

Innovative and
tailor-made
epoxy solutions





We are ipox

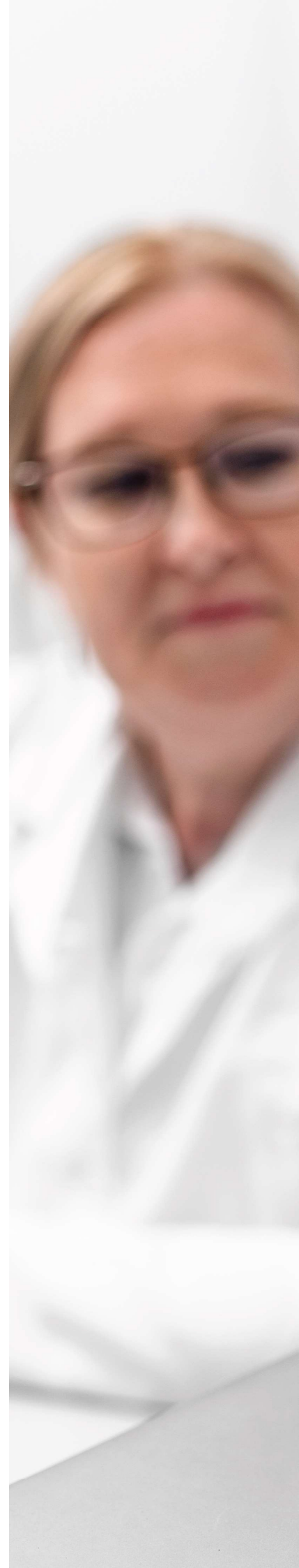
ipox® is a company with global reach which develops and creates custom epoxy technologies. Concept, production and sales remain in our hands. So we bring to you the very best of epoxy.

Company history

This is us

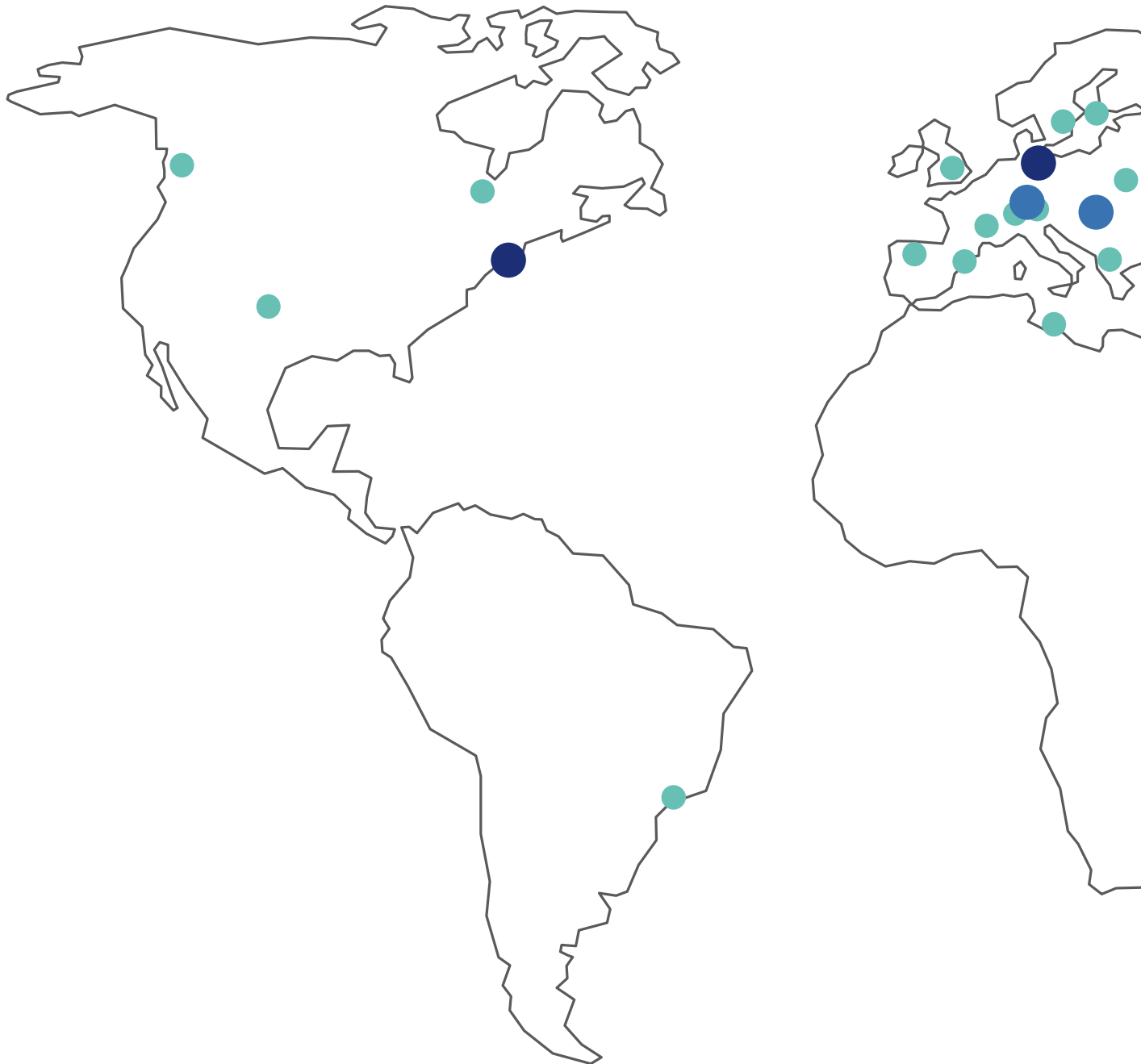
At ipox, everything revolves around epoxies - and has done so for over 40 years. At the production site in Budapest, research was carried out as early as the 1970s on the polymer materials, which were revolutionary at the time, and production technologies were developed for them. At that time, the foundations were laid for today's success and a production plant was gradually built up which, thanks to continuous investment, is now state of the art. Back integration into epichlorohydrin chemistry has given ipox a huge range of available building blocks and set screws for epoxides. In 2009, ipox was founded and the course was set anew in the company - by combining proven technologies with the many years of experience and enthusiasm of the current owners.

