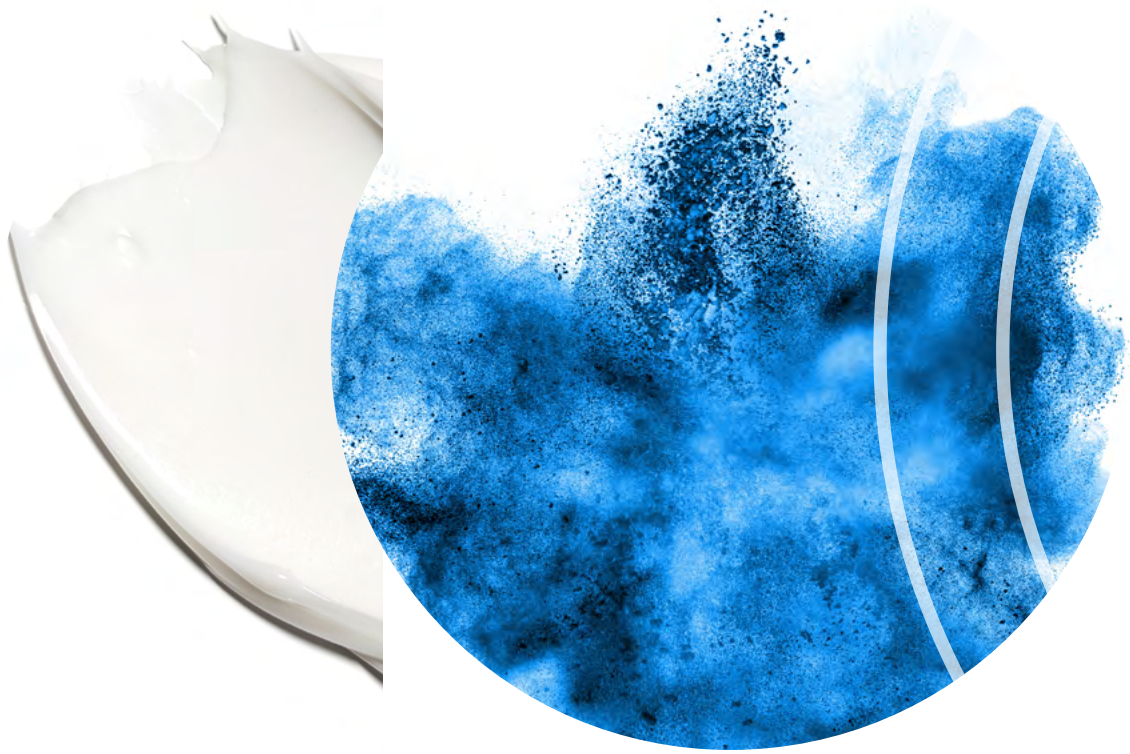
SARZYNA
CHEMICAL



epidian®

EPOXY RESINS AND HARDENERS

EPOXY RESINS AND HARDENERS

Sarzyna Chemical Sp. z o.o. core business is the manufacture of synthetic resins, including epoxy resins as the only manufacturer in Poland. With a successful fusion of tradition, experience and innovation & technological advancement for over 80 years, the Company offers high-quality products designed for use in key industries such as marine, construction, automotive, paint and mining.

The broad portfolio of over 1,000 baseline products, extended with customized solutions, covers EPIDIAN® epoxy resins, POLIMAL® unsaturated polyester resins, saturated polyester resins for powder paints, gelcoats and topcoats, hardeners, NOWOLAK and MODOFEN® phenolic-formaldehyde resins.

The Company's epoxy resin offering features an extensive range of EPIDIAN®-branded products, including:

- resins and hardeners for flooring,
- resins and hardeners for composite materials,
- specialized protective coatings for pipe repair systems,
- pultrusion systems,
- solid epoxy resins for powder paints and liquid anti-corrosion paints,
- resins for intermediates.

BASE LIQUID EPOXY RESINS

PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	EEW [g/eq]	VISCOSITY AT 25°C [mPa·s]	COLOUR [GARDNER/HAZEN]
EPIDIAN® 4	BASE UNMODIFIED LIQUID RESIN, BPA-BASED	0,410 – 0,450	222 – 244	–	–
EPIDIAN® 5	BASE UNMODIFIED LIQUID RESIN, BPA-BASED	0,480 – 0,515	194 – 208	20 000 – 30 000	max. 2 / –
EPIDIAN® 6	BASE UNMODIFIED LIQUID RESIN, BPA-BASED, HYDROLYZABLE CHLORINE CONTENT LESS THAN 1,000 ppm	0,510 – 0,545	183 – 196	10 000 – 15 000	– / max. 100
EPIDIAN® 6D	BASE UNMODIFIED LIQUID RESIN, BPA-BASED, HYDROLYZABLE CHLORINE CONTENT LESS THAN 400 ppm, EPICHLOROHYDRIN CONTENT LESS THAN 5 ppm	0,520 – 0,550	182 – 192	10 000 – 12 500	– / max. 100
EPIDIAN® 6F	BLEND OF BASE LIQUID RESINS, BPA- AND BPF-BASED	0,540 – 0,570	175 – 185	6 000 – 9 000	max. 1 / –
EPIDIAN® 6F1	BLEND OF BASE LIQUID RESINS, BPA- AND BPF-BASED	0,550 – 0,590	169 – 182	4 500 – 6 500	max. 1 / –
EPIDIAN® 6 LC	BASE UNMODIFIED LIQUID RESIN, BPA-BASED, HYDROLYZABLE CHLORINE CONTENT LESS THAN 300 ppm	0,510 – 0,545	183 – 196	10 000 – 15 000	– / max. 100

Liquid epoxy resin intermediates are intended for the production of varnishes, liquid anti-corrosion paints, prepregs, binders, saturants, putties, adhesives, hot- and cold-cured compositions.

SPECIAL-PURPOSE LIQUID EPOXY RESINS

BPA + REACTIVE DILUENTS

PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	EEW [g/eq]	VISCOSITY AT 25°C [mPa·s]	COLOUR [GARDNER/HAZEN]
EPIDIAN® 52	CONTAINS A MONOFUNCTIONAL REACTIVE DILUENT	0,510 – 0,550	182 – 196	400 – 800	
EPIDIAN® 601	CONTAINS A MONOFUNCTIONAL REACTIVE DILUENT	0,500 – 0,550	182 – 200	700 – 1100	max. 1 / –
EPIDIAN® 6010	CONTAINS A MONOFUNCTIONAL REACTIVE DILUENT	0,520 – 0,562	178 – 192	500 – 700	max. 2 / –
EPIDIAN® 6011	CONTAINS A MIXTURE OF A MONOFUNCTIONAL REACTIVE DILUENT AND SOLVENT	0,470 – 0,510	196 – 213	200 – 400	–
EPIDIAN® 6012	CONTAINS A MONOFUNCTIONAL REACTIVE DILUENT	0,500 – 0,540	185 – 200	2 000 – 3 000	–
EPIDIAN® 607	CONTAINS A MIXTURE OF MONOFUNCTIONAL REACTIVE DILUENTS	0,480 – 0,520	192 – 208	700 – 1000	–
EPIDIAN® 624	CONTAINS A MONOFUNCTIONAL REACTIVE DILUENT	0,475 – 0,510	196 – 211	600 – 800	max. 1 / –
EPIDIAN® 629	CONTAINS A BIFUNCTIONAL REACTIVE DILUENT	0,540 – 0,580	172 – 185	800 – 1300	max. 1 / –
EPIDIAN® 6291	CONTAINS A BIFUNCTIONAL REACTIVE DILUENT	0,560 – 0,610	164 – 178	250 – 550	max. 1 / –
EPIDIAN® 635	CONTAINS A BIFUNCTIONAL REACTIVE DILUENT	0,530 – 0,560	178 – 189	2 500 – 3 000	max. 1 / –
EPIDIAN® 641	CONTAINS A BIFUNCTIONAL REACTIVE DILUENT	0,535 – 0,555	180 – 187	4 300 – 5 800	max. 2 / –
EPIDIAN® 6411	CONTAINS A BIFUNCTIONAL REACTIVE DILUENT	0,560 – 0,590	169 – 179	1 000 – 1 400	–
EPIDIAN® 655	IT CONTAINS A MONOFUNCTIONAL REACTIVE DILUENT WITH IMPROVED HYDROLYTIC RESISTANCE	0,500 – 0,530	189 – 200	1 500 – 2 100	max. 2 / –

