

“Protection that lasts beyond the fill”



ACE COATINGS

AGRICULTURAL, CONSTRUCTION AND EARTHMOVING
EQUIPMENT



TECHNOLOGIES FOR A SECURE FUTURE



Resins and additives for ACE applications

The ACE market continues to drive both coating durability and aesthetics to new heights. For the harshest environments, solventborne technologies remain the best tool for the job, and VARENA CHEMICAL continues to support a robust portfolio of solventborne polyols well-suited for primers, topcoats and direct-to-metal application to provide the protection needed out in the field.

While much of the ACE market remains focused on solventborne solutions, VARENA CHEMICAL also provides the market with high performance waterborne dispersions, to support customers wherever they are in their shift from solventborne to waterborne.



Agriculture, construction and earthmoving equipment: Heavy duty equipment coatings

Global climate conditions can expose your ACE equipment to a wide range of temperatures, humidity levels, and sunlight. In these harsh environments, a coating that protects the surface of your investment is essential. VARENA offers a range of high-performance resins and additives designed for coating systems used in ACE applications. These solutions provide excellent corrosion protection and enable innovative coatings available in a wide variety of colors and formulations.

VARENA coating resins and additives enable high-performance coating systems that meet the stringent requirements of leading OEM manufacturers in the agricultural, construction, and earthmoving industries.



VaraPol; LIQUID POLYESTER FOR PU-SYSTEMS

STANDARD PRODUCTS

Product	Delivery Form [%]	Viscosity [mPa.s/23°C]	Acid Value [mgKOH/g]	Tg [°C]	OH/Solid [%]	Description
E 1800	Solvent free	25000 - 36000	< 3	-42	6,5	As sole binder with aromatic isocyanates it is used for anti-corrosive primers with excellent adhesion.
E 1805	65% in MPA	17000 - 23000	< 3	+48	8,8	Excellent weather stability, lightfastness, gloss retention, good chemicals and abrasion resistance
E 1807	Solvent free	1800 - 2600	< 3	-21	4,3	Suitable for flexible topcoat/co-binders to make coatings systems more flexible.
AB 1733	90% in X	2000 - 2400	< 1	-	-	Used in heavy duty top coats for metal, marine; protective paints and concrete and masonry paints and reinforced polyester coatings. Offers good gloss level, solvent and water resistance, solids content, flexibility and hardness.
PU 841	95% in X	12000 - 16000	< 4	-46	5,8	VaraPol PU 841 X-95 is in combination with polyisocyanate resins for ultra high solid normal and forced-drying, two-component polyurethane systems.
PU 846	Solvent free	7500 - 10000	< 12	-46	7,4	Two component polyurethane coatings as such or as combination resin for hydroxy acrylic resins to increase solids contents of protective coatings.
PU 837	80% in BA	3300 - 4100	< 3	-24	5,0	It exhibits chemical resistance and scratch resistance. Recommended for industrial finishes, and protective coatings.
E 1127	80% in BA	9000 - 13000	< 16	-27	5,0	It is therefore particularly suitable for the formulation of anti corrosive primers for industrial use, finishes for agricultural machinery.
FS 1300	Solvent free	2500 - 4500	< 3	-	4,7	Polyester-polyether polyol, for 2-K coatings.



VaraLac; SOLVENTBASED ALKYD RESINS

STANDARD PRODUCTS					
Product	Delivery Form [%]	Viscosity [mPa.s/23°C]	Acid Value [mgKOH/g]	Oil Type	Description
UR 5202	50% in W	3500 - 550	< 5	Linoleic rich oils	Polyurethane modified long oil alkyd for corrosion resistant maintenance primers and marine paints/varnishes and heavy duty (anti-corrosives).
UR 5314	60% in W	2200 - 3000	< 2	Linseed / Soya	Polyurethane modified long oil alkyd for corrosion resistant maintenance primers and marine paints/varnishes and heavy duty (anti-corrosives).
AN 580	60% in X	2000 - 3000	< 15	Castor oil	Machinery paints and general industrial air drying systems.
PM 353	60% in X	6000 - 8500	< 20	Linseed / Tung	Phenolic modified short-toil alkyd resin. Used in anti-corrosive primers, non lifting fillers and machinery paints, heavy duty (anti-corrosives) and one coat systems for metal.
AN 418	65% in X	2400 - 3200	< 15	Linoleic rich oils	Machinery paints
AH 1263	Solvent free	2000 - 3500	< 10	Mixed fatty acids	Protective and maintenance primers and topcoats.
AH 1265	Solvent free	2000 - 3000	< 10	Mixed fatty acids.	Protective and maintenance primers and topcoats.
AS 381	60% in X	1700 - 3200	< 10	Mixed fatty acids	Sytrene modified short-oil alkyd, for corrosion resistant metal primers, marine paints / varnishes and maintenance primers. and for glossy top coats and hammer finishes..
AS 388	60% in X	1500 - 3000	< 10	Mixed fatty acids	Sytrene modified short-oil alkyd, for corrosion resistant metal primers, marine paints / varnishes and maintenance primers. and for glossy top coats and hammer finishes.

