

POLYMER INNOVATIONS

PROTECTIVE & MARINE

RESIN & ADDITIVE
FOR PROTECTIVE
AND MARINE
COATINGS; RIGID AND
ROBUST

Needless to say that the influence of salt water, cold and wind means that marine coatings are exposed to some of the harshest conditions.

VARENA's resins are known to provide for powerful coatings that protect objects and equipment such as bridges and ocean liners no matter what.



PROTECTIVE

Industrial Coatings

VARENA CHEMICAL coatings provide superior protection, durability, and performance in a variety of markets, including rebar, oil and gas, and potable and non-potable water applications. With their advanced technology, they are a top choice for customers looking for reliable solutions that can withstand even the toughest environments.

OUR COATINGS TECHNOLOGIES

BUILDINGS

MINING

OFFSHORE OIL AND GAS

OFFSHORE OIL AND GAS FACILITIES

THERMAL POWER

TRANSPORTATION & PIPELINE

WATER AND WASTE

WIND POWER

VaraPol; LIQUID POLYESTER FOR PU-SYSTEMS

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 1870	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 topcoats 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	WorléeRes 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 1125	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 and castings.



VaraLac; SOLVENTBASED ALKYD RESINS

Product	Delivery Form [%]	Viscosity [mPa.s/23°C]	Acid Value [mgKOH/g]	Oil Type	Description
UR 5202	50% in W	3500 - 5500	< 5	Linolec 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	60%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 - 2300	< 10	Mixed fatty acids	Sytrene modified short-oil alkyd, for corrosion resistant metal primers, marine paints / varnishes and maintenance primers. and for glossy topcoats 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 topcoats and hammer finishes.

VaraSol; WATERBORNE ALKYD RESINS

Product	Delivery Form [%]	Viscosity [mPa.s/23°C]	Oil length [%]	Oil Type	Description
AZ 4543	100%	600 - 800	62	Linseed oil	Temporary anticorrosive paints
AZ 5600	42% in Z	500 - 1000	26	Linoleic rich fatty acids	Salt spray resistance coatings.
AZ 4502	60% in Z	50 - 1000	73	Linsed oil	Metal primers.
Z 4554	50% in Z	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 5601	44% in Z	200 - 450	25	Linoleic rich	PU modified short oil alkyd emulsion, for industrial metal primers with salt spray resistance.
AZ 4576	53% in Z	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

Product	Solvent	Solid content [%]	OH – Value [%]	Viscosity / 23°C / [mPa.s]	Application
A 972	EEP	70	3.1	4000 - 6000	ACE (agriculture and construction equipment), car refinish, commercial vehicles and protective marine coatings.
A HS 970	BAC	70	2.4	2200 - 3800	Protective and marine coatings.
A 940	X/BAC	60	1.4	1400 - 2400	PU-repair and big rolling stock, general industry, primers.
A HS 937	BA	75	2.8	4500 - 5500	Corrosion Protection; Metal; good Weather and Chemical Stability; High Solid.
A 960	S100	60	2.6	2300 - 3300	PU-repair primer, marine paints and protective coating.
A 961	X	60	2.6	1300 - 2300	PU-repair primer, marine paints and protective coating.
A 965	BAC/X	65	2.7	1900 - 2900	PU-repair primer, marine paints and protective coating.
A 96	XEA	60	2.8	3000 - 5000	High solid, excellent exterior durability, protective, marine.
A 2210	X	60	1.0	17000 - 22000	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	BAC / X / S100	60	3.0	1.000 – 2.000	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	BuAC	75	1.7	4.000 – 8.000	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	BuAC	70	2,5	2.000 – 5.000	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.



VaraMul; ACRYLIC; WATERBASED DISPERSIONS

Product	Monomer	Supply Form [%]	pH value	MFFT [C°]	Viscosity [mPa.s]/20°C	Main uses and characteristics
AE 1137	Styrene acrylic emulsion	42 in water	7.5-8.5	28	max. 200	Allround emulsion for topcoats 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	Topcoats 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	7.0-8.5	<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 – 3.000	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 – 3.500	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	5	max. 500	Self-crosslinking styrene modified acrylic emulsion for primers with excellent results in corrosion protection.