A broad portfolio of resins used in the production of structural composites, including components in marine, automotive and construction industries.
These provide a base for a variety of coating materials, ranging from paints, to varnishes, to epoxy floors. In electronics, they are successfully used as encapsulation and potting compounds & binders

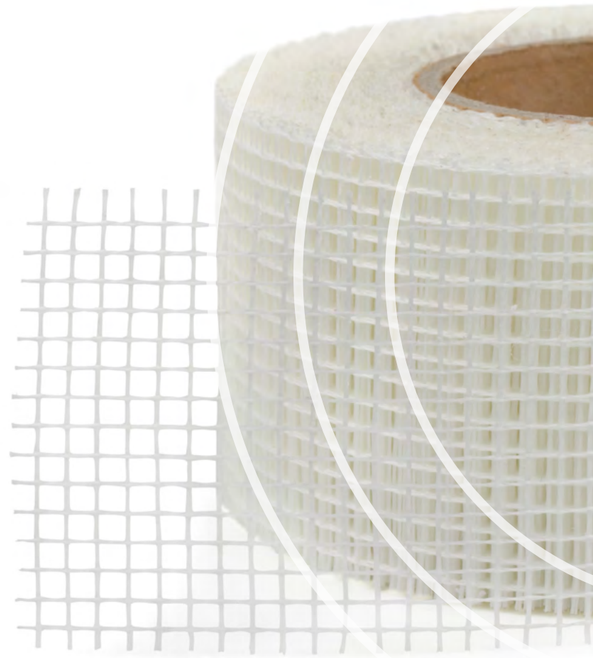
In the cured form, the product offers high mechanical strength and chemical resistance.

BPA + SOLVENTS

PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	VISCOSITY AT 25°C [mPa·s]
EPIDIAN® 62	CONTAINS A PLASTICIZER	min. 0,390	4 000 – 6 500
EPIDIAN® 53	CONTAINS STYRENE	min. 0,410	900 – 1 500
EPIDIAN® 57	CONTAINS A POLYESTER DILUENT	–	13 000 – 19 000
EPIDIAN® 505	CONTAINS A MIXTURE OF SOLVENTS	0,390 – 0,410	max. 1500 at 20°C

BPA /BPF + REACTIVE DILUENTS

PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	EEW [g/eq]	VISCOSITY AT 25°C [mPa·s]	COLOUR [GARDNER/HAZEN]
EPIDIAN® 651	CONTAINS A MONOFUNCTIONAL REACTIVE DILUENT	0,470 – 0,510	196 – 213	300 – 400	max. 1 / –
EPIDIAN® 652	CONTAINS A MONOFUNCTIONAL REACTIVE DILUENT	0,488 – 0,513	195 – 205	500 – 900	max. 1 / –
EPIDIAN® 653	CONTAINS A MONOFUNCTIONAL REACTIVE DILUENT	0,500 – 0,526	190 – 200	800 – 1000	max. 1 / –
EPIDIAN® 659	CONTAINS A BIFUNCTIONAL REACTIVE DILUENT	0,555 – 0,588	170 – 180	600 – 700	max. 1 / –
EPIDIAN® 659–0	CONTAINS A BIFUNCTIONAL REACTIVE DILUENT	0,570 – 0,600	166 – 175	400 – 600	max. 1 / –



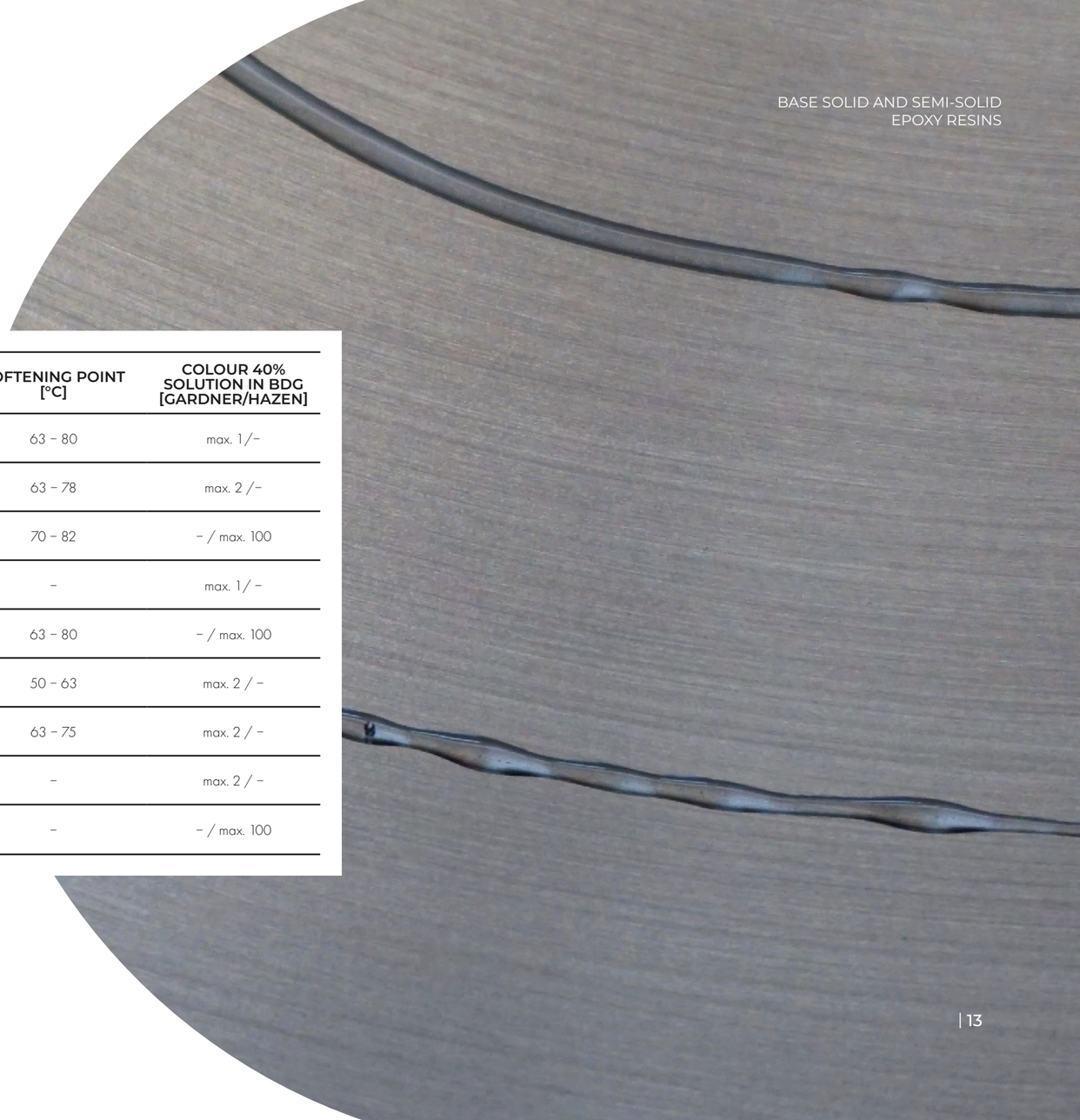
SOLUTIONS OF LOW MOLECULAR WEIGHT EPOXY RESINS

PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	EEW [g/eq]	VISCOSITY AT 25°C [mPa·s]	COLOUR [GARDNER/HAZEN]
EPIDIAN® 4X80	80% EPIDIAN® 4 SOLUTION IN XYLENE	0,380 – 0,425	235 – 263	500 – 900	– / max. 200
EPIDIAN® 4X90	90% EPIDIAN® 4 SOLUTION IN XYLENE	0,420 – 0,450	222 – 28	2 400 – 6 000	– / max. 200
EPIDIAN® 450	EPIDIAN® 4 SOLUTION IN BUTYL ALCOHOL AND STYRENE	0,300 – 0,400	250 – 333	800 – 1 500	–
EPIDIAN® 520	EPIDIAN® 5 AND PHENOLIC-FORMALDEHYDE RESIN SOLUTION IN ACETONE	0,120 – 0,190	526 – 833	–	–
EPIDIAN® 560	60% EPIDIAN® 5 SOLUTION IN XYLENE	0,295 – 0,315	317 – 339	less than 50	–
EPIDIAN® 6X90	90% EPIDIAN® 6 SOLUTION IN XYLENE	0,510 – 0,540	185 – 196	–	max. 1 / –

BASE SOLID AND SEMI-SOLID EPOXY RESINS

MEDIUM MOLECULAR WEIGHT EPOXY RESINS

PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	EEW [g/eq]	SOFTENING POINT [°C]	COLOUR 40% SOLUTION IN BDG [GARDNER/HAZEN]
EPIDIAN® 1	BASE SOLID UNMODIFIED TYPE 1 RESIN	0,180 – 0,230	434 – 556	63 – 80	max. 1 /–
EPIDIAN® 1R	BASE SOLID UNMODIFIED TYPE 1 RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 1,500 ppm	0,180 – 0,200	500 – 556	63 – 78	max. 2 /–
EPIDIAN® 1R1	BASE SOLID UNMODIFIED TYPE 1 RESIN	0,182 – 0,211	474 – 550	70 – 82	– / max. 100
EPIDIAN® 1R2	BASE SOLID UNMODIFIED TYPE 1 RESIN	0,190 – 0,200	500 – 526	–	max. 1 / –
EPIDIAN® 1R3	BASE SOLID UNMODIFIED TYPE 1 RESIN	0,202 – 0,208	481 – 495	63 – 80	– / max. 100
EPIDIAN® 2	BASE SEMI-SOLID UNMODIFIED RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 1,500 ppm	0,230 – 0,280	357 – 434	50 – 63	max. 2 / –
EPIDIAN® 2 PA	BASE SOLID UNMODIFIED RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 1,500 ppm	0,200 – 0,230	434 – 500	63 – 75	max. 2 / –
EPIDIAN® 24	BASE SEMI-SOLID UNMODIFIED RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 1,500 ppm	0,285 – 0,333	300 – 350	–	max. 2 / –
EPIDIAN® 25	BASE SEMI-SOLID UNMODIFIED RESIN	0,350 – 0,370	270 – 286	–	– / max. 100



HIGH MOLECULAR WEIGHT EPOXY RESINS

	PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	EEW [g/eq]	SOFTENING POINT [°C]	VISCOSITY 40% SOLUTION IN BDG AT 25°C [mPa·s]	COLOUR 40% SOLUTION IN BDG [GARDNER/HAZEN]
TYPE 2	**EPIDIAN® 010**	BASE SOLID UNMODIFIED RESIN	0,140 – 0,117	588 – 714	75 – 90	250 – 400	max. 1 / –
	EPIDIAN® 010 A	BASE SOLID UNMODIFIED TYPE 1.5 RESIN	0,170 – 0,182	549 – 588	–	–	max. 1 / –
	EPIDIAN® 010 B	BASE SOLID UNMODIFIED RESIN	0,154 – 0,164	610 – 650	–	–	max. 1 / –
	EPIDIAN® 010 C	BASE SOLID UNMODIFIED TYPE 2.5 RESIN	0,137 – 0,156	640 – 730	80 – 95	–	max. 1 / –
	EPIDIAN® 010 C–F	BASE SOLID UNMODIFIED RESIN, VISCOSITY AT 150°C WITHIN THE RANGE OF 600 – 1,500 mPa·s	0,143 – 0,166	600 – 700	75 – 95	–	max. 1 / –
	EPIDIAN® 020	BASE SOLID UNMODIFIED RESIN	0,166 – 0,178	560 – 600	–	–	max. 1 / –
	EPIDIAN® 025	BASE SOLID UNMODIFIED RESIN	0,145 – 0,160	625 – 690	–	–	max. 1 / –
TYPE 3	**EPIDIAN® 011**	BASE SOLID UNMODIFIED RESIN	0,120 – 0,140	715 – 835	88 – 98	370 – 550	max. 1 / –
	EPIDIAN® 011 A	BASE SOLID UNMODIFIED RESIN	0,125 – 0,140	715 – 800	88 – 98	370 – 450	max. 1 / –
	EPIDIAN® 011 C–W	BASE SOLID UNMODIFIED RESIN	0,133 – 0,143	700 – 750	90 – 98	360 – 480	max. 1 / –
	EPIDIAN® 011 E	BASE SOLID UNMODIFIED RESIN	0,120 – 0,135	740 – 835	88 – 98	400 – 550	max. 1 / –
	EPIDIAN® 011 T	BASE SOLID UNMODIFIED RESIN	0,115 – 0,140	715 – 870	84 – 98	300 – 500	max. 1 / –
	EPIDIAN® 031	BASE SOLID UNMODIFIED RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 600 ppm, VISCOSITY AT 150°C WITHIN THE RANGE OF 2,500 – 4,500 mPa·s	0,120 – 0,140	714 – 834	–	–	max. 1 / –
	EPIDIAN® 033A	BASE SOLID UNMODIFIED RESIN, VISCOSITY AT 150°C WITHIN THE RANGE OF 3,100 – 5,200 mPa·s	0,125 – 0,135	741 – 800	–	–	– / max. 90

Resins for pure and hybrid epoxy powder paints for use in a variety of interior applications, mainly for anti-corrosion protection. Designed for coating metal elements exposed to adverse conditions, in particular to contact with chemical agents, e.g. for protecting pipes, valves, tanks, tools and automotive parts.

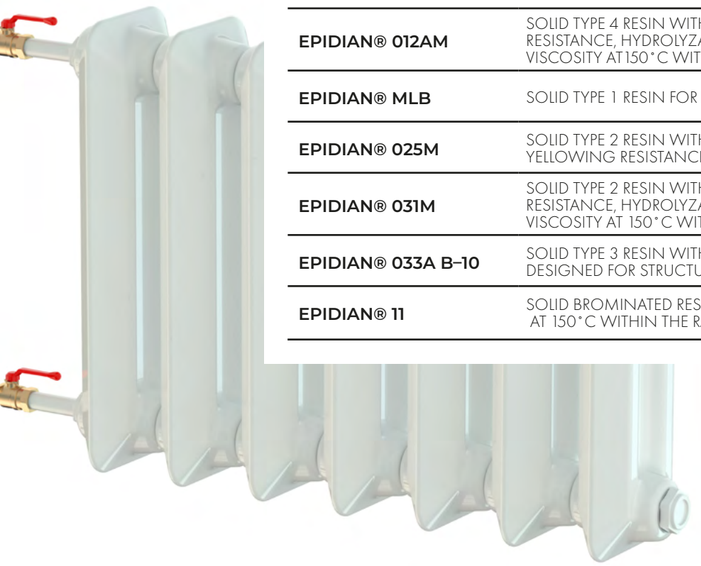
	PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	EEW [g/eq]	SOFTENING POINT [°C]	VISCOSITY 40% SOLUTION IN BDG AT 25°C [mPa·s]	COLOUR 40% SOLUTION IN BDG [GARDNER/HAZEN]
TYPE 4	**EPIDIAN® 012**	BASE SOLID UNMODIFIED RESIN	0,100 – 0,125	800 – 1000	93 – 105	450 – 750	max. 1 / –
	EPIDIAN® 012 A	BASE SOLID UNMODIFIED RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 600 ppm, VISCOSITY AT 150°C WITHIN THE RANGE OF 5,000 – 10,200 mPa·s	0,105 – 0,114	877 – 952	98 – 108	–	–
	EPIDIAN® 012 AG	BASE SOLID UNMODIFIED RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 600 ppm, VISCOSITY AT 150°C WITHIN THE RANGE OF 5,000 – 10,200 mPa·s, GLASS TRANSITION TEMPERATURE WITHIN THE RANGE OF 60 – 66°C	0,105 – 0,114	877 – 952	98 – 108	–	–
	EPIDIAN® 012 B	BASE SOLID UNMODIFIED RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 600 ppm, VISCOSITY AT 150°C WITHIN THE RANGE OF 5,500 – 14,200 mPa·s	0,100 – 0,111	900 – 1000	98 – 110	–	–
	EPIDIAN® 012 C	BASE SOLID UNMODIFIED RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 600 ppm	0,100 – 0,114	875 – 1000	98 – 108	650 – 1000	max. 1 / –
	EPIDIAN® 012 I	BASE SOLID UNMODIFIED RESIN	0,119 – 0,130	770 – 840	–	360 – 660	max. 1 / –
	EPIDIAN® 012 H	BASE SOLID UNMODIFIED RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 600 ppm AND EPICHLOROHYDRIN CONTENT LESS THAN 5 ppm	0,100 – 0,125	800 – 1000	93 – 105	–	–
	EPIDIAN® 012 U	BASE SOLID UNMODIFIED RESIN, HYDROLYZABLE CHLORINE CONTENT LESS THAN 1,000 ppm	0,105 – 0,114	877 – 952	93 – 105	–	–
TYPE 7	**EPIDIAN® 014**	BASE SOLID UNMODIFIED RESIN DESIGNED FOR CAN&COIL COATING	0,050 – 0,065	1538 – 2000	110 – 130	1 000 – 3 000	max. 2 / –
	EPIDIAN® 014 LV	BASE SOLID UNMODIFIED RESIN DESIGNED FOR CAN&COIL COATING	0,065 – 0,075	1333 – 1538	–	800 – 2 200	max. 2 / –

