relatively low residual solvents
- Free from acrylates and free from chlorine containing binders such as PVC or PVdC
- Free from migrating plasticizers

ADVANTAGES

- Good to very good release effect with the most common cold-seal adhesives
- Very glossy and transparent layer
- The dried layer of the varnish is nearly odourless

TECHNICAL DETAILS

Substrates	Common printing ink layers based on nitrocellulose, PVB, polyurethane etc. Plastic films with good corona pre-treatment, Aluminum foil with primer, the adhesion on aluminum foil without primer must be tested, Paper	
Coating Weight	1,5 g/m2 – 2,5 g/m2 (dry)	
Appearance	Cloudy liquid, in thick layer yellowish-brownish	
Odour	Like ethyl acetate and n-propanol	
Solid content	34,0 % – 36,0 %	
Viscosity	31 s – 41 s, flow cup DIN 53211, 4 mm, at 20 °C	
Solvents	Accelerator	Ethanol / ethyl acetate = 1/1
	Thinner	Ethanol
	Retarder	n-Propanol, ethoxy propanol

SOFT TOUCH VARNISH L-521

L-521 Soft Touch Varnish is a solvent-based, transparent varnish with a special soft touch surface for printed packaging films, mainly for food packaging.

PROPERTIES

- Moderate protection against mechanical influences such as rubbing, chafing and scratching
- Free from acrylates and chlorine based binders such as PVC or PVdC

ADVANTAGES

- Very good soft touch effect
- Good heat seal resistance
- Good printability

TECHNICAL DETAILS

Substrates	Printed packaging films made of paper, aluminum or plastic	
Coating Weight	1,5 g/m2 – 3,0 g/m2 (dry)	
Appearance	Colourless, slightly cloudy liquid	
Odour	Like solvents, mainly isopropanol and ethyl acetate	
Solid content	31,8 % – 34,8 %	
Viscosity	60 s – 70 s, flow cup DIN 53211, 4 mm, 20 °C (form of delivery)	
	23 s – 27 s, flow cup DIN 53211, 4 mm, 20 °C (thinned with 25% Isopropanol)	
Solvents	Accelerator	Ethyl acetate
	Thinner	Isopropanol
	Retarder	Ethoxy propanol
Heat seal Resistance	140 °C - 160 °C	

STRUCTURE VARNISH 40 L-641

L-641 Structure Varnish 40 is intended for printing on the outside of flexible plastic films, mainly for food packaging. The dried layer of L-641 has a slightly matt surface which gives a rough haptic effect. A sufficient layer thickness is required to achieve this effect.

PROPERTIES

- Semi-transparent
- Good protection against mechanical effects such as rubbing, scuffing and scratching
- Heat Seal Resistance up to 180°C

ADVANTAGES

- Rough structure effect apparent

TECHNICAL DETAILS

Substrates	OPP corona pre-treated, PET corona pre-treated, PE corona pre-treated, Paper, Aluminium, Aluminium side of laminates aluminium-metallized plastic films	
Coating Weight	4,0 g/m2 – 10,0 g/m2 (dry)	
Appearance	Turbid, whitish liquid	
Odour	Mainly of ethanol	
Solid content	29,0 % – 32,0 %	
Viscosity	27 s – 33 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	ethyl acetate
	Thinner	ethanol
	Retarder	ethoxy propanol
Heat seal Resistance	up to 180 °C	

STRUCTURE VARNISH MATT40 L-643

L-643 Structure Varnish matt 40 is intended for printing on the outside of flexible plastic films, mainly for food packaging. The dried layer of L-643 has a slightly matt surface which gives a rough haptic effect. A sufficient layer thickness is required to achieve this effect.