Direct-To-Metal coating resins Water-borne DTM resin solutions



SPECIAL PRODUCTS

Performance Materials

VaraTon; STYRENE-BUTADIEN COPOLYMER

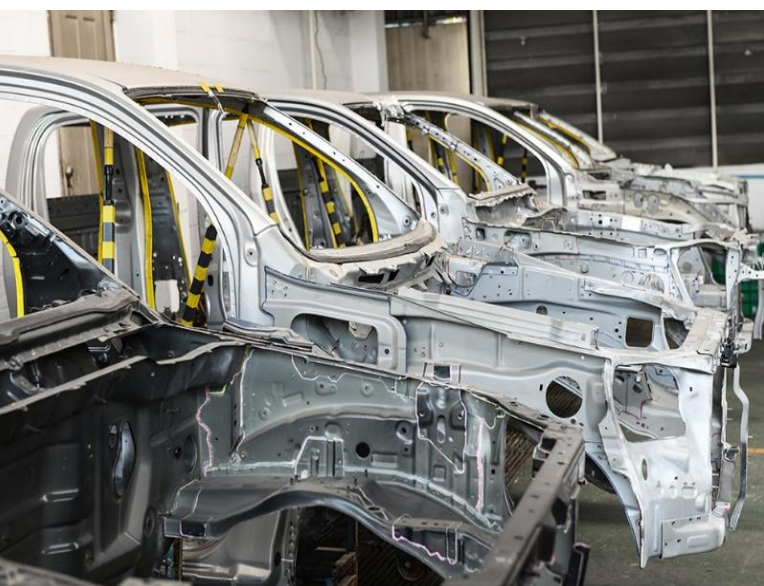
Product	Supply Form [%]	Viscosity [mPa.s]/23°C	Molecular weight	Main uses and characteristics
MA-100	49 - 59	600 – 900	8200	Low odour binding agent in aqueous adhesion promoter in automotive sealants, soft, isocyanate free electrical encapsulants, rubber to metal bonding and formulation of slow release fragrance gels.
MA-150	68 - 80	1.500 – 6.000	1.000	Low odour binding agent in aqueous adhesion promoter in automotive sealants and semi structural adhesives, rubber to metal adhesion promoter and electrical encapsulants.
MA-500	70 - 78	1.200 – 2.200	5750	Soft, isocyanate free electrical encapsulants, adhesion promoter in automotive sealants, rubber to metal adhesion promoter and impact modifier for polyester resins.

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.

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,



VaraPeel 2820

Water-based removable coating resin



Applications

- Automotive
- Mining machinery
- Marine
- Aviation
- Filming & studio use
- Construction industry
- Fibre glass industry
- Metal works and fabrication
- Brass, copper & aluminium protection
- Spray booths
- Signage and advertising
- Protection of pre-painted surfaces
- Stop-off coating in electroplating
- Glass and glazing industry
- Casting moulds

A fast drying water-based acrylic for removable coating for protection in harsh, outdoor, unsheltered applications.

Provides multimetal protection. Excellent UV resistance.

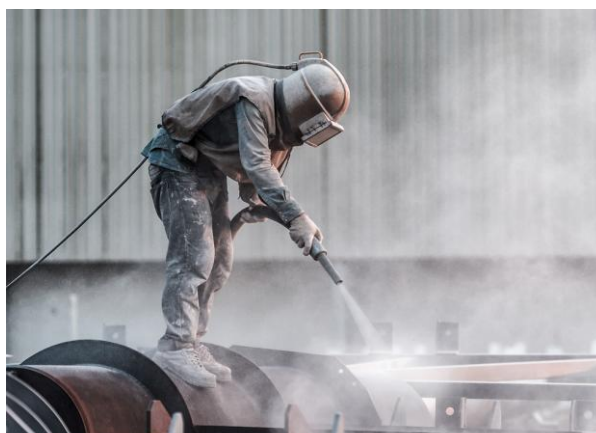
VaraXyn; SOLVENTBASED, WATERBASED EPOXY ESTERS

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 topcoats for automotive coatings and maintenance systems.
EE 420	50% 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% in Butyl glycol/water	100 - 400	< 5	DCO	Epoxy ester emulsion based on DCO. Industrial construction and maintance metal primers with chemical resistance, fast drying, excellent long-term corrosion and water resistance and excellent adhesion.