MODIFIED SOLID AND SEMI-SOLID EPOXY RESINS

PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	EEW [g/eq]	SOFTENING POINT [°C]
EPIDIAN® 010 H–2	SOLID TYPE 2 RESIN WITH 2% FLOW CONTROL AGENT ADDITION	0,140 – 0,160	625 – 715	75 – 90
EPIDIAN® 010 H–2,5	SOLID TYPE 2 RESIN WITH 2.5 % FLOW CONTROL AGENT ADDITION	0,155 – 0,165	605 – 645	75 – 90
EPIDIAN® 010 C–2	SOLID TYPE 2 RESIN WITH 2 % FLOW CONTROL AGENT ADDITION	0,140 – 0,160	625 – 715	75 – 90
EPIDIAN® 010 C HB–2,5	SOLID TYPE 2 RESIN WITH 2.5 % FLOW CONTROL AGENT ADDITION	0,135 – 0,154	649 – 741	80 – 95
EPIDIAN® 010 C LR–2,5	SOLID TYPE 2 RESIN WITH 2.5 % FLOW CONTROL AGENT ADDITION	0,135 – 0,154	649 – 741	80 – 95
EPIDIAN® 011 H–1	SOLID TYPE 3 RESIN WITH 1 % FLOW CONTROL AGENT ADDITION	0,120 – 0,140	715 – 830	84 – 98
EPIDIAN® 011 H–2	SOLID TYPE 3 RESIN WITH 2 % FLOW CONTROL AGENT ADDITION	0,115 – 0,140	715 – 870	84 – 98
EPIDIAN® 011 H–2,5	SOLID TYPE 3 RESIN WITH 2.5 % FLOW CONTROL AGENT ADDITION	0,115 – 0,140	715 – 870	84 – 98
EPIDIAN® 011 H–5	SOLID TYPE 3 RESIN WITH 5 % FLOW CONTROL AGENT ADDITION	0,115 – 0,135	740 – 870	84 – 98
EPIDIAN® 011 H–10	SOLID TYPE 3 RESIN WITH 10 % FLOW CONTROL AGENT ADDITION	0,110 – 0,130	770 – 910	84 – 98
EPIDIAN® 011A H–2	SOLID TYPE 3 RESIN WITH 2 % FLOW CONTROL AGENT ADDITION	0,120 – 0,140	714 – 833	84 – 98
EPIDIAN® 011 A H–10	SOLID TYPE 3 RESIN WITH 10 % FLOW CONTROL AGENT ADDITION	0,113 – 0,126	794 – 885	84 – 98
EPIDIAN® 012 C–15	SOLID TYPE 4 RESIN WITH 15 % FLOW CONTROL AGENT ADDITION	0,085 – 0,110	910 – 1177	90 – 102

Recommended for high – end appearance coatings used in the production of household appliances, steel furniture and others.

These provide better paint flow resulting in a thinner coating, thus improving efficiency and lowering production costs.



PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	EEW [g/eq]	SOFTENING POINT [°C]
EPIDIAN® 012AM	SOLID TYPE 4 RESIN WITH INCREASED OVER-BAKING YELLOWING RESISTANCE, HYDROLYZABLE CHLORINE CONTENT LESS THAN 600 ppm, VISCOSITY AT 150°C WITHIN THE RANGE OF 5,500 – 10,200 mPa·s	0,105 – 0,114	877 – 952	98 – 108
EPIDIAN® MLB	SOLID TYPE 1 RESIN FOR LOW-BAKE PAINTS	0,182 – 0,200	500 – 550	72 – 84
EPIDIAN® 025M	SOLID TYPE 2 RESIN WITH INCREASED OVER-BAKING YELLOWING RESISTANCE	0,137 – 0,156	640 – 730	–
EPIDIAN® 031M	SOLID TYPE 2 RESIN WITH INCREASED OVER-BAKING YELLOWING RESISTANCE, HYDROLYZABLE CHLORINE CONTENT LESS THAN 600 ppm, VISCOSITY AT 150°C WITHIN THE RANGE OF 2500 – 4500 mPa·s	0,120 – 0,140	714 – 833	–
EPIDIAN® 033A B–10	SOLID TYPE 3 RESIN WITH 10% FLOW CONTROL AGENT ADDITION, DESIGNED FOR STRUCTURAL PAINTS	0,111 – 0,128	780 – 900	–
EPIDIAN® 11	SOLID BROMINATED RESIN, VISCOSITY AT 150°C WITHIN THE RANGE OF 300 – 600 mPa·s	0,200 – 0,215	465 – 500	–

MEDIUM AND HIGH MOLECULAR WEIGHT EPOXY RESIN SOLUTIONS

PRODUCT	CHARACTERISTICS	EPOXY VALUE [mole/100 g]	EEW [g/eq]	VISCOSITY AT 25°C [mPa·s]	COLOUR [GARDNER/HAZEN]
EPIDIAN® 1075	75% TYPE 1 RESIN SOLUTION IN MIBK	0,200 – 0,222	450 – 500	–	– / max. 200
EPIDIAN® 1075X	75% TYPE 1 RESIN SOLUTION IN MIBK AND XYLENE	0,200 – 0,222	450 – 500	–	– / max. 200
EPIDIAN® 1X70	70% TYPE 1 RESIN SOLUTION IN XYLENE	0,190 – 0,230	435 – 526	–	max. 2 / –
EPIDIAN® 1XM70	70% TYPE 1 RESIN SOLUTION IN MEK AND XYLENE	0,200 – 0,222	450 – 500	2 000 – 3 000	max. 2 / –
EPIDIAN® 115	75% TYPE 1 RESIN SOLUTION IN XYLENE	0,190 – 0,230	435 – 526	7 000 – 14 000	max. 2 / –
EPIDIAN® 115 I	75% TYPE 1 RESIN SOLUTION IN XYLENE	0,213 – 0,222	450 – 470	7 000 – 14 000	max. 2 / –
EPIDIAN® 115 LV	75% TYPE 1 RESIN SOLUTION IN XYLENE	0,220 – 0,240	416 – 455	5 000 – 8 000	max. 2 / –
EPIDIAN® 115 H	75% TYPE 1 RESIN SOLUTION IN XYLENE	0,200 – 0,222	450 – 500	7 000 – 14 000	max. 2 / –
EPIDIAN® 1450	50% TYPE 7 RESIN SOLUTION IN XYLENE	0,050 – 0,075	1333 – 2000	–	max. 2 / –
EPIDIAN® 1450 SW	50% TYPE 7 RESIN SOLUTION IN XYLENE, METHOXYPROPANOL AND DIMETHYL ESTERS	0,050 – 0,065	1351 – 2000	1500 – 2500*	maks. 1 / –
EPIDIAN® 202	75% EPIDIAN® 2 PA SOLUTION IN ACETONE	0,200 – 0,230	434 – 500	max. 1700	max. 4 / –
EPIDIAN® 24X80	80% EPIDIAN® 24 SOLUTION IN XYLENE	0,300 – 0,335	299 – 333	3 400 – 7 100	max. 2 / –
EPIDIAN® 11M80	80% EPIDIAN® 11 SOLUTION IN MEK	0,200 – 0,215	465 – 500	1 000 – 5 000	–