VaraSol; WATERBORNE ALKYD RESINS

STANDARD PRODUCTS					
Product	Delivery Form [%]	Viscosity [mPa.s/23°C]	Oil length [%]	Oil Type	Description
AZ 454 W	100%	600 - 800	62	linseed oil	Temporary anticorrosive paints
AZ 600 W	42% in water	500 - 100	26	Linoleic rich fatty acids	Salt spray resistance coatings.
AZ 502 W	60% in water	50 - 1000	73	Linseed oil	Metal primers.
AZ 554 W	50% in water	100 - 600	40	Soya bean fatty acid	Interior / exterior primers and topcoats for wood and metals, primers and topcoats for Joinery application and corrosion resistant primers.
AZ 601 W	44% in water	200 - 450	25	Linoleic rich	PU modified short oil alkyd emulsion, for industrial metal primers with salt spray resistance.
AZ 576 W	53 % in water	100 - 1000	40	Soya bean oil	Interior / exterior primers and topcoats for metals, primers and topcoats for Joinery application and corrosion resistant primers.

VaraCryl; SOLVENTBASED ACRYLIC PU-SYSTEMS

STANDARD PRODUCTS

Product	Delivery Form [%]	Viscosity [mPa.s/23°C]	OH/Solid [%]	Description
A 972	70% in EEP	4000 - 6000	3.1	ACE (agriculture and construction equipment), car refinish, commercial vehicles and protective marine coatings.
A HS 970	70% in BAC	2200 - 3800	2.4	Protective and marine coatings.
A 940	60% in BAC/X	1400 - 2400	1.4	PU-repair and big rolling stock, general industry, primers.
A HS 937	75% in BAC	4500 - 5500	2.8	Corrosion Protection; metal; good Weather and Chemical Stability; High Solid.
A 960	60% in S100	2300 - 3300	2.6	PU-repair primer, marine paints and protective coating.
A 965	65% in BAC/X	1900 - 2900	2.7	PU-repair primer, marine paints and protective coating.
A 96	60% in XEA	3000 - 5000	2.8	High solid, excellent exterior durability, protective, marine.
A 2210	60% in X	17000 - 22000	1.0	A styrene acrylic resin for the production of physically drying primers. This grade has a non-volatile content of 60% ± 1. It is particularly suitable for the manufacture of fast drying primers.
A 2230	60% in BAC/X/S100	1000 - 2000	3.0	For high-quality air and forced-drying topcoats and clear coats, especially in the field of industrial and machine painting. The acrylic resin is characterized by rapid drying and drying and high gloss. Crosslinking with aliphatic isocyanates achieves good adhesion to steel.
A 2217 H	75% in BAC	4000 - 8000	1.7	A low-viscosity styrene acrylate resin for the production of high-solids, fast drying 2K primers and topcoats, and one-coat paints. Optimum adhesion, high initial hardness, good corrosion protection.
A 2219 H	70% in BAC	2000 - 5000	2.5	For air- and forced drying 2-component PUR topcoats for the steel construction, agricultural machinery and construction vehicle painting. The Paints have a good drying, high gloss and high hardness.



Faster drying, PU topcoats at any temperature with extended potlife – Today!

Our VaraCryl acrylic polyol product range for Industrial topcoats enables the formulation of the fastest drying 2k PU systems in the industry, at any given temperature, while maintaining pot life, solids and all other coating properties.

VaraMul; ACRYLIC; WATERBASED DISPERSIONS

STANDARD PRODUCTS

Product	Monomer	Delivery Form [%]	pH value	MFFT [°C]	Viscosity [mPa.s] /20°C	Description
AE 1137	Styrene acrylic emulsion	42% in water	7.5 – 8.5	28	max. 200	Allround emulsion for top coats on plastic, metal, wood and for corrosion inhibiting primers with very good adhesion on steel and low water absorption.
AE 1135	Styrene acrylic emulsion	42% in water	7.5 – 8.5	39	max. 1000	Top coats on metal, wood, plastics (PS, ABS), also for temporary anti-corrosive primers on metal, can be combined with water-thinnable alkyd resins.
XK 4498	Pure acrylic dispersion	45% in water	7.5 – 8.5	< 1	max. 500	Self-crosslinking pure core-shell dispersion that incorporates excellent block and alkaline resistance and extraordinary wet adhesion with minimal water absorption. The product displays early water resistance and very good weathering, as well as a non-yellowing elastic film. This emulsion shows excellent adhesion to difficult substrates such as metals and plastics. This emulsion is APEO free.
AE 1340	A super hydrophobic acrylic dispersion	47% in water	7.0 – 8.0	16	700 - 3000	Self-crosslinking super hydrophobic acrylic dispersion for anti-corrosive paints, stain locking, and adhesion promoted two phase acrylic dispersion with low MFFT combined with high surface hardness, less VOC demand in formulations, fast drying and high blocking resistance, high level of elasticity and fast sandability.
LDM 414	Non-plasticized aqueous copolymer dispersion	50% in water	8.0 – 9.0	15	500 - 3500	Copolymer dispersion based on acrylic and methacrylic acid esters. LDM 414 is especially designed as a binder for high-quality exterior coatings with excellent adhesion properties, for example on old alkyd coatings or zinc plates. The special adhesion and cross-linking system of LDM 414 give rise to outstanding wet adhesion in addition to low dirt-pickup. Excellent outdoor durability, good wet adhesion, good elasticity, adheres to mineral, wood and metal substrates, use in clear and pigmented coatings.
AE 1120	Styrene acrylic emulsion	49% in water	8.2 – 9.0	15	200 - 800	Corrosion inhibiting primers on different metals (e.g. iron, aluminium), wood with weather resistance.
AE 1158	Styrene acrylic emulsion	50% in water	7.0 – 8.0	6	max. 500	Self-crosslinking styrene modified acrylic emulsion for primers with excellent results in corrosion protection.