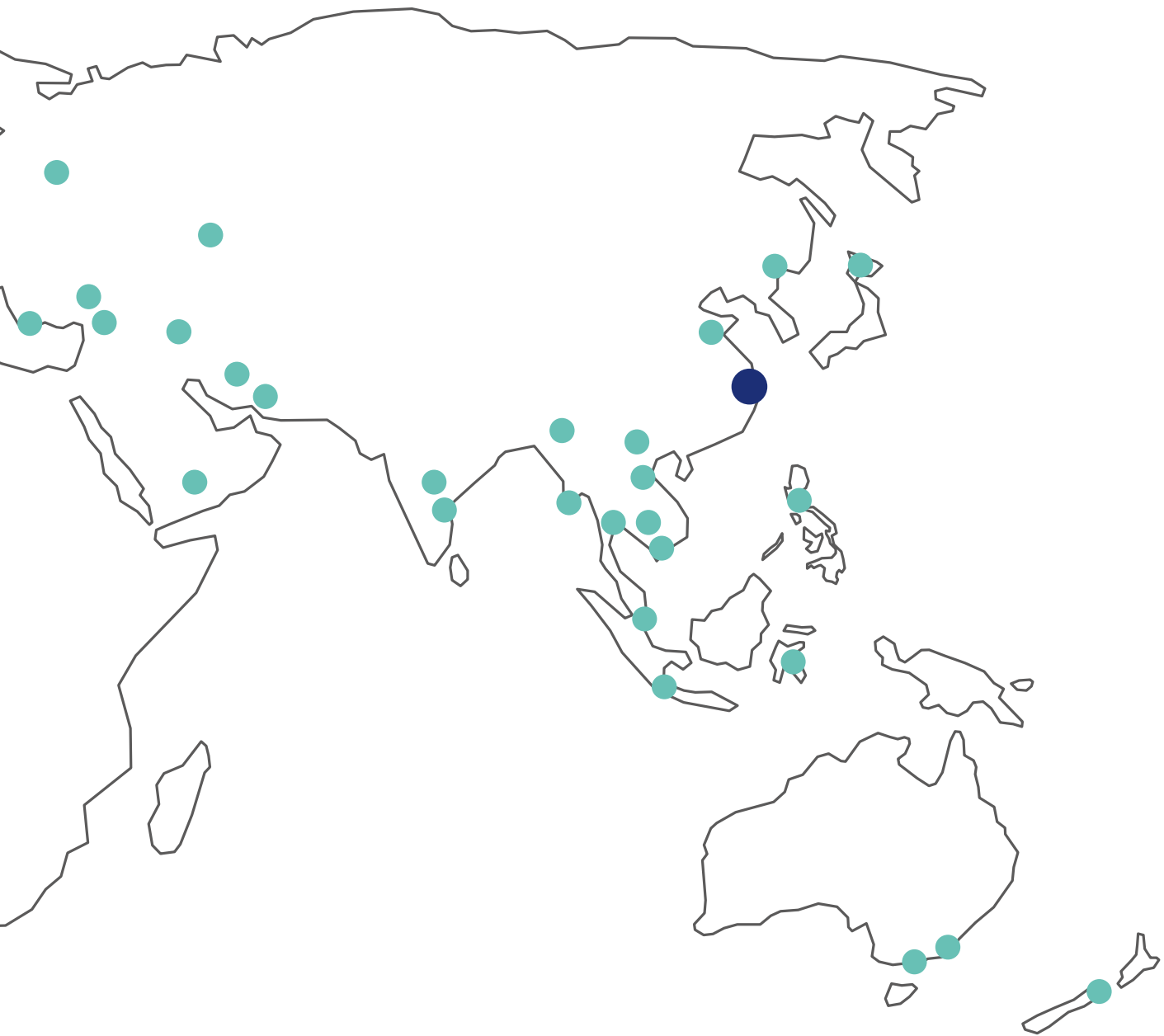
Our personal contact makes us quick and decisive. We stand for flexible and customized epoxy technologies with which we react competently to the specific wishes of our customers.





ipox worldwide





Our trade partners are distributed around the globe and are available at any time to answer your questions.