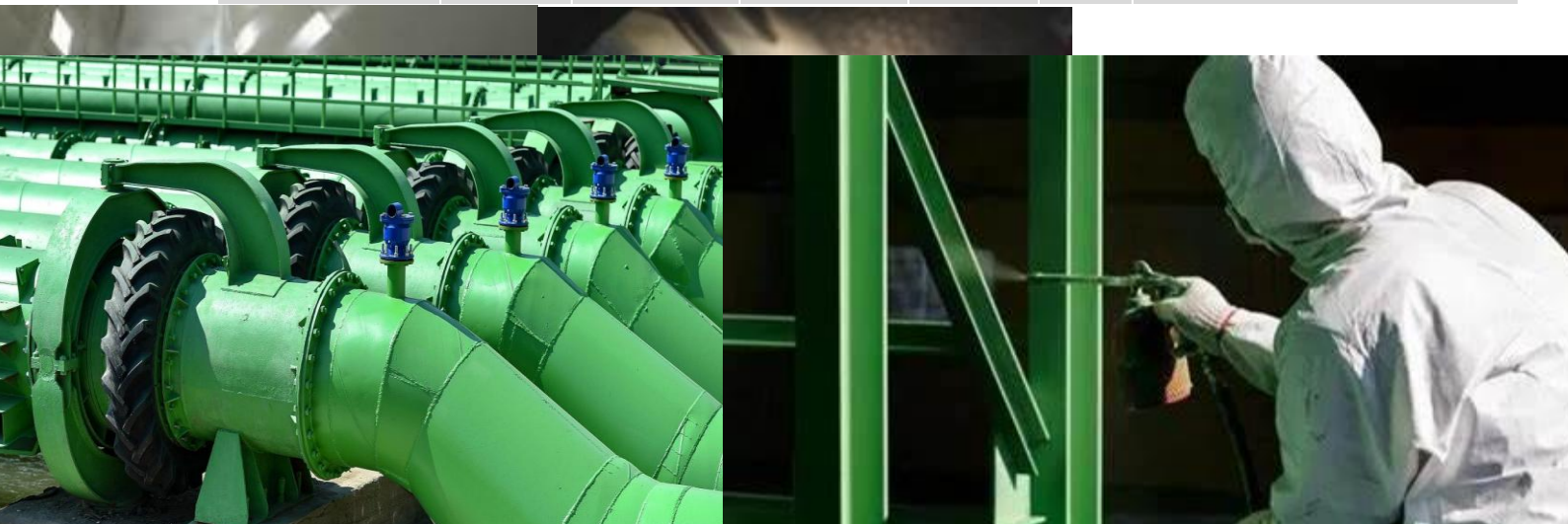
VaraDur; EPOXY CURING AGENTS

Product	Characteristics	Viscosity [mPas]	Amine Value [mg KOH/g]	Theoretical Amine Hydrogen Equivalent Weight [g/equl.]	Pot-life [min.]	Solid [%]	Main Applications
A 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.
A 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.
A 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.
A 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.
A 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.
A 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. WorléeCure A 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 ressitance thermosetting applications, curing at room temperature. WorléeCure AA 150 is usefull in adhesives applications, electrical encapsulations, laminates and industrial maintenance coatings.
H 100	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.
H 80	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 topcoats..