No need to compromise with VaraMul acrylic 1K DTM





VaraXyn; SOLVENTBAED, WATERBASED EPOXY ESTER

STANDARD PRODUCTS

Product	Delivery Form [%]	Viscosity [mPa.s/23°C]	Acid Value [mgKOH/g]	Oil Type	Description
EE 410	60% in X	800 - 1500	< 5	Drying fatty acids	For anticorrosive and zinc rich primers with excellent long-term corrosion and water resistance.
EE 412	60% in W	4500 - 5700	< 12	Tall oil / DCO	Vinyltoluene modified epoxy ester resin based on low rosin tall oil and dehydrated castor oil. Air dry and stoving primers and to coats for protective coatings.. Primers and top coats for automotive coatings and maintenance systems.
EE 420	60% in X	400 - 750	< 4	DCO	High flexibility epoxy ester based on dehydrated castor oil fatty acids. Air dry and stoving primers for protective coatings (chassis). Primers and fillers for automotive coatings.
EE 440	50% in S2	2200 - 2800	< 4	DCO	Air dry and stoving primers for protective coatings (chassis). Primers and fillers for automotive coatings.
EE 451	51%v in Butylglycol / water	100 - 400	< 5	DCO	Epoxy ester emulsion based on DCO, designed for protective coatings. Industrial construction and maintenance metal primers with chemical resistance, fast drying, excellent long-term corrosion and water resistance and excellent adhesion



Higher line efficiency

We offer a two-layer system based on waterborne epoxy ester primer and solventborne epoxy ester systems-

Our **VaraXyn** and **POXAMIN** portfolio offers very fast curing primers that can be topcoated soon after application.

Our **VaraCryl** and **VaraPol** portfolio offers compatible fast curing topcoats.

Phenolics for high performance metal coatings

VARENA CHEMICAL provides an industry leading portfolio of water and solvent-based **VaraNol** phenolic crosslinkers used in high performance general metal and packaging applications. This portfolio offers a range of compositions, binder compatibilities and cure characteristics and can be used to enable improved coating properties such as flexibility, heat resistance and chemical resistance.

- Broad Phenolics Crosslinker Portfolio
- Water & Solvent-Based Resins
- Enhance Flexibility & Chemical Resistance



> A R A Z O J



VaraFen; PHENOLIC RESINS

Product	Delivery Form [%]	Viscosity [mPa.s]/23°C	Main uses and characteristics
L 319	42 in S2/B	1.500 – 2.100	Precondensate of epoxy resin and partly butylated phenolic resin. Used in protective coatings, interior coatings for containers, boils, tube coating and injection spraying (tube lining). Offers chemical resistance, hardness and adhesion to steel, tinplate and aluminium.
FB 209	57 in B	340 – 490	Non plasticized n-butylated phenolic resin. Used in interior can coating (gold varnishes) and general industrial chemical resistance enamels. Offers chemical resistance, hardness and compatibility with epoxy resins.
FB 210	60 in B	500 – 1.000	Used in interior can coatings, gold varnishes and chemical resistant coatings. Offers chemical resistance and hardness. Compatible with epoxyde resin like Epikote 1007 or 1009, the FB 210 B 60 resin is used for heat curing phenolic / epoxyde combinations where good chemical resistance, light color and hardness are needed. Conforms to US FDA CFR 21 § 175.300 and EU 10/2011, Annex 1.
PR 217	55 in B	100 – 200	Butylated phenol resol with good compatibility to different resin systems, e.g. epoxy or polyester resins. The phenol resin has a low formaldehyde content of less than 0.1%, has good adhesion, hardness and flexibility as well as excellent sterilization resistance and chemical resistance with exception of strong alkalines. The product is a heat-reactive resin with limited shelf life. Extended storage at high temperatures should be avoided to prolong the useful life of the resins. Conforms to US FDA CFR 21 § 175.300 and EU 10/2011, Annex 1.