An up-to-date list can be found on our website:
www.ipox-chemicals.de/en/ipox-worldwide

- Locations ipox
- Locations Bruno Bock
- ipox Partners



We are

customer-oriented

Every customer and every task are individual. That's why our products have to be, too. In close responsible cooperation with our customers, we create optimal and forward-looking high-tech solutions for very specific applications.





We are
reliable

We think carefully about what we promise. Because then we also keep it. Thanks to our reliability, customers, suppliers and employees become partners at eye level who appreciate long-term and consistent cooperation.



We are

competent

For many decades, we have been researching, developing and producing superior epoxy systems. This wealth of experience provides the solutions for our customers' demanding tasks. In every respect.







We are

fast

Thanks to short paths, flat hierarchies and optimized processes, we are agile, mobile and extremely responsive. That's why we can develop efficient high-tech solutions for our customers in the shortest possible time.

Facts and figures



24/7

Working Time

16

Reactors

50 kg - 25 to.

Batch Size

100 +

Standard Products

200 +

Customized Products

10 +

Multinational Corporations

200 +

Customers

3.000 to.

Capacity Glycid Ether

9.000 to.

Capacity Epoxy Curing Agent

10.000 to.

Capacity Modified Epoxy Resins

Our vision

We are leading experts in epoxy technologies.
We combine quality with individuality - for the success
of our customers.





Our mission

We supply tailor-made epoxy building blocks for demanding applications of today and tomorrow - and do so in partnership, quickly and reliably. We are always on the lookout for new and better solutions, with the protection of people and the environment firmly in mind. To this end, we challenge and encourage our employees - every day anew.

Our industries

Our epoxy technologies are used in all kinds of applications. Depending on the special requirements of a particular application, we adapt existing products without delay – or we initiate a development process together with our clients. Among epoxy components we also offer proven epoxy systems. Please ask for details!



Construction chemistry

ipox technologies are extremely resistant, safe and functional – and so the ideal solution for the construction industry: they are used in anything from the priming of concrete surfaces to the preparation of high-value industrial flooring.



Technical fibers

ipox technologies are flexible and adhere well; they ensure the correct surface structure of fibres, helping to minimize fibre breakage. They improve the adhesion of matrix systems, for example rubber on tyre-cord or reaction resin on glassfibre. And they are fast to prepare, saving time and money.



Paints and coatings

The ipox range includes various special products for the paint and coatings industry. Reduction of VOCs, improvement of toxicological properties and stringent requirements for UV resistance in coating systems are our focus.



Composites and 3D printing

ipox technologies enable the best contact for the strongest composites. Our innovative and highly-specialised products provide the optimum building blocks for particulate composites, fibre-reinforced composites and laminates.



Performance Chemicals

ipox technologies improve the performance of finishing chemicals – from detergents through leather and textile chemicals, paints and plastics to speciality products for the oil industry. With ipox, you will improve your quality and exceed the highest technical demands.



Renewable and sustainable



Efficient production processes with minimized waste flows

ipox eco products are manufactured with efficient production processes - with high yields, minimized waste streams, continuous improvement programs. With a focus on renewable carbon from non-fossil raw materials. Of course, our sustainable products have the same quality and performance as the standard ipox products you are familiar with. We promise our environmentally friendly customers a secure supply of sustainable products.



Reactive Diluents

By means of ipox RD reactive diluents, epoxy resins can be efficiently thinned while their properties are modified in a targeted manner.

ipox RD 14

A difunctional reactive diluent based on neopentyl glycol

A very interesting property is the excellent hardening of epoxy systems modified with ipox RD 14. Especially at low temperatures they show more rapid strengthening.

- ipox RD 14 reduces viscosity and enables very high chemical resistance
- Alternative to 1,6-hexanediol diglycidyl ether (CAS 16096-31-4)

ipox RD 17

A monofunctional reactive diluent based on 2-ethylhexanol

Polymers may be emulsified by reactive modification with ipox RD 17 so that mineral oils, for example, can be used as drilling oil emulsions. This ensures better cooling capability and a reduction in costs.