*AT 23°C

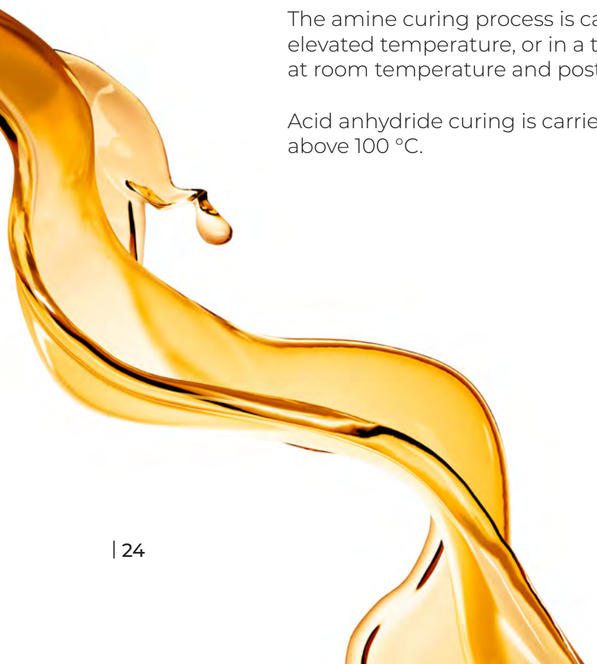
EPOXY RESIN HARDENERS

Epoxy resin hardeners are chemical compounds which in chemical reactions provide spatial cross-linking of resins to yield the characteristics of a chemosetting material.

The right hardener is selected based on the type of resin, curing conditions and the required properties of the finished product. Where formulations containing modifiers without epoxy groups are to be cured, the quantity of hardener should be based on the resin contained in the formulation. Before use, the resin should be thoroughly mixed with the specified quantity of hardener.

The amine curing process is carried out at room temperature, elevated temperature, or in a two-stage system, i.e. initial cure at room temperature and post-cure at elevated temperature.

Acid anhydride curing is carried out at high temperatures, above 100 °C.



AMINES AND THEIR MIXTURES

PRODUCT	CHARACTERISTICS	AMINE VALUE [mg KOH/g]	DENSITY AT 20°C [g/cm³]	VISCOSITY AT 25°C [mPa·s]	COLOUR [GARDNER/HAZEN]
HARDENER Z–1	ALIPHATIC AMINE-BASED HARDENER	min. 1100	0,978 – 0,983	–	–
HARDENER 6412	POLYETHER AMINE – AND CYCLOALIPHATIC AMINE – BASED HARDENER	520 – 600	0,925 – 0,945	–	– / max. 60
HARDENER 250	CYCLOALIPHATIC AMINE – BASED HARDENER	min. 650	0,920 – 0,925	–	– / max. 15
HARDENER 635	POLYETHER AMINE – AND CYCLOALIPHATIC AMINE – BASED HARDENER	480 – 530	0,940 – 0,970*	10–15	–
HARDENER 635–1	POLYETHER AMINE – AND CYCLOALIPHATIC AMINE – BASED HARDENER	500 – 600	0,930 – 0,950*	8–15	–
HARDENER PEA	POLYETHER AMINE – BASED HARDENER	450 – 490	0,936 – 0,954	–	– / max. 60
HARDENER MTB	ALIPHATIC AMINE –, AROMATIC AMINE – AND PHENOL DERIVATIVE – BASED HARDENER	300 – 450	–	180 – 280	max. 1 / –
HARDENER 6009	POLYETHER AMINE –, ALIPHATIC AMINE – AND CYCLOALIPHATIC AMINE – BASED HARDENER	560 – 600	0,930 – 0,938	–	–

*AT 25°C

AMINE ADDUCTS AND THEIR MIXTURES

PRODUCT	CHARACTERISTICS	AMINE VALUE [mg KOH/g]	DENSITY AT 20°C [g/cm³]	VISCOSITY AT 25°C [mPa·s]	COLOUR [GARDNER/HAZEN]
HARDENER IDA	CYCLOALIPHATIC POLYAMINE ADDUCT – BASED HARDENER	200 – 350	–	150 – 300	max. 3 / –
HARDENER IDA–2	CYCLOALIPHATIC POLYAMINE ADDUCT – BASED HARDENER	360 – 410	1,000 – 1,020	230 – 380	max. 3 / –
HARDENER IDA–4	CYCLOALIPHATIC POLYAMINE ADDUCT – BASED HARDENER	380 – 420	0,980 – 1,010	–	–
HARDENER U1	CYCLOALIPHATIC POLYAMINE AND AROMATIC AMINE ADDUCT – BASED HARDENER	370 – 430	0,960 – 1, 060	100 – 200	max. 2 / –
HARDENER EZ	CYCLOALIPHATIC POLYAMINE AND AROMATIC AMINE ADDUCT – BASED HARDENER	700 – 850	0,980 – 1,010	< 100	–

ANHYDRIDE-BASED

PRODUCT	CHARACTERISTICS	ACID VALUE [mg KOH/g]	DENSITY AT 20°C [g/cm³]	VISCOSITY AT 25°C [mPa·s]
HARDENER 130	ACID ANHYDRIDE – BASED HARDENER, INTENDED FOR HIGH – TEMPERATURE CROSS-LINKED COMPOSITE MATERIALS	300 – 400	1,160 – 1,260	25 – 50
HARDENER 134	MODIFIED, ACCELERATED ACID ANHYDRIDE-BASED HARDENER	300 – 400	1,21 – 1,23	1 500 – 5 000

MANNICH BASES

PRODUCT	CHARACTERISTICS	AMINE VALUE [mg KOH/g]	VISCOSITY AT 25°C [mPa·s]	COLOUR [GARDNER/HAZEN]
HARDENER TFF	MANNICH BASE HARDENER WITH INCREASED REACTIVITY AT LOW TEMPERATURES AND RESISTANCE TO HUMID ENVIRONMENTS	500 – 700	max. 10 000	max. 12 / –
HARDENER TFF 8020	80% MANNICH BASE HARDENER SOLUTION IN BENZYL ALCOHOL	350 – 600	700 – 2 200	max. 12 / –