E-COAT

Manufacturers are looking for advanced and environmentally friendly coating solutions to reduce costs while maintaining or improving the quality of their products. **VARENA AQUADIP ED 310** and **VARENA AQUADIP ED 316** could be the new solution for you! This 2K water-based epoxy with modified and 2K-water-based acrylic modified binder has been specially developed for cathodic electrodeposition. It is suitable for curing at lower temperatures and offers excellent properties while meeting environmental requirements. It also ensures robust operation, easy control and significant cost reduction for complex geometries.



VARENA AQUADIP
WATERBORNE CATHODIC ED RESINS



The advantages of E-COAT

Compared to other surface technology processes, E-Coat results in significant material savings because there are no losses due to overspray. E-Coat electrodeposition coatings polymer from VARENA CHEMICAL are environmentally friendly and optimised for low energy consumption.

VARENA AQUADIP ED 310 MP-65

Corrosion protection on a large scale: cathodic electro-dip coating

External cross-linking acrylate binder for application in cathodic electro dipping coating.

Delivery Form

65 % in methoxypropanol (65MP), non-neutralized

Applications and Properties

AQUADIP ED 310 MP-65 serves in combination with suitable curing agents (for example Additol VXXW 6385) for the production of white or bright coloured electro dipping paints.

By means of suitable catalysis, for example with tin compounds, at baking temperatures of 160 °C, glossy and highly anticorrosive paint films can be manufactured.

Besides the conventional application as binder for pigmented primer or one-layer systems, **AQUADIP ED 310 MP-65** may also be applied as clear paint for the production of transparent protective coatings on iron and non-iron metals due to its non-yellowing tendency.

Product Specifications

Property	Range	Unit	TM
Colour value	yellow-orange	-	Appearance VLN 250
Viscosity (25 °C), Brookfield, Sp.4 20 rpm.	40.000 – 50.000	mPa.s	DIN EN ISO 2555
Solid content	63 – 67	%	DIN EN ISO 3251
Acid-value	3 - 10	-	DIN 53183
OH-content, solid	approx. 4,5	%	DIN 53240/2
Flash point	approx.. 33	%	DIN EN 22719
Density, 20 °C	1,04	g/cm ³	DIN EN ISO 2811

PROPERTIES

- Low temperature cure 125-160 C
- Easy to control
- Non hazardous
- Hard deposits 4H or more depending upon the cure used
- Enhanced wear resistance
- Excellent adhesion on all substrates
- Excellent throwing power
- High level of gloss without the use of high solvent concentrations



VARENA AQUADIP

WATERBORNE CATHODIC ED RESINS



AQUADIP ED 316 Q-60

Corrosion protection on a large scale: cathodic electro-dip coating

External cross-linking E-Coat Epoxy-Amine binder for application in cathodic electro dipping coating.

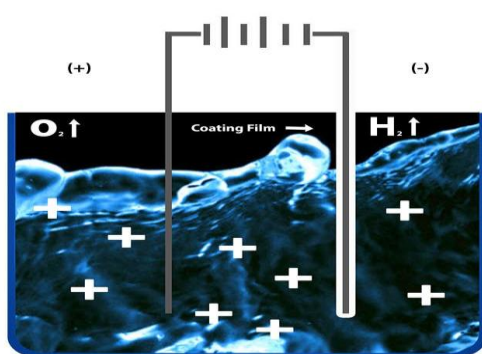
Delivery Form

60 % in butyl glycol / water

AQUADIP ED 316 Q-60 is a hydroxyl rich, water soluble cathodic E.D. resin that contains a built in acid catalyst which means that it can be crosslinked with a melamine resin. The resulting resin has excellent pigment wetting properties and exhibits excellent corrosion resistance.

Product Specifications

Property	Range	Unit	TM
Colour value	max. 2	-	Appearance VLN 250
Viscosity (25 °C), Brookfield, Sp.4 20 rpm.	10.000 – 20.000	mPa.s	DIN EN ISO 2555
Solid content	59 – 61	%	DIN EN ISO 3251
Acid-value	max. 1	-	DIN 53183
Density, 20 °C	1,025	g/cm³	DIN EN ISO 2811



Cathodic System

PROPERTIES

- High cathodic corrosion protection
- Defined fiction properties
- Good adhesion and abrasion resistance
- High chemical resistance
- Electrical conductivity
- Extremely thin layer (8-12 µm)
- Resource saving

VaraTon; STYRENE-BUTADIENE-COPOLYMER

VaraTon SB-300

An anionic, aqueous dispersion of a carboxyl group containing styrene-butadiene-copolymer. VaraTon SB-300 is mainly used as binding agent in aqueous anticorrosive automotive coatings where stone-chipping resistance is required, often in combination with water soluble or water dilutable resins.

The dispersion dries at room temperature to a tough elastic film with good adhesion to metallic surfaces and excellent abrasion resistance at high mechanical stress. By briefly heating up to 150°C these properties can be improved further. The VaraTon SB-300 dispersion also offers a high chemical and mechanical resistance also as good compatibility with fillers, pigments, water soluble and water dilutable resins. Anyway individual trials to check its suitability in the large variety of applications is recommended.