- ipox RD 17 has the best dilution performance of all ipox glycidyl ethers
- The product enables the formulation of self-emulsifying epoxy resins



Bonding agents / crosslinkers

ipox CL crosslinkers are special polyfunctional aliphatic epoxides. They improve the adhesion of surfaces. At the same time they improve the network density of paints - thus markedly increasing their mechanical properties.


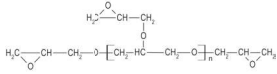

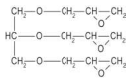

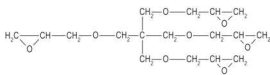

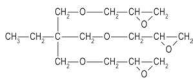
ipox CL 12

An aliphatic polyfunctional epoxy resin based on glycerol

Epoxy resins reactively modified with ipox CL 12 exhibit faster hardening with hardeners based on cycloaliphatic amines, especially at low temperatures.

- ipox CL 12 has a low viscosity
- Excellent wetting of fillers, fibers or technical textiles



Product	Chemical name	Structure	CAS	EEW g/eq	Visco. η^{25} mPa·s	colour* max	Water solubility	Properties
ipox CL 9 	Polyglycerol-3- polyglycidylether		118549-88-52 5038-04-04 Polymer	160 - 180	1100 - 1350	4	-	<ul style="list-style-type: none"> • aliphatic epoxy resin • high degree of cross-linking
ipox CL 12 	Glycerol- polyglycidylether		90529-77-4 Polymer	140 - 150	160 - 200	1	-	<ul style="list-style-type: none"> • good dilution performance • very good wetting performance • hydrophilic character
ipox CL 16 	Pentaerythritol- polyglycidylether		3126-63-4 30973-88-7 Polymer	156 - 170	900 - 1200	2	-	<ul style="list-style-type: none"> • aliphatic epoxy resin • high degree of cross-linking
ipox RD 20 	Trimethylolpro- pane-polyglycidylether		30499-70-8 Polymer	140 - 150	120 - 180	2	-	<ul style="list-style-type: none"> • good dilution performance • aliphatic epoxy resin • hydrophobic character
ipox CL 60	Polyglycidylether of ethoxylated Trimethylolpro- pane		Polymer	370 - 490	240 - 380	4	+	<ul style="list-style-type: none"> • aliphatic epoxy resin • very hydrophilic character • very soluble in water

* Colour Gardener

 All products also available in ecological (eco line) variant



Epoxy resins

Our modified epoxy resins ipox ER and ipox ER^W are special and highly-innovative adaptations of standard epoxy resins. By means of our experience and with the help of our reactive diluents ipox RD, we are able to achieve an enormous range of individual adaptations.


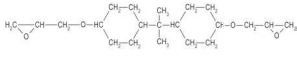

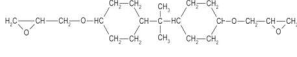
ipox ER 15

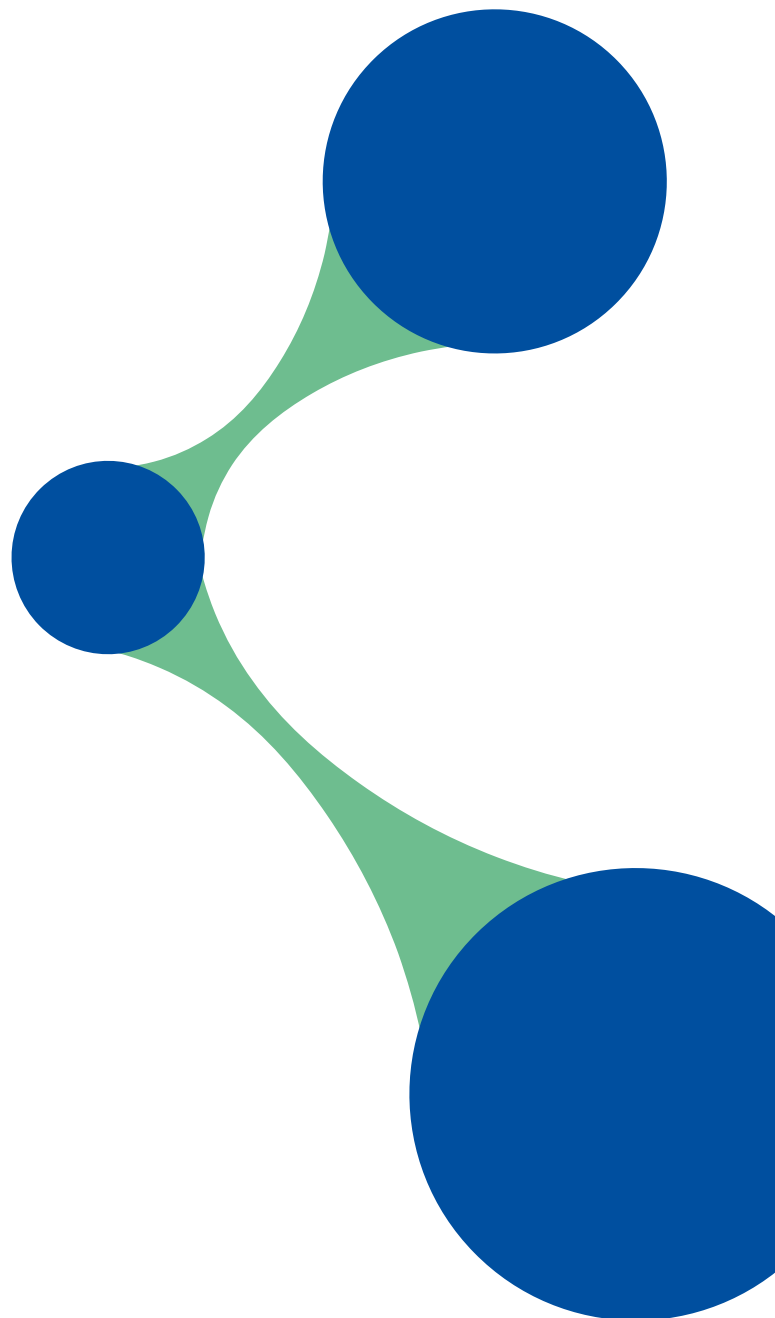
Cycloaliphatic epoxy resin based on hydrogenated bisphenol-A