VaraDur; EPOXY CURING AGENTS

Product	Characteristics	Viscosity [mPas]	Amine Value [mg KOH/g]	Theoretical Amine Hydrogen Equivalent Weight [g/equil.]	Pot-life [min.]	Solid [%]	Main Applications
CA 243	Cycloaliphatic Polyamine Resin	250 - 400 at 25°C	250 – 350	115	50	100	A low viscous and solvent free epoxy curing agent based on an cycloaliphatic polyamine adduct. It is used as curing agent both for high filled cementing material proportion self-leveling flooring systems as well as for high filled mortars on concrete ground.
H 60	Polyamine Resin	50 - 100 at 25°C	350 – 450	90	240	100	A liquid, solvent free, special polycondensated polyamine hardener containing benzyl alcohol. H 60 is mainly used as curing agent for solvent free epoxy flooring systems. W'Cure H 60 is designed as hardener for epoxy system with certain elasticity properties of the cured films.
CA 235	Cycloaliphatic Polyamine Adduct	500 - 650 at 25°C	260 – 290	104	28	100	Modified cycloaliphatic polyamine adduct free from nonylphenol. It is used in combination with suitable epoxy resin formulation for solvent-free systems. Main fields of application of this low-viscous hardener are ambient curing self-levelling, floorings, adhesives.
CA 240 S	Cycloaliphatic Polyamine Adduct	300 - 400 at 25°C	260 – 300	93	31	100	Accelerated modified stabilised cycloaliphatic polyamine free from nonyl- phenol. This is preferably used in combination with suited epoxy resins for solvent-free epoxy systems.
CA 246	Cycloaliphatic Polyamine Adduct	140 - 240 at 25°C	250 – 350	93	34	100	Modified cycloaliphatic polyamine adduct (nonylphenol-free). It is used as universal curing agent for casting, solvent-free laminating and coating resin systems as well as for adhesives and highly filled coating materials, mortars and primers.
CA 270-1	Cycloaliphatic Polyamine Adduct	180 - 300 at 25°C	250 – 350	95	15	100	CA 270-1 is modified cycloaliphatic polyamine adduct and is the accelerated version of CA 270. It is used as universal curing agent for casting, solvent-free laminating and coating resin systems as well as for adhesives and highly filled coating materials, mortars and primers with good through-curing at temperatures down to + 80 °C.
H 209	Modified stabilized polyamine adduct	130 - 230 25°C	365 – 425	90	80	100	It is preferably used in combination with suitable epoxy resin formulations for solvent-free systems. Main fields of application are primers and coatings. The lower reactivity enables usage in environments with higher temperature levels.



VaraDur 30 M

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

VaraDur 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, VaraDur 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, VaraDur 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