PROPERTIES

- Good matting
- Good protection against mechanical effects such as rubbing, scuffing and scratching
- Heat Seal Resistance up to 180°C

ADVANTAGES

- Rough structure effect apparent

TECHNICAL DETAILS

Substrates	OPP corona pre-treated, PET corona pre-treated, PE corona pre-treated, Paper, Aluminium, Aluminium side of laminates aluminium-metallized plastic films	
Coating Weight	4,0 g/m2 – 10,0 g/m2 (dry)	
Appearance	Turbid, whitish liquid	
Odour	Mainly of ethanol	
Solid content	32,5 % – 35,4 %	
Viscosity	75 s – 85 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	ethyl acetate
	Thinner	ethanol
	Retarder	ethoxy propanol
Heat seal Resistance	up to 180 °C	

HEATSEAL LACQUERS

L-1415 HSL	**HEAT-SEAL VARNISH**	Transparent protective lacquer for aluminium packaging foils, mainly for the inside coating of the packaging of soft cheese, processed cheese or similar dairy products.
L-1730 VE	**HEAT-SEAL VARNISH** PET-PS	Transparent heat sealing varnish for PET or aluminium lids. These are sealed on polystyrene cups normally used for dairy products such as yoghurt, coffee cream etc.
L-362 V	**HEAT-SEAL VARNISH**	Ethyl acetate based heat seal and protection lacquer, commonly used for flexible packaging plastic films, paper or aluminium foils, particularly for food packaging.
L-342	**HEAT-SEAL VARNISH** for Alu-Alu	Ethyl acetate based heat seal und protection lacquer, commonly used for aluminium foils, PET films or paper, particularly for food packaging.
L-593	**HEAT-SEAL VARNISH** Roto	Heat seal varnish, commonly used on flexible packaging films and foils like PET, BOPP or aluminium sealed to polypropylene, polystyrene, aluminium or other plastic materials like PET, PLA or PVC.
L-592	**HEAT-SEAL VARNISH** Flexo	Heat seal varnish, commonly used on flexible packaging films and foils like PET, BOPP or aluminium sealed to polypropylene, polystyrene, aluminium or other plastic materials like PET, PLA or PVC.
L-564	**HEAT-SEAL VARNISH**	Commonly used for flexible packaging films and foils like polyester (PET) or aluminium sealed to polypropylene (PP), polystyrene (PS) or other plastic materials like polyester (PET), polylactic acid (PLA) or polyvinyl chloride (PVC). Applied in sufficient coating weights and sealed a high temperatures above 180 °C it results in very high seal strengths.
L-566	**HEAT-SEAL VARNISH**	Commonly used for flexible packaging films and foils like polyester (PET) or aluminium sealed to polypropylene (PP), polystyrene (PS) or other plastic materials like polyester (PET), polylactic acid (PLA) or polyvinyl chloride (PVC). Applied in sufficient coating weights and sealed a high temperatures above 180 °C it results in very high seal strengths.

HEAT SEAL LACQUER L-1415

L-1415 HSL Heat Seal Lacquer is a transparent protective lacquer for aluminium packaging foils, mainly for the inside coating of the packaging of soft cheese, processed cheese or similar dairy products. It protects the aluminium against aggressive substances such as water, lactic acid, brine or other ingredients of dairy products, which can be very destructive for aluminium foils.

PROPERTIES
- Based on PVC binders
- Low response temperature

ADVANTAGES
- Very good corrosion protection against aggressive filling goods
- Transparent protective varnish for aluminium

TECHNICAL DETAILS

Substrates	Aluminium foil, normally 30 µm – 38 µm	
Coating Weight	4,5 g/m2 – 6,0 g/m2 (dry)	
Appearance	Colourless, slightly turbid liquid. During the storage the liquid can show a slight yellowish discolouration in thick layer	
Odour	Like MEK (methyl ethyl ketone, 2-butanone)	
Solid content	28,7 % – 30,7 %	
Viscosity	56 s – 70 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	-
	Thinner	Ethyl acetate or MEK. No alcohols!
	Retarder	N-propyl acetate, ethoxy propyl acetate. No alcohols!

HEAT SEALING VARNISH PET-PS L-1730 VE

L-1730 VE is a transparent heat sealing varnish for PET or aluminium lids. These are sealed on polystyrene cups normally used for dairy products such as yoghurt, coffee cream etc.