In the field of thin-film applications for paints and coatings, completely new hybrid systems have emerged in recent years. Aliphatic or cycloaliphatic epoxy resins – in particular ipox ER 15 – are combined with silicone resins (e.g. SILRES[®] HP 2000¹ or Dow Corning[®] 3055²).

- High-tech coatings in combination with silicone resins: extremely good UV stability, very high gloss stability, high corrosion protection
- Proven component in 3D printing / stereolithography (SLA)



Product	Chemical name	Structure	CAS	EEW g/eq	Visco. η^{25} mPa·s	colour* max	Properties
ipox ER 15 	Hydrogenated BPA-diglycidyl- lether		13410-58-7 30583-72-3	225 - 245	2000 - 3700	1	<ul style="list-style-type: none"> • cycloaliphatic epoxy resin • very hydrophobic character
ipox ER 15-1 	Hydrogenated BPA-diglycidyl- lether		13410-58-7 30583-72-3	210 - 225	1500 - 2500	1	<ul style="list-style-type: none"> • cycloaliphatic epoxy resin • very hydrophobic character



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1 SILRES® is a registered trademark of Wacker Chemie AG

2 Dow Corning® is a registered trademark of Dow Corning Corporation

www.ipox-chemicals.de/en/products/epoxy-resins



Modified epoxy resins

Product	Chemical base	EEW g/eq	Visco. η^{25} mPa·s	colour* max	Application
ipox ER 1020	Bisphenol-A-diglycidylether monofunctional RD	190-205	900-1500	1	<ul style="list-style-type: none">• solvent-free epoxy systems• hydrophobic character• optimized wetting of substrate and fillers
ipox ER 1022	Bisphenol-A-diglycidylether monofunctional RD	189-213	700-1000	2	<ul style="list-style-type: none">• solvent-free epoxy systems• hydrophobic character• chemical resistant coatings
ipox ER 1042	Bisphenol-A/F-diglycidylether monofunctional RD	185-200	900-1200	1	<ul style="list-style-type: none">• solvent-free epoxy systems• hydrophobic character• optimized wetting of substrate and fillers
ipox ER 1042-7	Bisphenol-A/F-diglycidylether monofunctional RD	185-200	500-900	1	<ul style="list-style-type: none">• solvent-free epoxy systems• lower viscosity than ipox ER 1042
ipox ER 1042-5	Bisphenol-A/F-diglycidylether monofunctional RD	190-205	400-600	1	<ul style="list-style-type: none">• solvent-free epoxy systems• lower viscosity than ipox ER 1042-7
ipox ER 1044	Bisphenol-A/F-diglycidylether, contains benzyl alcohol	200-225	850-1050	2	<ul style="list-style-type: none">• priming and injection resins in construction chemistry
ipox ER 1052	Bisphenol-A/F-diglycidylether difunctional RD	164-176	600-900	1	<ul style="list-style-type: none">• solvent-free epoxy systems• improved curing• very good solvent resistance
ipox ER 1052-5	Bisphenol-A/F-diglycidylether difunctional RD	164-176	450-650	1	<ul style="list-style-type: none">• solvent-free epoxy systems• lower viscosity than ipox ER 1052
ipox ER 1052-9	Bisphenol-A/F-diglycidylether difunctional RD	164-176	700-1000	1	<ul style="list-style-type: none">• solvent-free epoxy systems• higher viscosity than ipox ER 1052
ipox ER 1054	Bisphenol-A/F-diglycidylether difunctional RD	160-180	900-1400	1	<ul style="list-style-type: none">• solvent-free epoxy systems• very good chemical resistance
ipox ER 1062	Bisphenol-A/F-diglycidylether difunctional RD	172-188	700-1000	1	<ul style="list-style-type: none">• solvent-free epoxy systems• very good chemical resistance