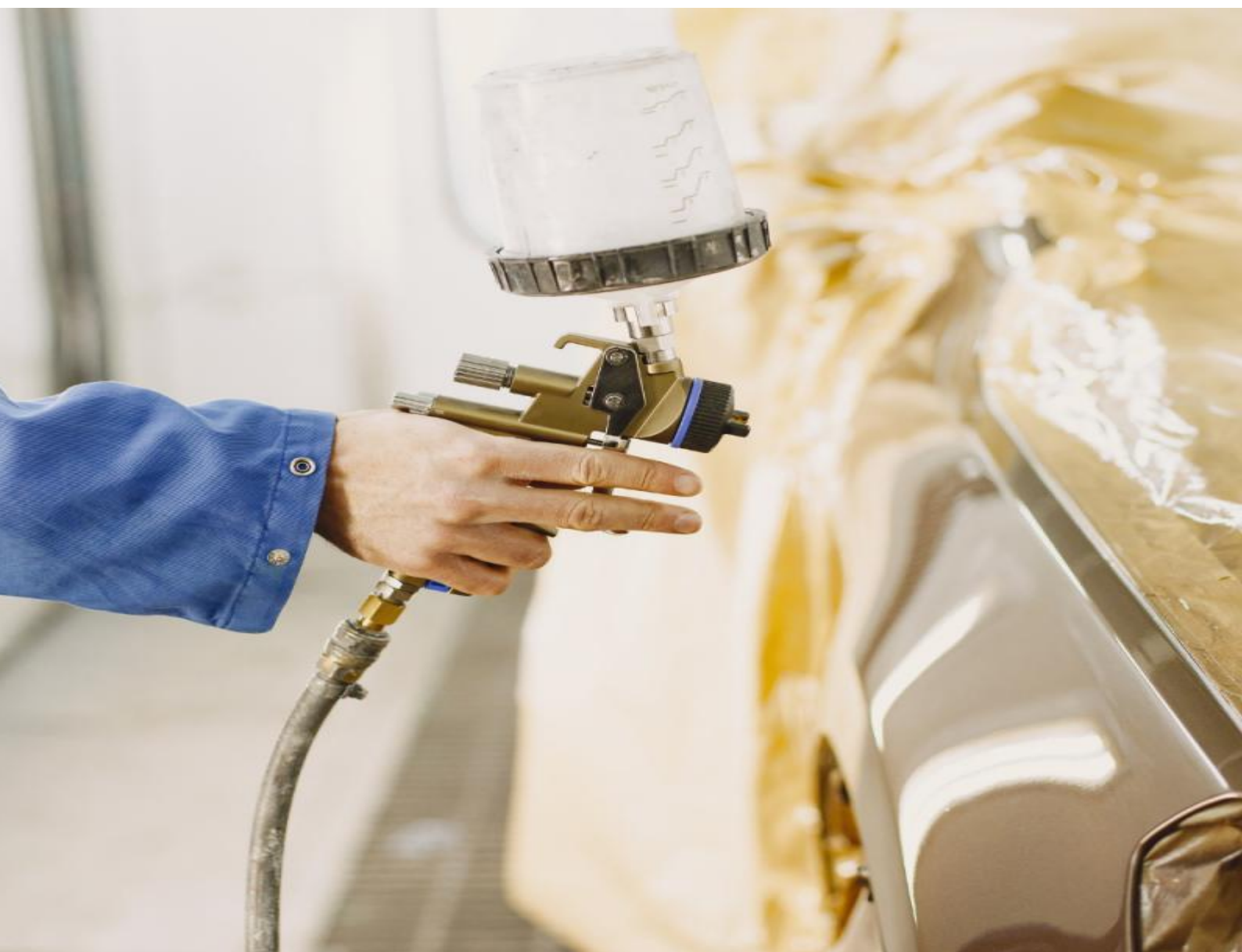
Delivery form

55% in isobutanol / xylene

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



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

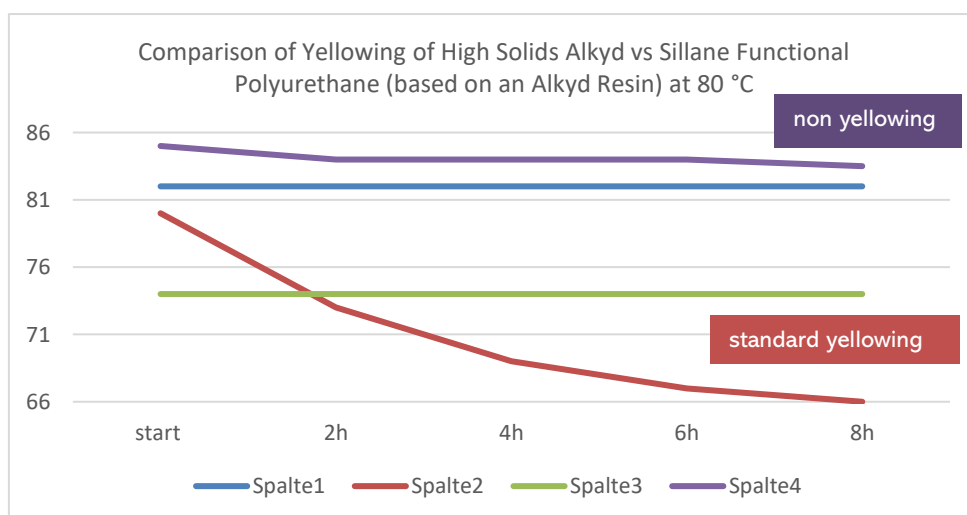
Solvent based silane functional polyurethanes for various applications