VaraTon; STYRENE-BUTADIEN COPOLYMER

Product	Supply Form [%]	Viscosity [mPa.s]/23°C	pH-value	Main uses and characteristics
SB-300	49-51	50 – 400	8 – 8,6	As binding agent in aqueous anticorrosive automotive coatings where stone-chipping resistance is required,





Properties of silane-functional polyurethane-urea binders
compared to classic two-component polyurethane coatings



Solvent based silane functional polyurethanes for various applications

They allow long processing- and fast drying-times with exceptional resistance properties. Binder for high quality paints as e. g. acrylates, polyester or alkyd resins crosslink with isocyanates or oxidatively.

VaraPur SI; Achieving excellent resistances and fast drying
With the VaraPur SI product family, we offer silane-functional polyurethanes for optimal properties.



Although classical systems for high quality lacquers as for example 2K polyurethane systems which crosslink with isocyanates and oxidatively drying alkyd resins show generally good properties, there are some disadvantages which have to be accepted when using these systems.

Conventional 2K-PUR systems have a relatively short processing time and - depending on the used polyol and amount of isocyanate - a relatively long drying time. Besides, these 2K systems need a second component - an isocyanate - which is affected by labeling issues and needs specific handling.

In comparison, alkyd resins do not need a crosslinker but metal based siccatives for acceptable drying times. Furthermore, the addition of an anti-skinning agent is necessary to get a good storage stability.

The crosslinking process works with air humidity and is accelerated by a specific alkyl phosphate based catalyst. Another particular feature of this system is that ethanol is released during the crosslinking process and not toxic methanol as in comparable systems. In general, these silane functional polyurethanes provide long processing time in combination with fast drying and outstanding resistance properties. In addition, silane functional systems with alkyds as polyols do not need any metal based siccativ or anti-skinning agent and do not show any yellowing tendency. In addition, silane functional systems with alkyds as polyols do not need any metal based siccativ or anti-skinning agent and do not show any yellowing tendency

Solvent based silane functional polyurethanes for various applications

Silane functional polyurethanes based on various polyols allow an optimization of the properties of the previous systems.

Binder for high quality paints as e. g. acrylates, polyester or alkyd resins crosslink with isocyanates or oxidatively.