Product	Chemical base	EEW g/eq	Visco. η^{25} mPa·s	Solid Content %	colour* max	Application
ipox ER 1030W^A	Bisphenol-A-diglycidylether polymeric reactive emulsifier	188-198	9000-13000	100	3	<ul style="list-style-type: none"> • water emulsifiable epoxy resin for the preparation of epoxy resin emulsions • 100% reactive emulsifier
ipox ER 1031W^A	Bisphenol-A-diglycidylether	180-200	7500-12000	100	1	<ul style="list-style-type: none"> • water emulsifiable epoxy resin for the production of epoxy resin emulsions
ipox ER 1030-6W^A	Bisphenol-A-diglycidylether difunctional RD	165-185	500-800	100	2	<ul style="list-style-type: none"> • water emulsifiable epoxy resin with ipox EH 2082 water washable grouts
ipox ER 1035W	water based epoxy resin	255-285	50-130	66-68	white emulsion	<ul style="list-style-type: none"> • liquid resin emulsion for the production of waterborne paints and coatings
ipox ER 1100W	Bisphenol-A/F-diglycidylether	180-190	6000-8000	100	2	<ul style="list-style-type: none"> • water-based emulsion paints and adhesives
ipox ER 1100-8W	Bisphenol-A/F-diglycidylether difunctional RD	165-185	750-950	100	1	<ul style="list-style-type: none"> • water emulsifiable epoxy resin

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^A All ingredients are listed in „4MSI Common Approach on Organic Materials in Contact with drinking water“, Part B – Positive list, 6th Rev. Dez. 2022

The new clearpox[®]

The new ipox clearpox one epoxy resin combines all the properties required for such a high-performance system: clearpox one is a highly transparent 2-component epoxy resin potting compound for large layer thicknesses in one potting. It has only a slight tendency to yellow and is very UV stable. Our clearpox one potting compound is characterized by low shrinkage, low heat generation during the curing reaction and a very long processing time. The mixing ratio is 2:1 by weight. Since we attach great importance to health aspects in our developments, our resin system is VOC-free. clearpox one is compatible with e.g. wood, concrete, glass, metal, glass and carbon fiber fabric, natural stone, quartz sand, marble, granite.



Standard epoxy resins tend to yellow very quickly. In the development of clearpox one, we have implemented our latest research results to make the tendency to yellowing as low as possible. Above is a standard epoxy system for surface protection compared with clearpox one after an accelerated UV laboratory test.



General instructions for processing

The processing temperature should be between 20-30°C, but never below 10°C. The curing reaction is strongly temperature-dependent (high temperature = faster curing; low temperatures can greatly slow down curing). The success of your project with clearpox one depends on the optimum reaction temperature and will be all the better if you work at a temperature around 25°C. We have developed the product on this basis and all the specified product properties are optimized for this temperature (gloss, strength, good deaeration, etc.). The mixing ratio between resin and hardener must always be strictly observed, please refer to the technical data sheet with the exact mixing ratio and the processing time.



Modified amine hardeners

With ipox EH epoxy hardeners, the properties of epoxy resin systems can be individually determined - fast or slow, hard or impact resistant, low viscosity or high viscosity, hydrophilic or hydrophobic, low VOC or VOC-free.

ipox EH 2065

The VOC-free universal hardener

For decades, the industry standard for universal hardeners of 2 K-EP coatings with good early water resistance contained the raw materials benzyl alcohol and salicylic acid. Benzyl alcohol has to be labeled as VOC in Europe due to its boiling point and salicylic acid has to be labeled with GHS 08 "Health Hazard" according to the current toxicological evaluation.

With ipox EH 2065, a new next-generation VOC-free hardener is now available. In addition to a long processing time, it shows very fast

through-curing even at low temperatures - and this with a favorable toxicological classification at the same time.

- ipox EH 2065 has a low viscosity and is ideally suited for emission-free coatings indoors (AgBB, EC 1+, M1, „Emissions dans l'air intérieur" class A+)
- Thanks to its low yellowing tendency and very high chemical resistance, it is also an ideal product for topcoats