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

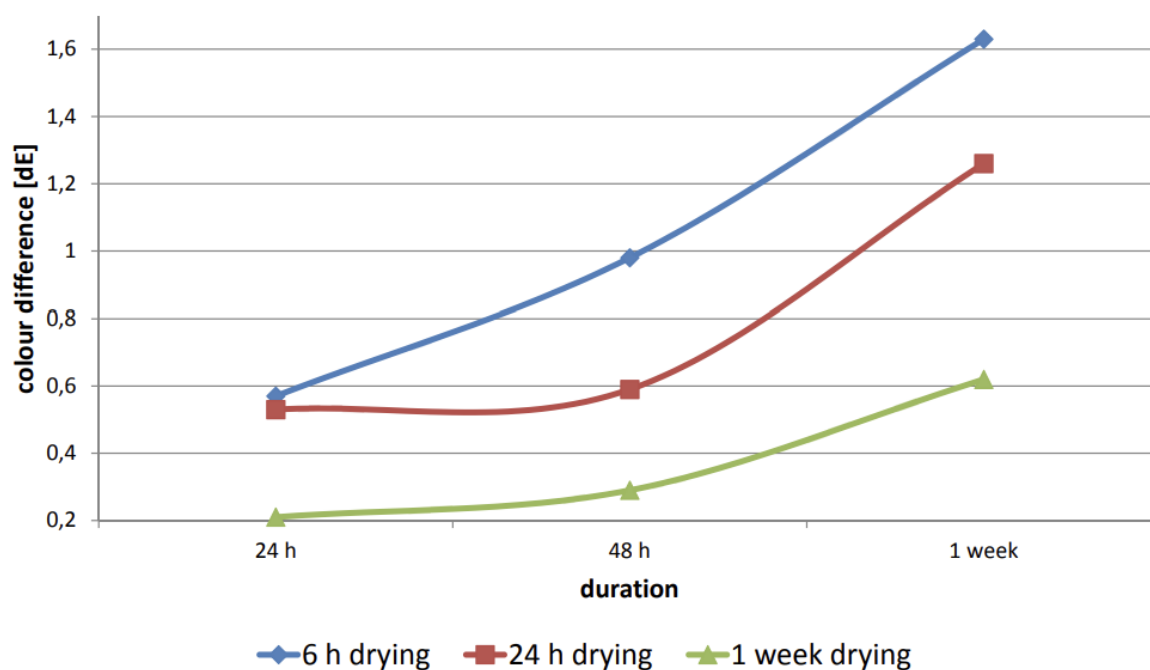
Binder for high quality paints as e. g. acrylates, polyester or alkyd resins crosslink with isocyanates or oxidatively.

VaraPur SI; SILAN FUNCTIONAL; ALIPHATIC POLYURETHANE RESIN

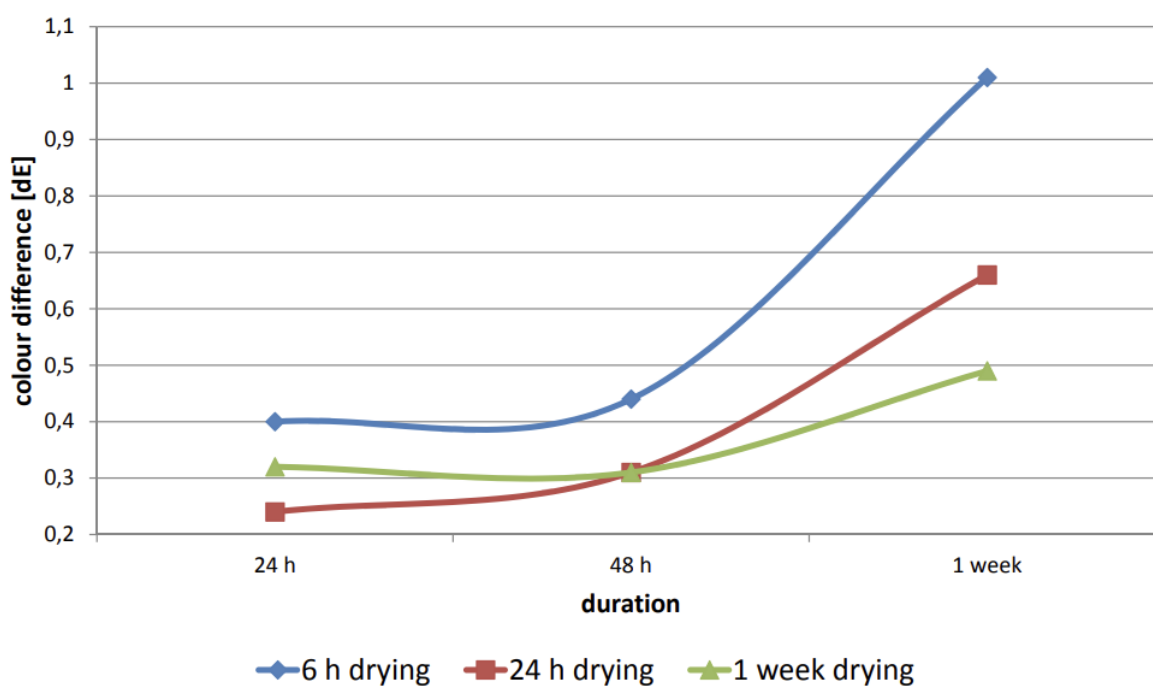
Product	Solvent	Solid [%]	Viscosity [mPa.s]/20°C	Main uses and characteristics
VaraPur SI 101	D60 / Dowanol	75	max. 10.000	A high solid, moisture-curing, silane-modified, aliphatic polyurethane based on a cotton oil fatty acid-based alkyd resin for the formulation of quick-drying primers, pre-, clear- 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.
VaraPur 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.
VaraPur 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.
VaraPur 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.
VaraPur SI 206	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.
VaraPur 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.
VaraPur 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.
VaraPur 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 SI 402 are very fast and reach within a very short time very good resistance properties.
VaraPur 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.
VaraPur 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%