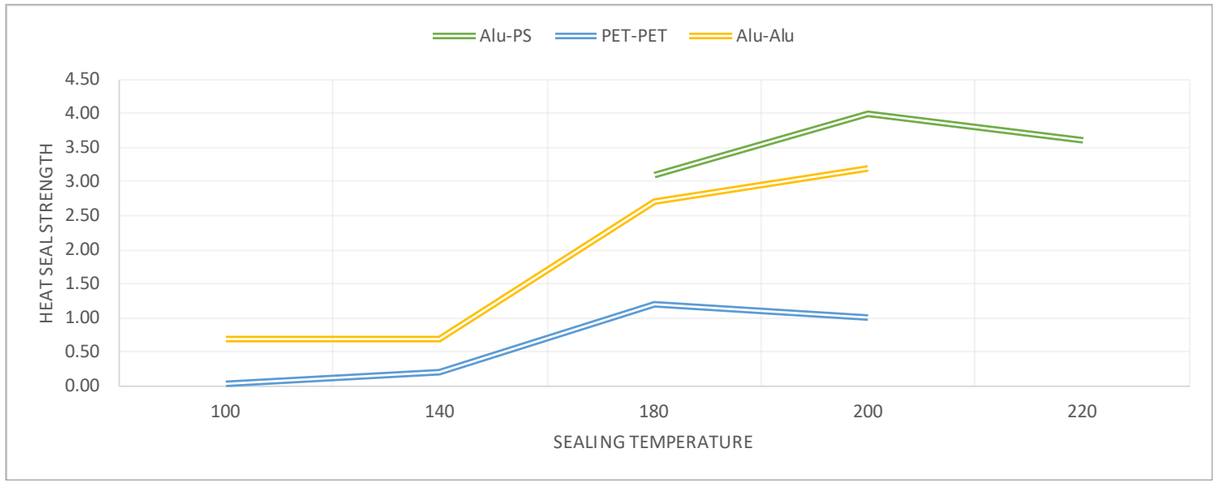
PROPERTIES
- The dried paint layer is completely odourless
- Contains special binders and only ethyl acetate as a solvent, resulting in rapid drying and low residual solvents
- Free from cellulose nitrate
- Important: L-1730 VE consists of two liquid phases and therefore requires special preparation for printing

ADVANTAGES
- Good seal adhesion
- Good protective layer for aluminium

TECHNICAL DETAILS

Substrates	Polyester films or polyester side of compound films Aluminium films or aluminium side of compound films	
Coating Weight	On aluminium: 4,0 g/m2 – 6,0 g/m2 (dry) On polyester: 3,0 g/m2 – 4,0 g/m2 (dry)	
Appearance	After stirring: Colourless, slightly cloudy liquid	
Odour	Like ethyl acetate	
Solid content	29,3 % – 31,3 %	
Viscosity	38 s – 46 s, flow cup, 4 mm, DIN 53224, 20 °C	
Solvents	Accelerator	-
	Thinner	Ethyl acetate. No alcohols!
	Retarder	N-propyl acetate, ethoxy propyl acetate. No alcohols!

SEALING VARNISH TO SUBSTRATE



HEAT SEAL LACQUER
L-362 V

L-362 V Heat Seal Lacquer is an ethyl acetate based heat seal and protection lacquer, commonly used for flexible packaging plastic films, paper or aluminium foils, particularly for food packaging.

PROPERTIES

- Free from acrylates and cellulose nitrate
- Free from chlorine containing binders such as PVC or PVdC
- Free from migrating plasticizers
- Further applications are possible, for instance as protection lacquer for the inside of aluminium wrap foils for chocolate bars or figures such as easter eggs
- In some cases also the sealing process lacquer to paper is suitable