Product	Chemical base	HEW g/eq	Visco. η^{25} mPa·s	Gel time (min) 100g, 23°C, DGEBA	colour* max	Properties	Alkylphe- nol free	VOC- free**
ipox EH 2041	modified cycloaliphatic amines	95	125-225	50	2	<ul style="list-style-type: none"> • excellent surfaces • very good chemical resistance • curing at T > 10°C • long working time • low yellowing tendency 	+	-
ipox EH 2042	modified cycloaliphatic amines	95	275-375	25	2	<ul style="list-style-type: none"> • faster through-curing than EH 2041 • very good curing at T > 7°C 	+	-
ipox EH 2043	modified cycloaliphatic amines	95	200-400	25	3	<ul style="list-style-type: none"> • faster through-curing than EH 2042 • very good curing at T > 7°C 	+	-
ipox EH 2044	modified cycloaliphatic amines	87	120-230	55	1	<ul style="list-style-type: none"> • excellent surfaces • very good chemical resistance • curing at T > 10°C • long working time • extremely low yellowing tendency 	+	-
ipox EH 2047	modified cycloaliphatic amines	75	200-300	30	1	<ul style="list-style-type: none"> • excellent surfaces • curing at T > 10°C • low yellowing tendency 	+	-
ipox EH 2049	modified cycloaliphatic amines	95	100-200	60	1	<ul style="list-style-type: none"> • excellent surfaces • long working time • very low yellowing tendency • very good early water resistance 	+	-
ipox EH 2061	modified cycloaliphatic amines	92	150-250	100	1	<ul style="list-style-type: none"> • excellent surfaces • long working time • very low tendency to yellowing 	+	-

* Colour Gardener

** According to decopaint directive 2014/42/EG and solvent directive 1999/13/EC



Modified amine hardeners

Product	Chemical base	HEW g/eq	Visco. η^{25} mPa·s	Gel time (min) 100g, 23°C, DGEBA	colour* max	Properties	Alkylphe- nol free	VOC- free**
ipox EH 2062	modified cycloaliphatic amines	100	350-600	45	1	<ul style="list-style-type: none"> • faster through-curing than EH 2061 • very good chemical resistance • very low yellowing tendency 	+	-
ipox EH 2065	modified cycloaliphatic amines	85	150-300	40	1	<ul style="list-style-type: none"> • free of VOC • 100% reactive components • low tendency to yellowing 	+	+
ipox EH 2072	modified cycloaliphatic amines	115	350-450	70	1	<ul style="list-style-type: none"> • excellent surfaces • long working time • very good early water resistance 	+	-
ipox EH 2078	modified cycloaliphatic amines	122	3500-6500	30	3	<ul style="list-style-type: none"> • excellent surfaces • very good chemical resistance • curing at T > 10°C 	+	-
ipox EH 2081-1	modified cycloaliphatic amines	63	60-160	70	11	<ul style="list-style-type: none"> • Hardener for water washable jointing compounds 	+	+
ipox EH 2082	modified cycloaliphatic amines	44	75-175	70	3	<ul style="list-style-type: none"> • emulsifiable • together with ipox ER 1030-6W for water-washable grouts 	+	+
ipox EH 2121	modified cycloaliphatic amines	91	200-400	45	8	<ul style="list-style-type: none"> • moisture barrier on damp substrate • excellent adhesion with PUR • long working time • low viscosity 	+	+



Product	Chemical base	HEW g/eq	Visco. η^{25} mPa·s	Gel time (min) 100g, 23°C, DGEBA	colour* max	Properties	Alkylphe- nol free	VOC- free**
ipox EH 2122	modified cycloaliphatic amines	115	600-800	30	8	<ul style="list-style-type: none"> moisture barrier on damp substrate excellent adhesion with PUR fast through-curing 	+	+
ipox EH 2212	MXDA- Mannichbase	85	450-750	15	5	<ul style="list-style-type: none"> cures at T > 5°C very good chemical resistance reactive accelerator 	-	+
ipox EH 2213	MXDA- Mannichbase	75	400-600	15	5	<ul style="list-style-type: none"> lower viscosity than EH 2212 improved surface properties 	-	+
ipox EH 2216	cycloaliphatic amine	64	650-850	12	5	<ul style="list-style-type: none"> low-temperature curing agent for epoxy resins very fast through-curing 	+	+
ipox EH 2240	MXDA-ACN- Adduct	102	120-220	>4h	2	<ul style="list-style-type: none"> for impact resistant EP systems with high chemical resistance co-hardener 	+	+
ipox EH 2350	modified polyaminoamide	115	600-1200	60	8	<ul style="list-style-type: none"> excellent adhesion to damp substrates and steel low viscosity very hydrophobic can be accelerated with EH 2212 or EH 2216 	-	-
ipox EH 2900	Tertiary amine		90-300		8	<ul style="list-style-type: none"> Catalyst, Accelerator 	+	+

* Colour Gardener

** According to decopaint directive 2014/42/EG and solvent directive 1999/13/EC



Water-based amine hardeners

ipox EH^w epoxy hardeners can be used to formulate epoxy systems with outstanding properties: Straightforward application to the object ; virtually odourless – without VOC and with no emissions!

ipox EH 2471W

The perfect curing agent for waterborne epoxy systems

Typical applications are coatings up to 4 mm thick, either self-levelling or applied by roller. You can continue using the product for a long time. After a quick hardening, even at low temperatures, you will receive a semi-matt surface. Convince yourself! We will be glad to send you free samples of our epoxy resin hardeners and support you with a suggested formulation.