POLYAMINOAMIDE-BASED

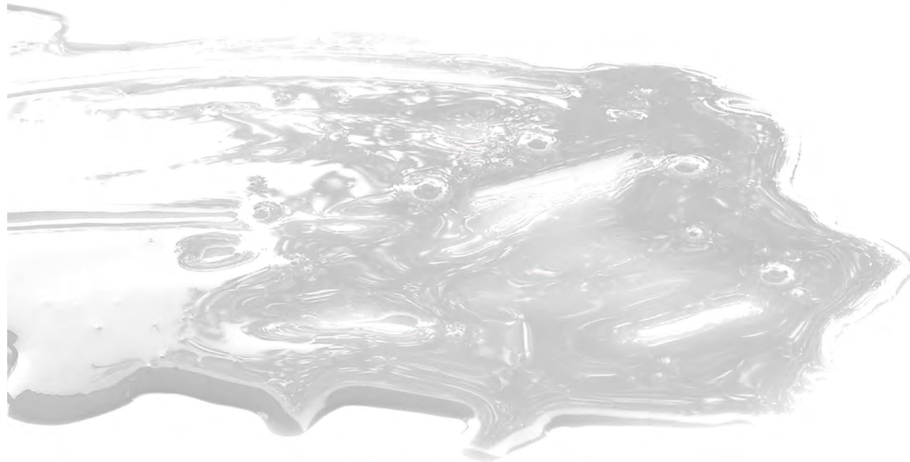
PRODUCT	CHARACTERISTICS	AMINE VALUE [mg KOH/g]	VISCOSITY AT 25°C [mPa·s]	COLOUR [GARDNER/HAZEN]
HARDENER PAC	POLYAMINOAMIDE – BASED HARDENER	290 – 360	10 000 – 27 000	max. 12 / –
HARDENER PF	POLYAMINOAMIDE AND MANNICH BASE HARDENER	350 – 400	8 000 – 20 000	max. 13 / –
HARDENER PAT 115	HIGH MOLECULAR WEIGHT POLYAMINOAMIDE – BASED HARDENER	200 – 230	2 750 – 3 700	max. 11 / –
HARDENER PAT 115X70	70% HIGH MOLECULAR WEIGHT POLYAMINOAMIDE PAT 115 – BASED HARDENER SOLUTION IN XYLENE	150 – 180	1 500 – 3 000	–
HARDENER PA 115	POLYAMINOAMIDE – BASED HARDENER	210 – 250	3 500 – 4 600	max. 12 / –
HARDENER PA 115X70	70% POLYAMINOAMIDE PA 115 – BASED HARDENER SOLUTION IN XYLENE	145 – 180	750 – 1 400	–
HARDENER PAA 70	70% POLYAMIDE SOLUTION IN XYLENE	140 – 180	5 000 – 13 000	max. 10 / –
HARDENER PAT 125	HIGH MOLECULAR WEIGHT POLYAMINOAMIDE – BASED HARDENER	220 – 280	30 000 – 50 000	max. 13 / –
HARDENER PAT 140	HIGH MOLECULAR WEIGHT POLYAMINOAMIDE – BASED HARDENER	280 – 330	10 000 – 30 000	max. 13 / –
HARDENER 6012	POLYAMINOAMIDE – AND ALIPHATIC AMINE – BASED HARDENER	500 – 600	1 200 – 2 200	max. 10 / –
HARDENER 1KZ	POLYAMINOAMIDE – BASED HARDENER IN ISOPROPANOL	200 – 400	500 – 1000	max. 12 / –

HARDENER SCALE FACTOR CHART

RESIN	HARDENER														
	Z–1	6412*	635	635–1	MTB	6009	IDA	IDA–2	U1	EZ	TFF	TFF 8020	PAC	PF	PAT 115
EPIDIAN® 4	10	22	–	–	–	–	–	–	–	15	–	–	60–100	50–60	60–100
EPIDIAN® 431	–	–	–	–	–	–	–	–	12	–	–	–	–	–	–
EPIDIAN® 450	–	–	–	–	28	–	–	–	30	14	20	24	50–80	40–50	50–80
EPIDIAN® 5	12	25	30	28	37	–	50	40	40	18	26	32	60–100	50–60	60–100
EPIDIAN® 505	10	22	–	–	32	–	–	–	35	15	22	27	50–80	40–50	50–80
EPIDIAN® 52	13	27	33	31	39	–	53	43	–	20	27	33	60–100	50–60	60–100
EPIDIAN® 53	10	22	–	–	32	–	40	–	–	15	22	27	50–80	40–50	50–80
EPIDIAN® 560	–	–	–	–	23	–	30	–	24	11	16	20	–	–	–
EPIDIAN® 57	10	22	–	–	30	–	–	–	–	15	22	27	50–80	40–50	50–80
EPIDIAN® 6	13	27	33	31	39	–	53	43	43	20	27	33	60–100	50–60	60–100
EPIDIAN® 601	13	27	33	31	39	–	53	43	43	20	27	33	60–100	50–60	60–100
EPIDIAN® 6010	13	27	33	31	–	–	53	43	43	20	27	33	60–100	50–60	60–100
EPIDIAN® 6011	12	25	30	28	37	26	50	40	40	18	26	32	60–100	50–60	60–100
EPIDIAN® 6012	13	27	33	31	–	–	53	43	43	20	27	33	–	–	–
EPIDIAN® 607	12	25	30	28	37	–	50	40	40	18	26	32	60–100	50–60	60–100
EPIDIAN® 62	10	22	–	–	32	–	–	–	–	15	22	27	–	–	–
EPIDIAN® 624	12	25	30	28	37	26	50	40	40	18	26	32	60–100	50–60	60–100
EPIDIAN® 629	14	30	35	33	41	30	55	45	45	22	30	36	60–100	50–60	60–100
EPIDIAN® 6291	14	30	35	33	41	30	55	45	45	22	30	36	60–100	50–60	60–100
EPIDIAN® 635	13	27	33	31	39	–	53	43	43	20	27	33	60–100	50–60	60–100
EPIDIAN® 641	13	27	33	31	39	–	53	43	43	20	27	33	60–100	50–60	60–100
EPIDIAN® 6411	14	30	35	33	41	30	55	45	45	20	30	36	60–100	50–60	60–100
EPIDIAN® 651	12	25	30	28	37	26	50	40	40	18	26	32	60–100	50–60	60–100
EPIDIAN® 652	12	25	30	28	37	26	50	40	40	18	26	32	60–100	50–60	60–100
EPIDIAN® 653	12	25	30	28	37	26	50	40	40	18	26	32	60–100	50–60	60–100
Epidian® 655	12	25	30	28	37	26	50	40	40	18	26	32	60–100	50–60	60–100
Epidian® 659	14	30	35	33	41	30	55	45	45	20	30	36	60–100	50–60	60–100
Epidian® 659–0	14	30	35	33	41	30	58	45	45	20	30	36	60–100	50–60	60–100

*REQUIRES POST – CURING AT A TEMPERATURE OF AT LEAST 80 °C

The chart below should be understood as follows: to 100 parts by weight of Epidian® 5, add 12 parts by weight of hardener Z–1.