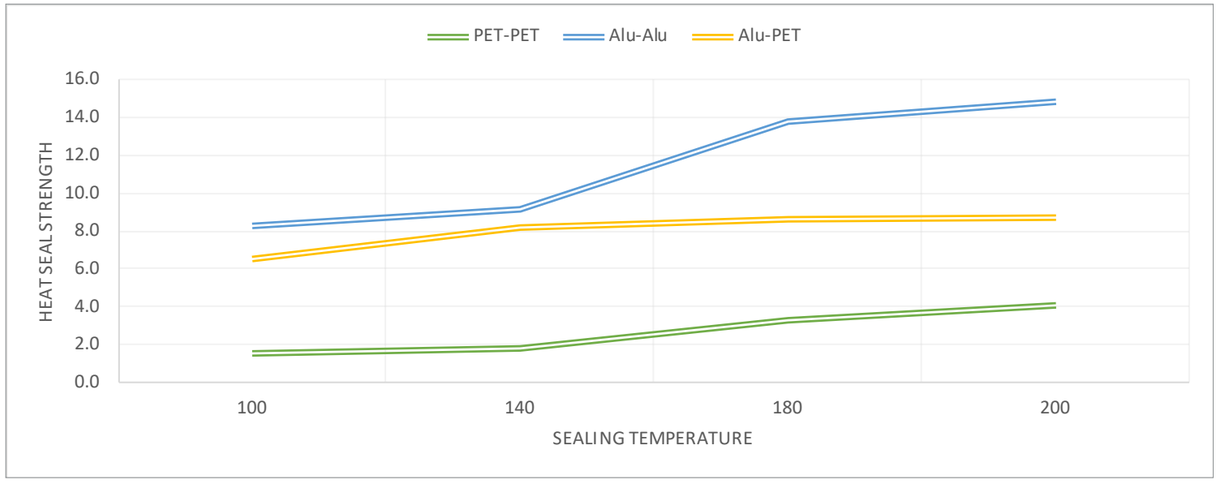
ADVANTAGES

- Heat sealable at low temperatures, from 70 °C upwards, sealing process lacquer to lacquer
- The dried layer of the lacquer is completely odourless
- Contains special binders and only ethyl acetate as solvent. This results in fast drying and very low residual solvents

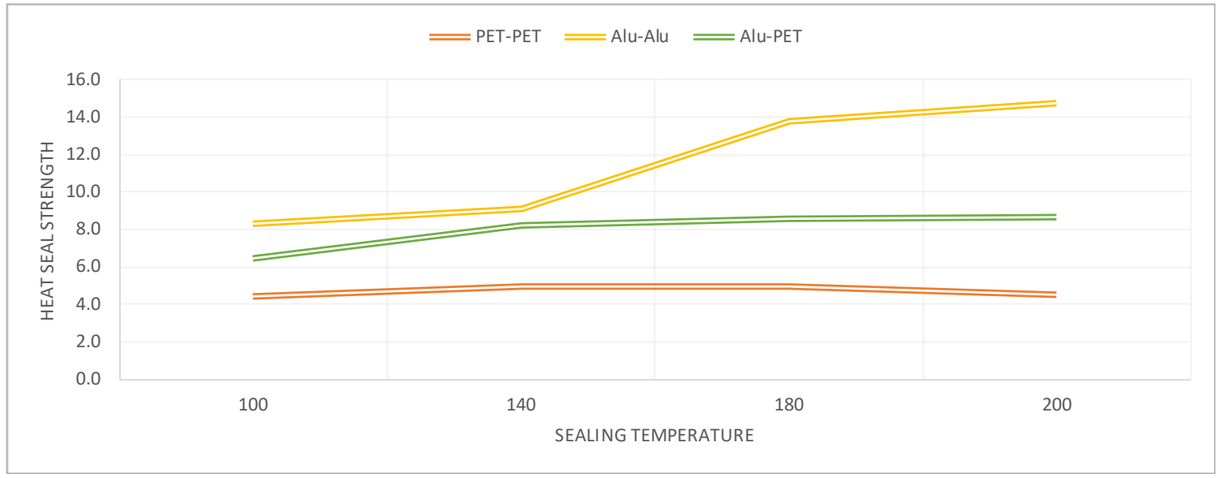
TECHNICAL DETAILS

Substrates	Aluminium foil, Paper, PET and PA films with corona pre-treatment	
Coating Weight	2,0 g/m2 – 4,0 g/m2 (dry)	
Appearance	Slightly turbid liquid, a thick layer in the form of delivery can be colourless to slightly reddish	
Odour	Like ethyl acetate	
Solid content	27,2 % – 29,2 % by weight	
Viscosity	17 s – 21 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	-
	Thinner	Ethyl acetate or methyl ethyl ketone (MEK)
	Retarder	N-propyl acetate, ethoxy propyl acetate

SEALING VARNISH TO SUBSTRATE



SEALING VARNISH TO VARNISH



HEAT SEAL VARNISH for ALU-ALU L-342

L-342 Heat Seal Varnish Alu-Alu is an ethyl acetate based heat seal und protection lacquer, commonly used for aluminium foils, PET films or paper, particularly for food packaging.