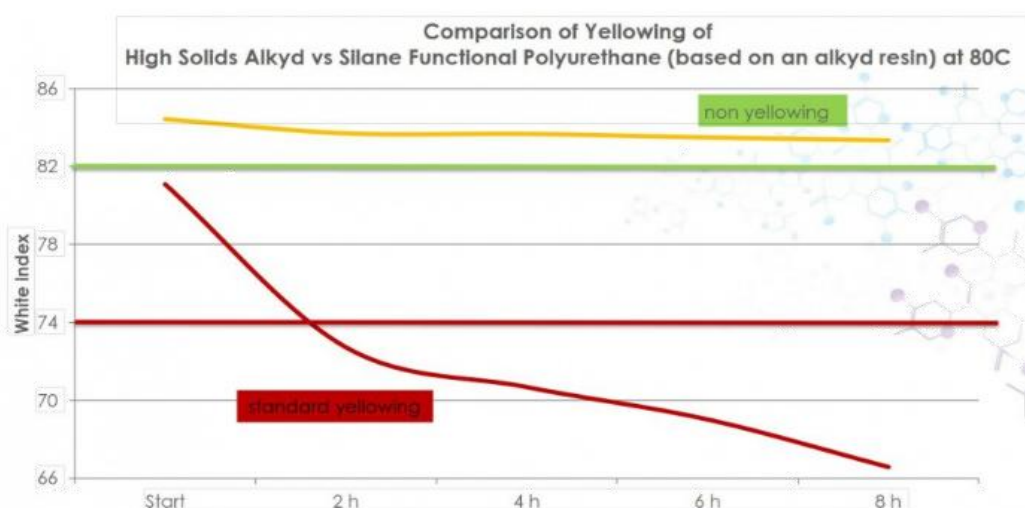




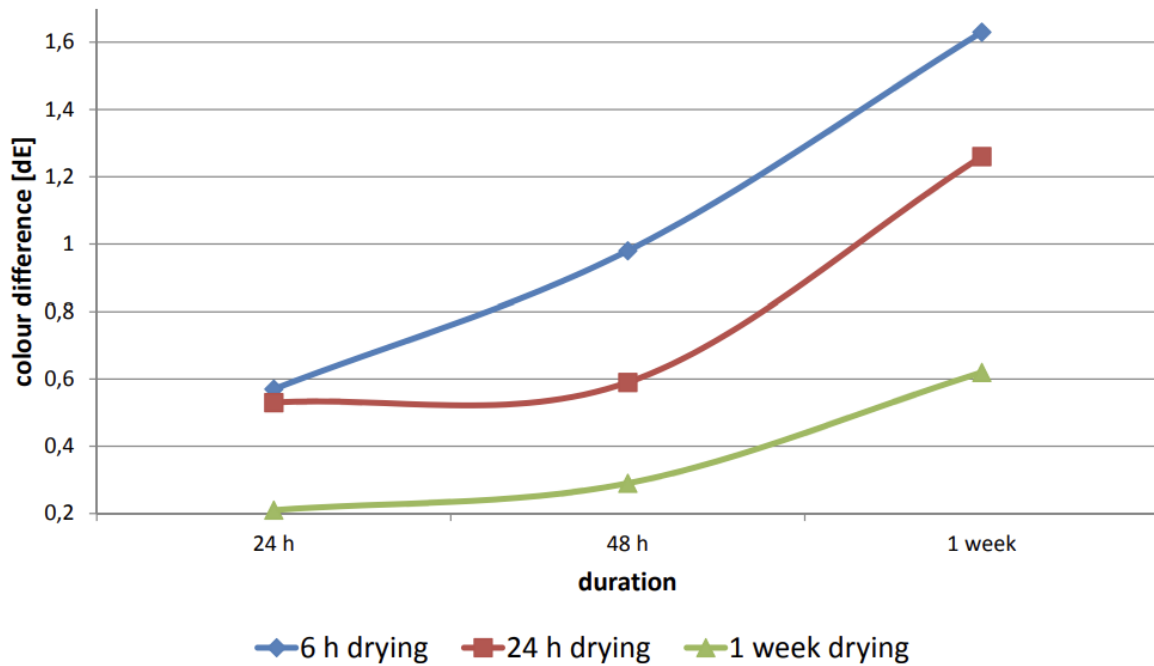
VARAPUR SI
SILANE FUNCTIONAL POLYURETHANE UREA