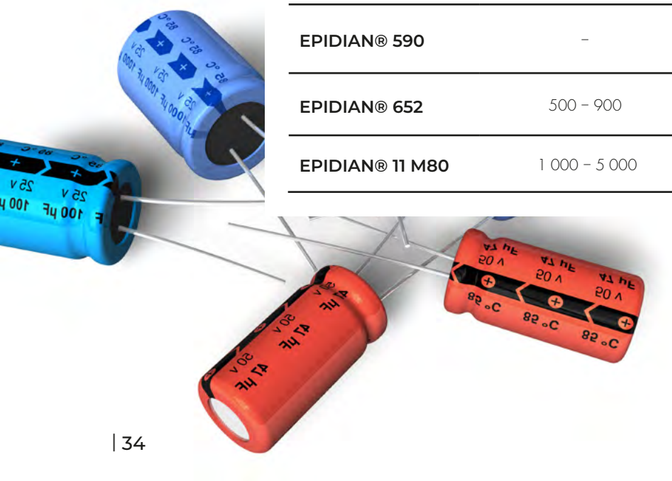


SPECIAL-PURPOSE SYSTEMS

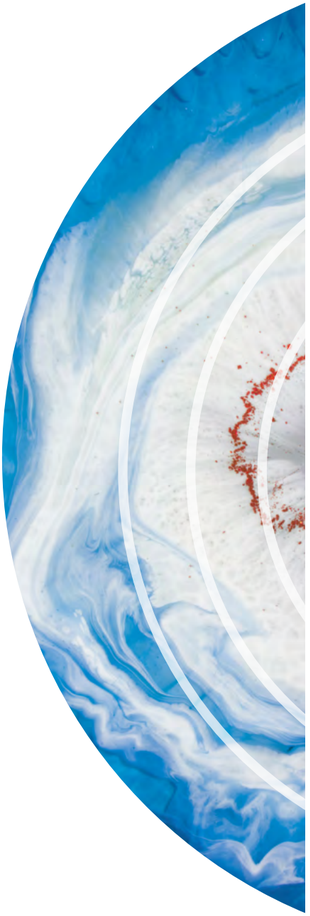
ELECTRICAL INSULATION

EPOXY RESIN	RESIN VISCOSITY AT 25°C [mPa·s]	HARDENER	HARDENER QUANTITY PER 100g RESIN [parts by weight]	GEL TIME OF 100g COMPOSITION AT 20°C [min.]	CHARACTERISTICS
EPIDIAN® 52	400 – 800	Z–1	13	40	LOW – VISCOSITY, CLEAR COMPOSITION TO BE USED ALONE OR AS AN ENCAPSULATING AND POTTING COMPOUND IN COMBINATION WITH FILLERS.
EPIDIAN® 53	900 – 1 500*	Z–1	10	60	LOW – VISCOSITY, CLEAR COMPOSITION CONTAINING A MODIFIER SOLVENT.
		TFF	22	30	
EPIDIAN® 62	4 000 – 6 500*	Z–1	10	50	PLASTICIZED COMPOSITION, WITH A PLASTICIZER. AFTER CURING, THE COMPOSITION BECOMES MILKY WHITE AND OPAQUE.
		IDA	40	80	
EPIDIAN® 590	–	IDA–4	20	210**	BLACK – COLOUR COMPOSITION WITH A SOLVENT AND A MINERAL FILLER.
EPIDIAN® 652	500 – 900	134	100	–	CLEAR COMPOSITION WITH AN ANHYDRIDE – BASED HARDENER, INTENDED FOR CROSS – LINKING AT HIGH TEMPERATURES, ABOVE 100°C.
EPIDIAN® 11 M80	1 000 – 5 000	–	–	–	80% BROMINATED EPOXY SOLUTION IN MEK.

* AT 20°C
** SAMPLE 10g



Due to their electrical insulating properties, epoxy compositions are used for encapsulating and potting various components, encapsulating and sealing capacitors, resistors, connectors and other parts of electrical and electronic devices.



DECORATIVE COATINGS

DECO SYSTEM

The DECO epoxy composition provides a transparent coating with high - end appearance.

Depending on the hardener used, it may be used for making smooth surfaces on wooden tops, filling "canyons" in countertops, sinking or casting transparent objects. The composition can be stained with transparent epoxy resin dyes, available in 11 colours.

SYSTEM DECO:
Epidian® DECO
Hardener DECO
Hardener DECO–K
Transparent dye

SYSTEM 658

Transparent, two - component composition for making high - end appearance coatings. It can be used as a ready - made solution or as a base to be further modified by addition of pigments and fillers.

SYSTEM 658:
Epidian® 658
Hardener 658

PULTRUSION

Pultrusion is a fibre-pulling process for the production of composite materials, which enables the manufacture of composite profiles in a continuous system.

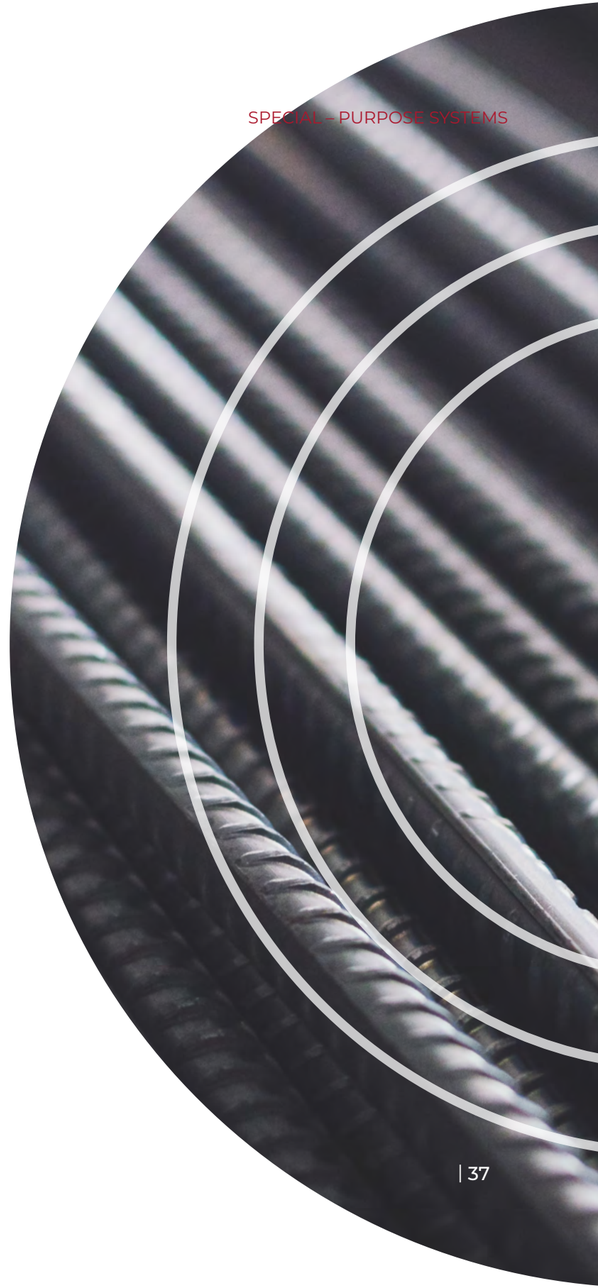
The offering features two solutions: System 1300 and System 1301.

SYSTEM 1300

Component A - Epidian® 1300
Component B - Hardener 1300
Component C - Accelerator 1300
Component D - Modifier 1300

SYSTEM 1301

Component A - Epidian® 1301
Component B - Hardener 1300
Component C - Accelerator 1300



SPORTING EQUIPMENT

SYSTEM 6012

Epoxy compositions are used in the production of sporting equipment: skis, snowboards, kiteboards, wakeboards, skateboards.

With the increased adhesion, System 6012 can be successfully used in bonding multi-layer laminates of various materials: wood, metal, glass fibres, carbon fibres.

SYSTEM 6012:
Epidian® 6012
Hardener 6012

UV RESISTANCE

SYSTEM 6293

Low - viscosity, solvent - free, two - component composition with increased resistance to UV radiation.

SYSTEM 6293:
Epidian® 6293
Hardener 6293

SURFACE PROTECTION

SYSTEM 6250

System 6250 is a two-component, solvent-free composition with mineral fillers, intended for renovation and protection of concrete surfaces, bricks, hollow blocks, marble, stones, as well as metal surfaces in industrial facilities exposed to chemical corrosion. Porous surfaces should be first primed with System 6533.

It can be used to protect permanently submerged surfaces, e.g. elements of sewage treatment plants, tanks, ducts, pipes, after prior appropriate surface preparation at least at the 1st grade acc. PN–ISO 8501–1 and roughness standard SA 2.5.