PROPERTIES

- Free from acrylates and cellulose nitrate
- Free from chlorine containing binders such as PVC or PVdC
- Free from migrating plasticizers
- Further applications are possible, for instance as protection lacquer for the inside of aluminium wrap foils for chocolates
- In some cases also the sealing process lacquer to paper is suitable

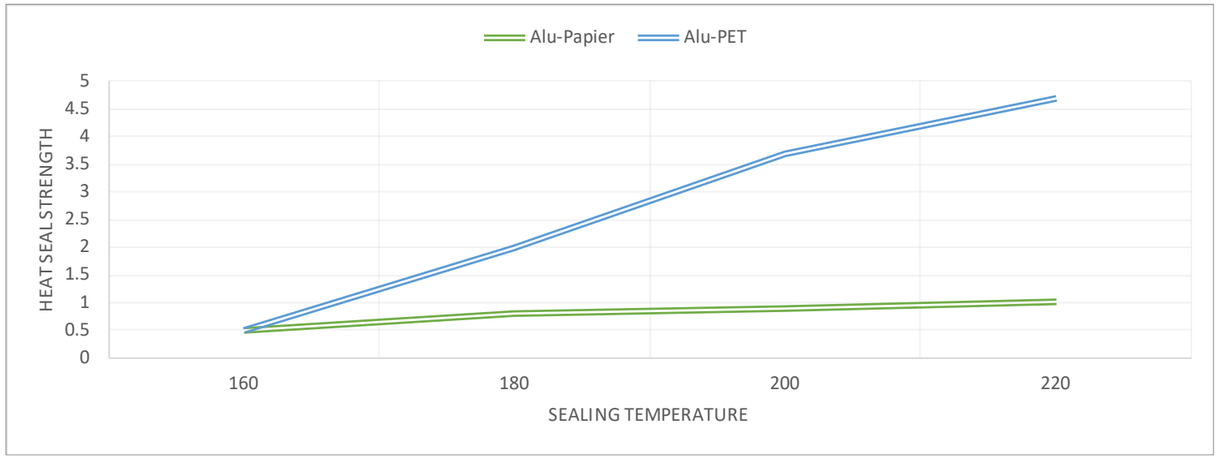
ADVANTAGES

- Heat sealable at low temperatures, from 70 °C upwards sealing process lacquer to lacquer and lacquer to substrate
- The dried layer of the lacquer is completely odourless
- Contains special binders and only ethyl acetate as solvent. This results in fast drying and very low residual solvents.
- Especially equipped for soft peel effect

TECHNICAL DETAILS

Substrates	Aluminium foil, PET and PA films with corona pre-treatment, Paper	
Coating Weight	2,0 g/m2 – 4,0 g/m2 (dry)	
Appearance	Slightly turbid liquid, a thick layer in the form of delivery can be colourless to slightly reddish	
Odour	Like ethyl acetate	
Solid content	29,5 % – 32,5 % by weight	
Viscosity	17 s – 21 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	-
	Thinner	ethyl acetate or methyl ethyl ketone (MEK)
	Retarder	n-propyl acetate, ethoxy propyl acetate

SEALING VARNISH TO SUBSTRATE



HEAT SEAL VARNISH ROTO L-593

L-593 Heat Seal Varnish is a heat seal varnish, commonly used on flexible packaging films and foils like PET, BOPP or aluminium sealed to polypropylene, polystyrene, aluminium or other plastic materials like PET, PLA or PVC.