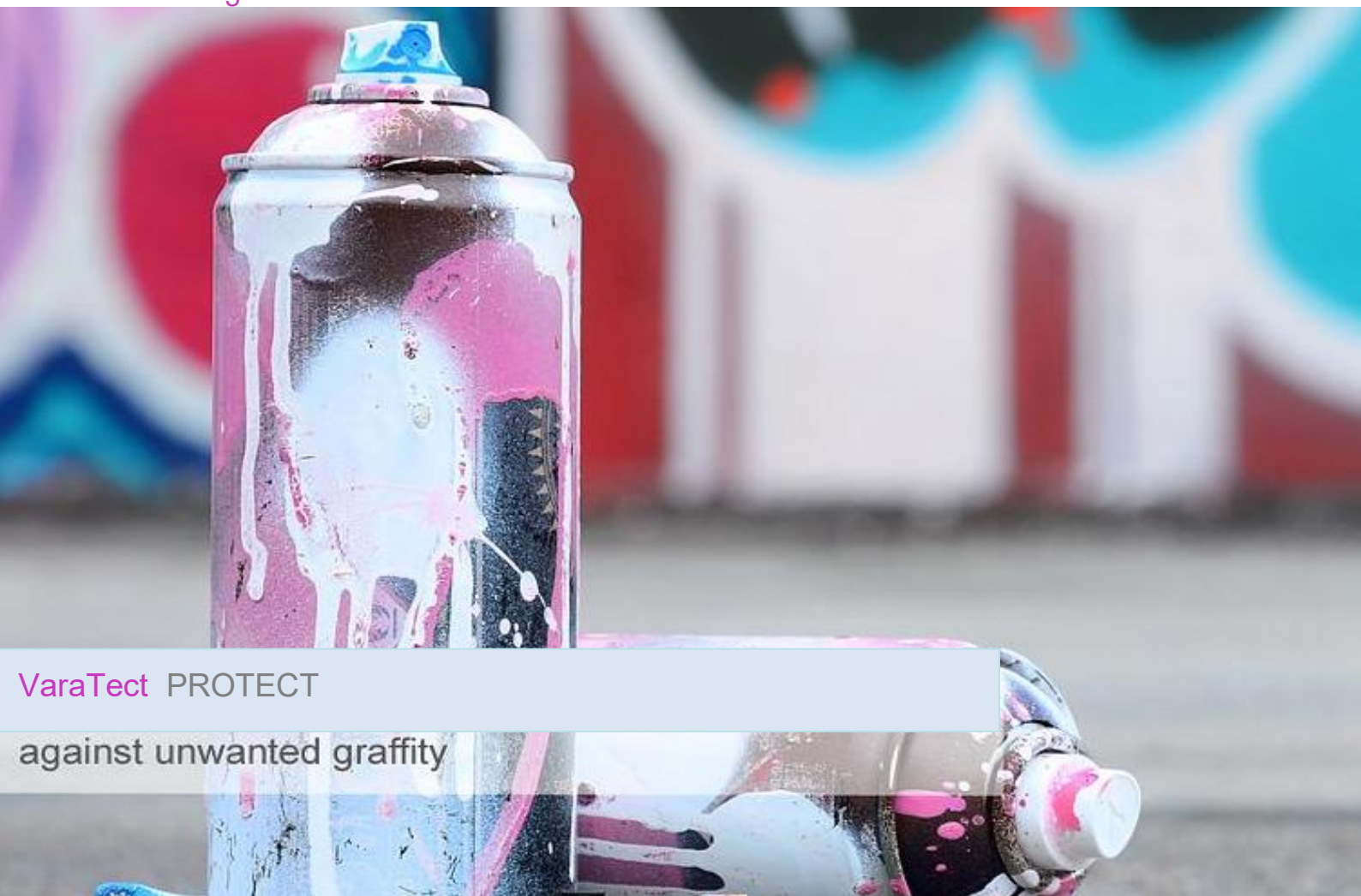


Adhesion: • tested and good adhesion on steel, aluminium, galvanized steel, ceramic tiles, concrete

VaraTect; INORGANIC-ORGANIC-HYBRID SYSTEMS

Product	Appearance	Supply Form [%]	Application	Viscosity [mPa.s]/20°C	Main uses and characteristics
VaraTect 1107	Clear, slightly yellowing liquid	42 in ethanol	Spraying, dipping, flooding, wiping	max. 100	Thin layer clear coat with excellent anti graffiti-/easy-to-clean-effect on glass, metals, old paint layers (grind by using an abrasive pad), drying at room temperature, forced or by stoving.
VaraTect 1119	Clear, slightly yellowing liquid	42 in n-propanol	Spraying, dipping, flooding, wiping	max. 30	Thin layer clear coat with excellent anti graffiti-/easy-to-clean-effect on glass, metals, old paint layers (grind by using an abrasive pad), drying at room temperature, forced or by stoving.
VaraTect 1181	Clear liquid	30 in solvenon DPM/MPA	Spraying, dipping, flooding, wiping	max. 30	Two component thin layer clear coat with VaraTect 1119 / 1107, used with catalysts as a sole binder, high abrasion- and scratch resistance, good chemical resistance, excellent mar resistance and anti graffiti-/easy-to-clean-effect.
VaraTect 1126	Clear, slightly yellowing liquid	42 in ethanol	Spraying, dipping, flooding, wiping	max. 100	Thin layer clear coat with excellent anti graffiti-/easy-to-clean-effect on glass, metals, old paint layers (grind by using an abrasive pad), drying at room temperature, forced or by stoving, excellent scratch resistant.

A High Performance Thin Film Barrier



VaraTect PROTECT

against unwanted graffiti

*Graffiti*Protection

MarinVaraProtect SPC 500

A special copper acrylate copolymer

It is designed to shore up seaweed resistant for general oceangoing vessels with excellent and long term antifouling performance endorsed by massive track records.



SPC 500 is a copper acrylate copolymer for general ocean-going vessels paints, for high solids, high performance, TBT free, copper free, low friction, self polishing copolymer (SPC) antifouling paint.

Developed especially to meet the severe fouling challenge of vessels trading in coastal waters. Suitable for use on both coastal and deep sea vessels depending on activity profile and intended service life. For use at Newbuilding and Maintenance & Repair.

Corrosionpedia Explains Protective Coating

Corrosion, the gradual deterioration of materials due to chemical reactions with their environment, is a major concern for many industries that deal with metal structures and components because it leads to the failure of critical components and structures. Protective coatings are commonly used to prevent corrosion, and there are several types of coatings that can be used depending on the specific application.



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