VaraPur SI; SILANE FUNCTIONAL POLYURETHANE

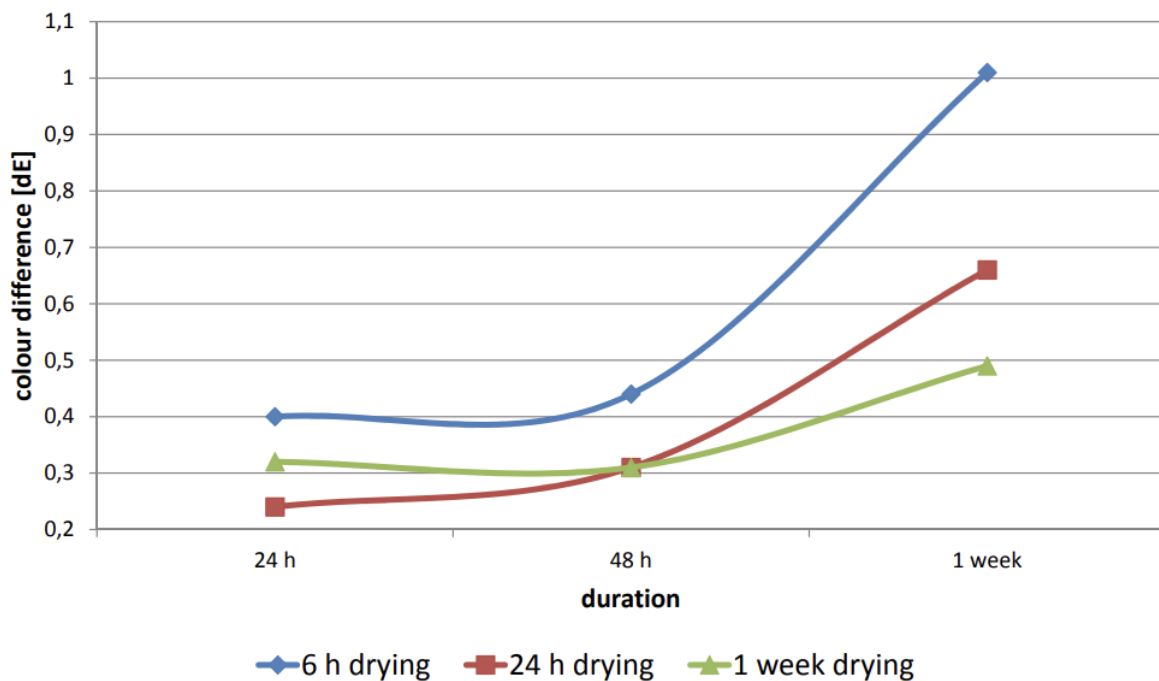
Product	Solvent	Solid [%]	Viscosity [mPa.s]/20°C	Main uses and characteristics
PUR SI 101	D60 / Dowanol	75	max. 10.000	A high solid, moisture-curing, silane-modified, aliphatic polyurethane based on a cotton oil fatty acid-based alkyd resin for the formulation of quick-drying primers, pre-, clear- and topcoats in the field of painter and building paints. It is also suitable for formulation of glazes, fast drying and early water resistance, even in difficult climatic conditions.
PUR SI 202	BuAC / n-propanol	75	max. 25.000	A high solid, moisture-curing, silane-modified, aliphatic polyurethane based on an aliphatically branched polyester to the formulation of primers for wood, clear and topcoats, which at room temperature or forced to dry, in any case, lacquers based on VaraPur SI 202 dry very quickly and reach within a short time a high hardness and very good resistance properties.
PUR SI 203	BuAC / n-propanol	75	max. 20.000	High solid, moisture-curing, silane-modified, aliphatic polyurethane based on an aliphatically branched polyester to the formulation of clear and topcoats, which dry at room temperature or forced, also the formulation of stoving enamels is possible. In any case, paint based on VaraPur SI 203 very fast and achieve very good in no time resistance properties.
PUR SI 204	BuAC / n-propanol	75	max. 25.000	A high solid, moisture-curing, silane-modified, aliphatic polyurethane based on an aliphatic branched polyester suitable for the formulation of base coats for wood-, clear- and topcoats, forced drying or at room temperature. In any case, paints based on SI 202 dry very quickly and achieve a high hardness and very good resistance properties within shortest time.
PUR SI 204	BuAC / n-propanol	60	max. 15.000	A high molecular, moisture-curing, silane-modified, aliphatic polyurethane, based on an aliphatic branched polyester, suitable for the formulation of clear- and topcoats, at room temperature or forced drying. Due to the higher molecular weight it is characterized by a very good physical drying. The equally fast chemical crosslinking leads to high resistances, which are achieved after short times.
PUR SI 249	BuAC / Ethanol	70	max.5.000	One-component, moisture-curing, silane-modified, aliphatic polyurethane based on a linear polyester, for quick-drying and resistant clear and topcoats. Especially good adhesion is achieved on ceramic substrates and glass.
PUR SI 401	BuAC / n-propanol	80	max. 25.000	Moisture-curing, silane-modified, aliphatic polyurethane based on a linear carbonate diol, to the formulation of base, clear and topcoats, which dry at room temperature or forced. Also the formulation of baked enamels is possible. In any case, paint based paints from US 401 very fast and achieve very good in no time resistance properties. Varnishes based on VaraPur SI 401 dry to viscoplastic films with good scratch resistance, good adhesion to various substrates can be achieved, this could be e.g. glass, ceramics, concrete, but also iron and non-ferrous metals.
PUR SI 402	KW 180-220 / DPM	75	max. 75.000	Moisture-curing, silane-modified, aliphatic polyurethane based on a linear carbonate diol, for the formulation of primer, clear and topcoats, which dry at room temperature. In any case, dry varnishes based on US 402 are very fast and reach within a very short time very good resistance properties.
PUR SI 501	BuAC / n-propanol	75	max. 10.000	Moisture-curing, silane-modified, aliphatic polyurethane based on a linear polyether polyol, formulation of base, clear and topcoats, which dry at room temperature or forced. In any case, lacquers based on VaraPur SI 501 dry very quickly and reach within very short time very good resistance properties. Varnishes based on Si 501 dry to very elastic, rubber-like films good scratch resistance, good adhesion to glass, ceramics and concrete.
PUR SI 584	BuAC / n-propanol	78	max. 10.000	Silane-modified, aliphatic polyurethane based on linear polyetherpolyol, good adhesion to various substrates can be achieved, this could be e.g. glass, ceramics, concrete, but also iron and non-ferrous metals.



VaraPur SI 401
Water resistance / water immersion test



Salt water resistance / salt water immersion test 0.5%



Adhesion: • tested and good adhesion on steel, aluminium, galvanized steel, ceramic tiles, concrete