PROPERTIES

- Free from chlorine containing binders such as PVC or PVdC
- Free from migrating plasticizers

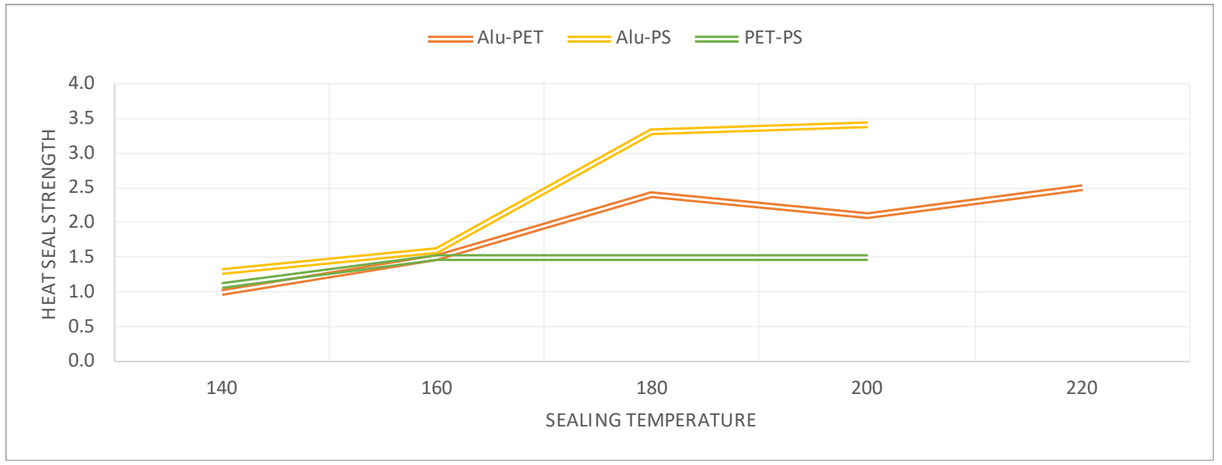
ADVANTAGES

- The dried layer of the varnish is completely odourless
- Contains special binders and mainly ethyl acetate as solvent. This results in fast drying and very low residual solvents

TECHNICAL DETAILS

Substrates	Aluminium foil (with Primer), Paper, PET, PS and PA films with corona pre-treatment, BOPP films with corona pre-treatment	
Coating Weight	4,0 g/m2 – 5,0 g/m2 (dry)	
Appearance	Whitish turbid liquid	
Odour	Mainly of ethyl acetate	
Solid content	27,5 % – 30,5 % by weight	
Viscosity	15 s – 21 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	-
	Thinner	Ethyl acetate
	Retarder	n-propyl acetate, ethoxy propyl acetate

SEALING VARNISH TO SUBSTRATE



HEAT SEAL VARNISH FLEXO
L-592

L-592 Heat Seal Varnish is a heat seal varnish, commonly used on flexible packaging films and foils like PET, BOPP or aluminium sealed to polypropylene, polystyrene, aluminium or other plastic materials like PET, PLA or PVC.

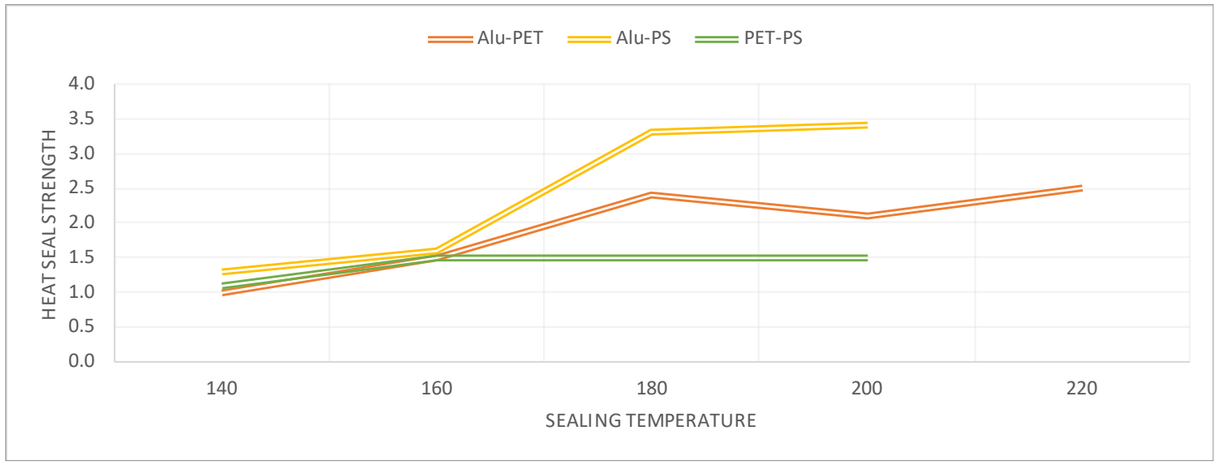
PROPERTIES
- Free from chlorine containing binders such as PVC or PVdC
- Free from migrating plasticizers