- the ultimate choice for industrial coating and flooring
- ultra low emission, no VOCs, practically odor free!
- Impressive properties at surprisingly low cost



Product	Chemical base	HEW g/eq	Visco. η^{25} mPa·s	Solid Content %	colour* max	Properties	Alkylphe- nol free	VOC- free**
ipox EH 2410W	modified polyamine adduct in water	220	11000 - 21000	64 -66	6	<ul style="list-style-type: none"> • excellent adhesion to damp substrates and steel • fast drying and through-curing 	+	+
ipox EH 2460W	modified polyaminoamide	210	25000 - 50000	49 -51	16	<ul style="list-style-type: none"> • excellent adhesion to damp substrates and steel • with solid resin dispersions suitable for anti-corrosion primers • pigmented roller coatings with liquid resins 	+	+
ipox EH 2466W	modified polyamine adduct in water	200	15000 - 25000	68 -72	9	<ul style="list-style-type: none"> • Hardener for impregnations and coatings based on water-based 2-K-epoxy-systems • emulsifies liquid epoxy resin • low viscosity • very low odor 	+	+
ipox EH 2471W	modified polyamine adduct in water	300	5000 - 10000	53 -57	Emul- sion	<ul style="list-style-type: none"> • Hardener for impregnations, paints and self-leveling coatings on waterborne 2-K-epoxy-systems 	+	+

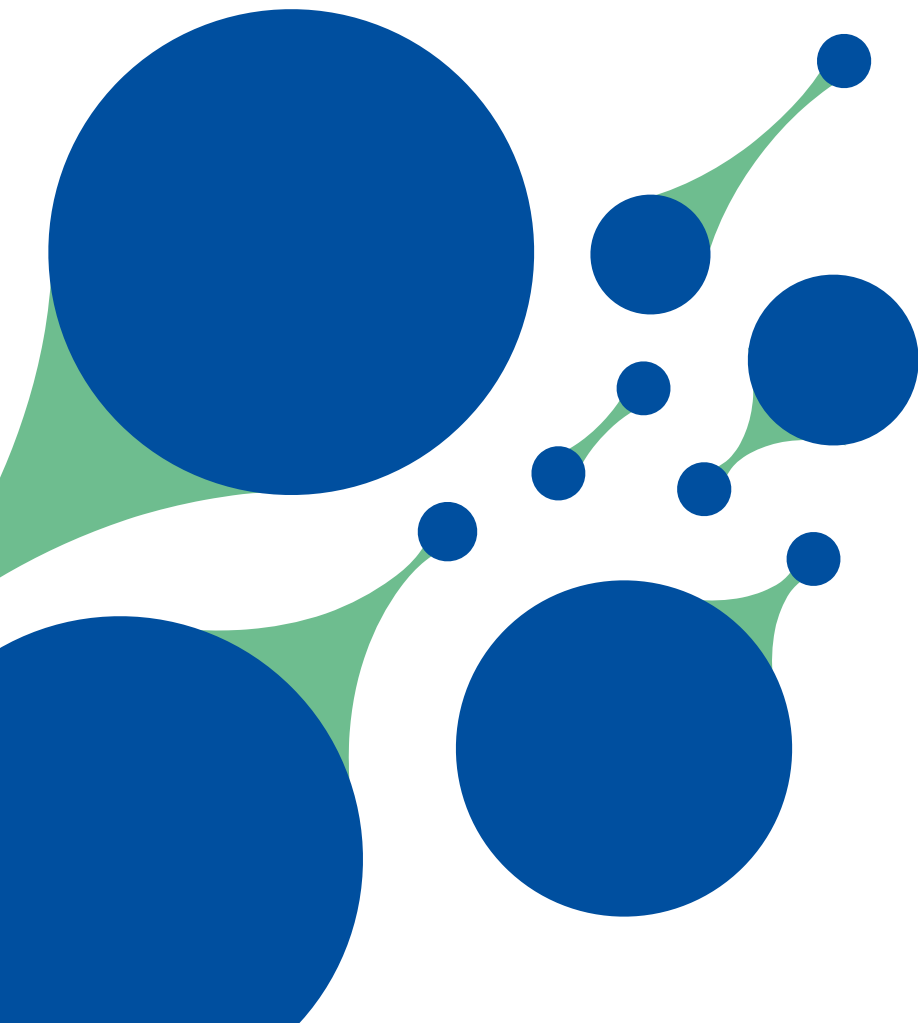
* Colour Gardener

** According to decopaint directive 2014/42/EG and solvent directive 1999/13/EC

Do you have questions about our products? Are you looking for epoxy technologies that do not yet exist? We will be happy to advise you!

Information about our company and the versatile product range can also be found on the Internet at www.ipox-chemicals.com





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