POXAMIN; EPOXY CURING AGENTS

Product	Characteristics	Viscosity [mPas]	Amine Value [mg KOH/g]	Theoretical Amine Hydrogen Equivalent Weight [g/equl.]	Pot-life [min.]	Solid [%]	Main Applications
PA 115	Polyamide Resin	3200 - 4000 at 75°C	230 – 270	198	240	100	high viscosity, reactive polyamide resin designed for use with solid or liquid epoxy resins for flexible and resistant thermoset coating applications that cure at room temperature.
PA 115 X-70	Polyamide Resin	1000 - 1600 at 25°C	155 – 188	214	420	70	A reactive polyamide resin designed for use with solid or liquid epoxy resins for flexible and resistant thermoset coating applications that cure at room temperature.
PA 125	Polyamide Resin	6500 - 9500 at 75°C	340 – 370	103	120	100	A medium viscosity, reactive polyamide resin based on dimerized fatty acid and polyamines, designed for use with solid or liquid epoxy resins for flexible and resistant thermosetting coating applications that cure at room temperature.
PA 125 X-90	Polyamide Resin	3000 - 6000 at 25°C	280 – 320	130	180	90	A medium viscosity, reactive polyamide resin based on dimerized fatty acid and polyamines in supplied 86% in solvent xylene, designed for use with solid or liquid epoxy resins for high build coatings and where the prime requirement are fast cure and flexibility.
PA 140	Polyamide Resin	300 - 600 at 25°C	370 – 410	97	120	100	A reactive solvent free, medium low viscosity polyamide resin designed for use with solid or liquid epoxy resins for touch, chemical resistance thermosetting coatings, curing at room temperature.
PA 145	Polyamide Resin	4000 - 6000 at 25°C	380 – 455	103	150	100	A low viscosity, reactive polyamide resin designed for use with solid or liquid epoxy resins for high solid formulations. POXAMIN PA 145 epoxy-system are usefull in encapsulating potting and laminating applications.
AA 150	Polyamidoamine Resin	700 - 1200 at 25°C	420 – 450	133	160	100	A reactive solvent free, low viscosity amidoamine resin for use with solid or liquid epoxy resins for flexible and chemical resistance thermosetting applications, curing at room temperature. POXAMIN AA 150 is usefull in adhesives applications, electrical encapsulations, laminates and industrial maintenance coatings.
H 600	Polyamine Resin	300 - 550 at 25°C	625 – 775	50	50	100	A liquid, special polyamine hardener, solvent and benzylalcohol free. H 100 is mainly used as curing agent for solvent free epoxy coatings.
HC 30 M	Modified Polyamine Resin	8000 - 12000 at 25°C	230 – 270	380	360	55	A solvent based modified amine epoxy adduct for the formulation of solvent based epoxy primers and top coats..

POXAMIN AQ; WATERBORNE EPOXY CURING AGENTS

Product	Characteristic	Viscosity [mPas]	Amine Value [mg KOH/g]	Theoretical Amine Hydrogen Equivalent Weight [g/equil.]	Pot-life [min]	Solid [%]	Main uses and characteristics
AQ 2386	Water thinnable polyamine	3.900 – 4.100	280 – 380	86	30	80 in W	AQ 2386 is mainly used as curing agent for the manufacture of sealings and self-levelling coating systems. This curing system has a very low self-colouring, a fast water resistance and shows good surface properties.
AQ 2170	Water based polyamide	50 – 150	110 – 130	115	45	50 in IB/W	A reactive polyamide resin designed for use with solid or liquid epoxy resins for flexible and resistant thermoset coating applications that cure at room temperature.
AQ 2175	Water based polyamide	600 – 650	170 – 190	170	45	50 in IB/W	Reactive polyamide resin designed for use with solid or liquid epoxy resins for flexible, resistant thermosetting coating applications that cure at room temperature.
AQ 2621	Water based polyamidoamine adduct	4.000 – 7.000	185 – 225	165	60	70 in W/BG	Used in civil engineering in combination with Epikote 255 or 816. Recommended usage rate (phr) 100 : 120-130.
AQ 2285	Polyamine adduct	< 10.000	300 – 400	86	16	80 in water	AQ 2285 is mainly used as curing agent for the manufacture of sealings and selflevelling coating systems.
AQ 2286	Polyamin adduct	< 10.000	250 – 350	115	24	75 in water	This curing system has a very low self-colouring, a fast water resistance and shows good surface properties.
AQ 2216	Polyamine adduct	< 9.000	280 – 280	86	25	80 in water	The hardener system has a very low color, a fast water resistance and has good surface properties. POXAMIN AQ 2616 is suitable for the production of sealants and self-leveling coating systems.
AQ 2648	Polyamine adduct	< 25.000	400 – 450	86	35	100%	The hardener system has a very low color, a fast water resistance and has good surface properties.



POXAMIN AQ AQUA TECHNOLOGY

- Excellent chemical resistance
- Good outdoor weatherability
- Superior flexibility
- Excellent exterior durability
- Outstanding corrosion resistance



Superdurable weathering with
outstanding flexibility



POXAMIN HC 30 M

POXAMIN HC 30 M is a solventbased modified amine epoxy adduct for the formulation of solvent based two component-EP-primers and top coats.

POXAMIN HC 30 M is used in all types of solvent based two component-EP systems. In corresponding primers good corrosion resistance is achieved.

In combination with semi-solid epoxy resins such as Araldite GY 280, or solid resins such as Araldite GT 7071, GT 7072 or their solutions such as Araldite GZ 7071 X 75, POXAMIN HC 30 M is suitable for the production of solvent-containing, cold-curing anticorrosion coatings applied to metal or mineral substrates.

Used with multi-functional epoxy resins such as Araldite EPN 1180, POXAMIN HC 30 M is suitable for (top)-coatings with a particularly high degree of chemical resistance.

Colour index (as delivered) [Gardener]	< 2
Amin value [mg/KOH]	190 ± 30
Viscosity at 20 °C [mPa.s]	8.000 – 12.000
H-equivalent [g/val]	380*
Pot life* / RT 25°C [min.]	approx. 6 hr
Delivery form	55% in isobutanol / xylene

* with standard A/F-epoxy resin, EEW: 170-180

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