ADVANTAGES
- The dried layer of the varnish is completely odourless
- Contains special binders and mainly ethyl acetate as solvent. This results in fast drying and very low residual solvents

TECHNICAL DETAILS

Substrates	Aluminium foil, paper, PET, PS and PA films with corona pre-treatment	
Coating Weight	4,0 g/m2 – 7,0 g/m2 (dry)	
Appearance	Whitish turbid liquid	
Odour	Mainly of ethyl acetate and ethoxy propanole	
Solid content	32,6 % – 35,6 % by weight	
Viscosity	26 s – 40 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	-
	Thinner	acetate
	Retarder	n-propyl acetate, ethoxy propyl acetate

SEALING VARNISH TO SUBSTRATE



HEAT SEAL VARNISH
L-564

L-564 Heat Seal Varnish commonly used for flexible packaging films and foils like polyester (PET) or aluminium sealed to polypropylene (PP), polystyrene (PS) or other plastic materials like polyester (PET), polylactic acid (PLA) or polyvinyl chloride (PVC). Applied in sufficient coating weights and sealed a high temperatures above 180 °C it results in very high seal strengths.

PROPERTIES
- Free from chlorine containing binders such as PVC or PVdC
- Free from migrating plasticizers

ADVANTAGES
- The dried layer of the Varnish is completely odourless
- Contains special binders and mainly ethyl acetate as solvent, this results in fast drying and very low residual solvents

TECHNICAL DETAILS

Substrates	Aluminium foil, paper, PET and PA films with corona pre-treatment	
Coating Weight	2,0 g/m2 – 7,0 g/m2 (dry)	
Appearance	Whitish turbid liquid	
Odour	Mainly of ethyl acetate	
Solid content	33,2 % – 36,2 % by weight	
Viscosity	22 s – 28 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	-
	Thinner	acetate
	Retarder	n-propyl acetate, ethoxy propyl acetate

SEALING VARNISH TO SUBSTRATE

Diagram page 39

SEALING VARNISH TO VARNISH

Diagram page 39

HEAT SEAL VARNISH L-566

L-566 Heat Seal Varnish commonly used for flexible packaging films and foils like polyester (PET) or aluminium sealed to polypropylene (PP), polystyrene (PS) or other plastic materials like polyester (PET), polylactic acid (PLA) or polyvinyl chloride (PVC). Applied in sufficient coating weights and sealed a high temperatures above 180 °C it results in very high seal strengths.

PROPERTIES

- Free of chlorine containing binders such as PVC or PVdC
- Free of migrating plasticizers