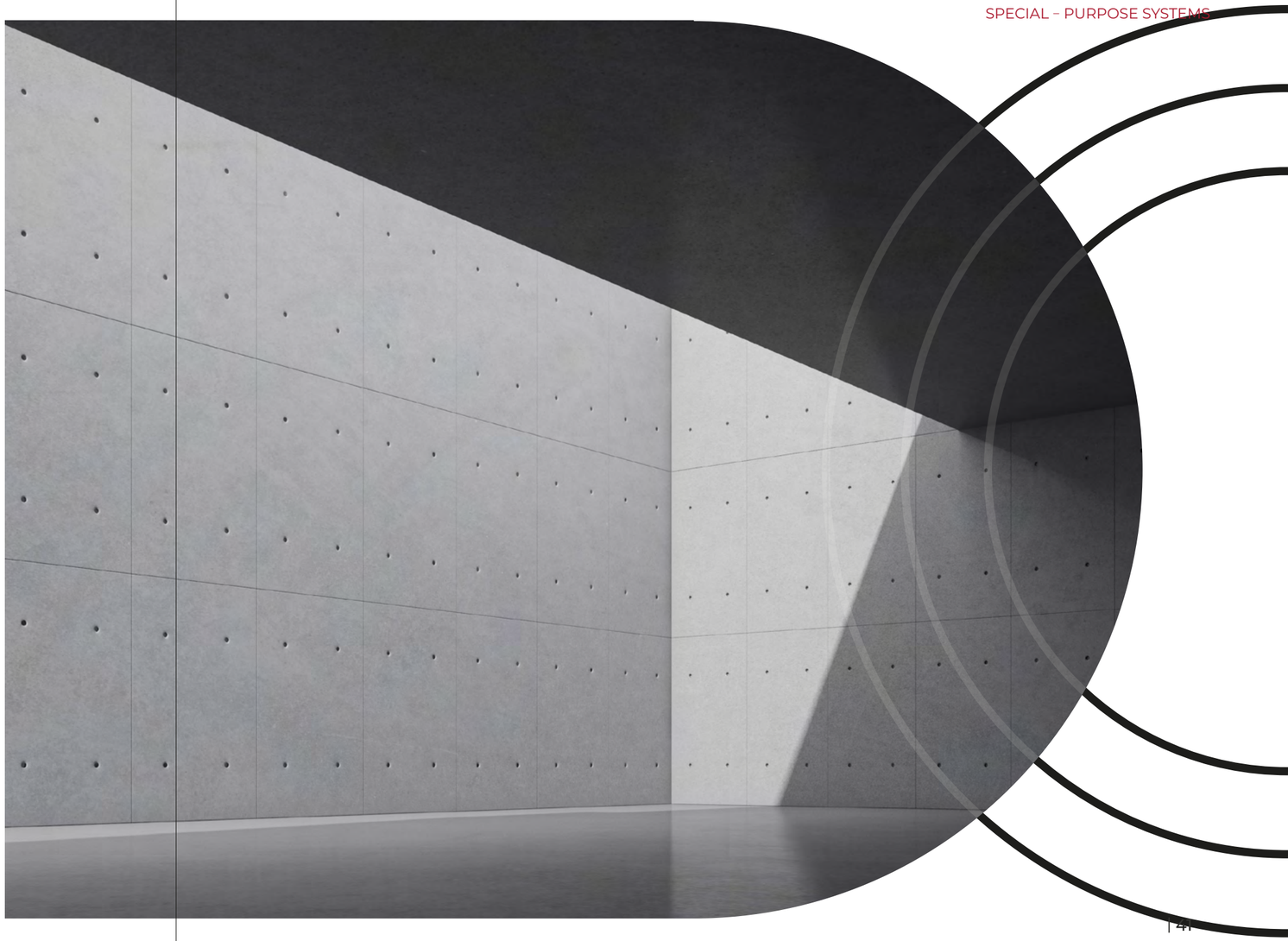
SYSTEM 6250:
Epidian® 6250
Hardener 6250

SYSTEM 6533:
Epidian® 653-3
Hardener 653-3

SYSTEM 6200

Composition used as a binder in the making of anti - skid surfaces on asphalt and concrete, provided that they are first primed. It is available in colour versions as per the RAL palette

SYSTEM 6200:
Component A – modified epoxy resin
Component B – modified Mannich base hardener
Component C – aggregate (e.g. bauxite, granite)



ADHESIVES, PUTTIES

EPOXY RESIN	RESIN VISCOSITY AT 25°C [mPa·s]	HARDENER	HARDENER QUANTITY PER 100g RESIN [parts by weight]	GEL TIME OF 100g COMPOSITION AT 20°C [min.]	CHARACTERISTICS
EPIDIAN® 5	20 000 – 30 000	Z–1	12	33	HIGH – VISCOSITY, CLEAR COMPOSITION FOR BONDING METALS, GLASS, CERAMICS AND SELECTED PLASTICS. THE USE OF HARDENER PAC INCREASES THE FLEXIBILITY OF THE COMPOSITION AS ITS QUANTITY IN THE SYSTEM IS INCREASED
		IDA	50	40	
		PAC	60 – 100	180	
EPIDIAN® 53	900 – 1 500*	Z–1	10	60	LOW – VISCOSITY, CLEAR COMPOSITION CONTAINING A MODIFIER SOLVENT RECOMMENDED FOR BONDING RIGID MATERIALS DUE TO ITS LOW RESISTANCE TO DEFORMATION. IT CANNOT BE USED TO BOND PARTS CONTAINING POLYSTYRENE. THE USE OF HARDENER TFF ENABLES APPLICATION IN A HUMID ENVIRONMENT AT TEMPERATURES FROM 5°C.
		TFF	22	30	
EPIDIAN® 57	13 000 – 19 000	Z–1	10	40	HIGH – VISCOSITY COMPOSITION WITH HIGH PEEL STRENGTH. ONCE CURED, THE JOINT TURNS IVORY IN COLOUR. IT CAN BE USED FOR BONDING METALS, GLASS, CERAMICS, THERMOSETTING PLASTICS, LEATHER. THE USE OF HARDENER TFF ENABLES APPLICATION IN A HUMID ENVIRONMENT AT TEMPERATURES FROM 5°C.
		TFF	22	22	
EPIDIAN® 57M	25 000 – 40 000	Z–1	10,7	–	HIGH – VISCOSITY, GRAY – COLOUR COMPOSITION WITH A MINERAL FILLER.
EPIDIAN® 62	4 000 – 6 500*	Z–1	10	50	PLASTICIZED COMPOSITION, WITH A PLASTICIZER. AFTER HARDENER IS ADDED, IT TURNS WHITE IN COLOUR. THE USE OF HARDENER IDA FURTHER ADDS TO THE FLEXIBILITY OF THE COMPOSITION.
		IDA	40	80	
EPIDIAN® 431	–	U1	12	80	COMPOSITION WITH A PUTTY – LIKE CONSISTENCY IN GRAY COLOUR AND WITH HIGH CHEMICAL RESISTANCE. MAINLY USED FOR LAYING CHEMICAL RESISTANT LININGS AND COVERINGS, BUT IT CAN ALSO BE USED FOR BONDING OTHER MATERIALS.
EPIDIAN® 622	800 – 1 300	Z–1	12	180**	LOW – VISCOSITY, WHITE – COLOUR COMPOSITION WITH A MINERAL FILLER.
EPIDIAN® 642W	1000 – 1 300	642W	45	–	LOW – VISCOSITY, WHITE – COLOUR COMPOSITION WITH A MINERAL FILLER.
EPIDIAN® 100	–	–	–	–	ONE – COMPONENT ADHESIVE IN THE FORM OF IRREGULAR FLAKES, INTENDED FOR HOT BONDING OF STEEL AND NON – FERROUS METALS, ALUMINIUM AND ITS DERIVATIVES, GLASS, CERAMICS AND SELECTED PLASTICS RESISTANT TO TEMPERATURES ABOVE 120°C REQUIRED FOR HARDENING OF THE JOINT.

* AT 20°C
** SAMPLE 10g

Various, two-component resin-based adhesives used in construction, electrical engineering, anti-corrosion coating, joining metals, glass, ceramics and other materials.

When using epoxy compositions for bonding, careful preparation of the surfaces of the joined elements is required, i.e. cleaning by sandblasting or shot blasting and degreasing with acetone or ethyl acetate, or chemical etching in exceptional cases. Plastics must be thoroughly cleaned and degreased.

CONTACT US

Sarzyna Chemical sp. z o.o.
ul. Chemików 1
37-310 Nowa Sarzyna
tel. +48 17 741 10 03 ext. 1
e-mail: biuro@sarzynachemical.pl

Customer Service
tel. +48 17 741 10 03 ext. 3

Sales Department
tel. +48 17 741 10 03 ext. 2
e-mail: sprzedaz@sarzynachemical.pl

www.sarzynachemical.pl