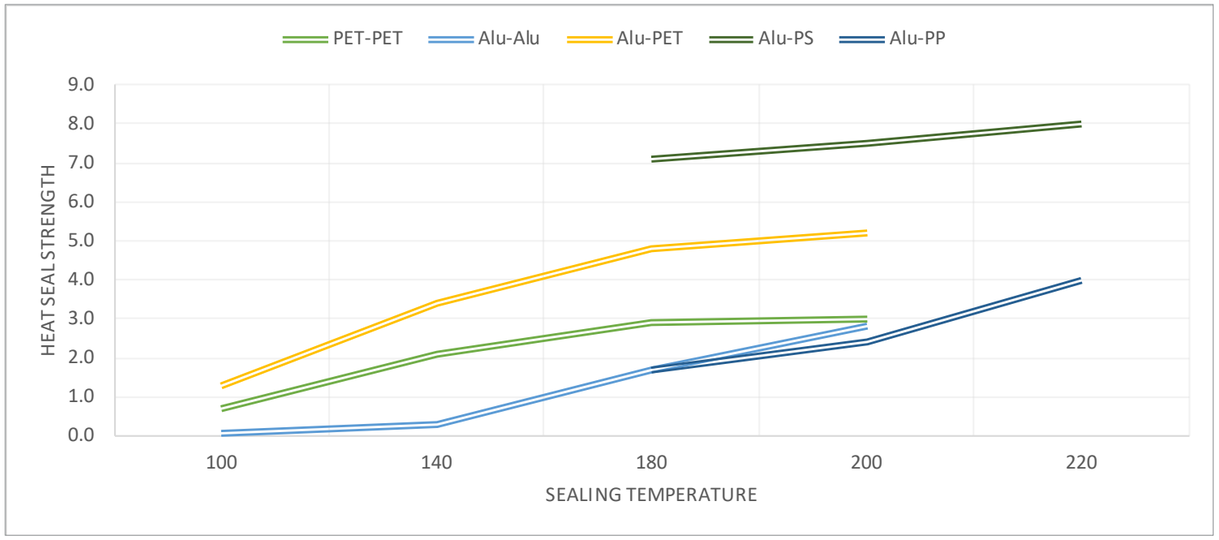
ADVANTAGES

- The dried layer of the Varnish is completely odourless
- Contains special binders and mainly ethyl acetate as solvent. This results in fast drying and very low residual solvents

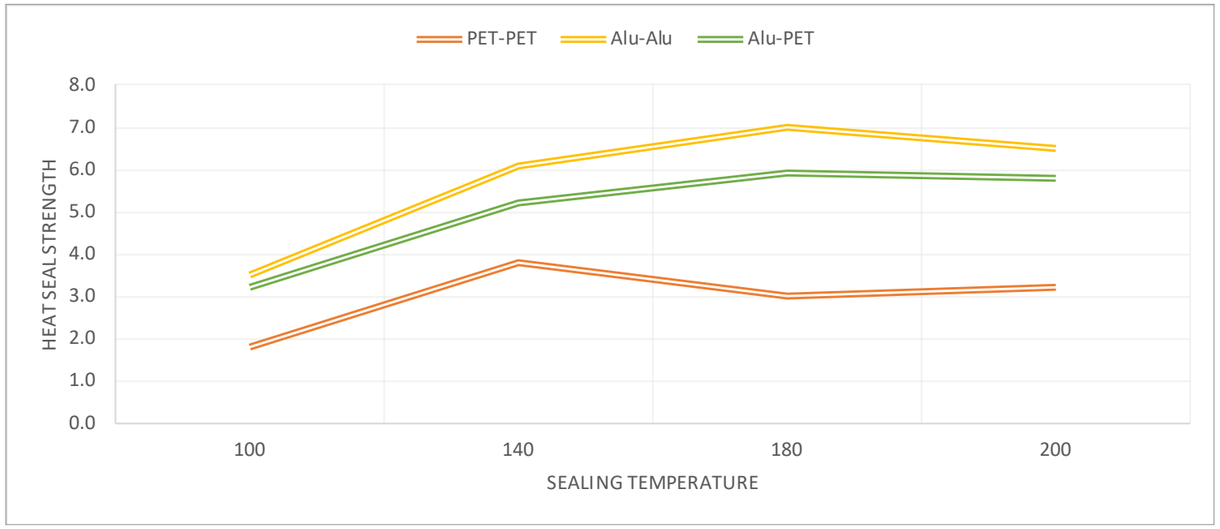
TECHNICAL DETAILS

Substrates	Aluminium foil, paper, PET and PA films with corona pre-treatment	
Coating Weight	2,0 g/m2 – 7,0 g/m2 (dry)	
Appearance	Whitish turbid liquid	
Odour	Mainly of ethyl acetate	
Solid content	38,6 % – 41,6 % by weight	
Viscosity	22 s – 28 s, flow cup DIN 53211, 4 mm, 20 °C	
Solvents	Accelerator	-
	Thinner	ethyl acetate
	Retarder	n-propyl acetate, ethoxy propyl acetate

SEALING VARNISH TO SUBSTRATE



SEALING VARNISH TO VARNISH



ROTOFLEX AG | Lebernstrasse 40 | CH - 2540 Grenchen
P +41 32 644 27 70 | info@rotoflex.ch | www.rotoflex.ch