

Application examples

▪ High-strength bonding, alternative to soldering

- For example bonding of carbide or steel, structural bondings in vehicle and steel construction
- DELOMONOPOX AD286
 - DELOMONOPOX 1197
 - DELOMONOPOX AD297
 - DELOMONOPOX AD295
 - DELOMONOPOX AD289

▪ High run resistance

- DELOMONOPOX 1197
- DELOMONOPOX AD297
- DELOMONOPOX AD298

▪ Sealing and casting of electronic components

- DELOMONOPOX 6093
- DELOMONOPOX 6095
- low chloride ion content, improved corrosion properties
- DELOMONOPOX AD066
- DELOMONOPOX MG063

▪ For fast curing

- DELOMONOPOX AD066

▪ For flexible bonding

- DELOMONOPOX AD288

CONTACT

DELO Industrial Adhesives
▶ **USA** · Sudbury/Boston, MA
Phone +1 978 254 5275
info@DELO.us
www.DELO.us

DELO Industrial Adhesives
▶ **Taiwan** · Taipei
Phone +886 2 6639 8248
info@DELO.com.tw
www.DELO.com.tw

DELO Industrial Adhesives
▶ **Singapore**
Phone +65 6560 0236
info@DELO.com.sg
www.DELO.com.sg

DELO Industrial Adhesives
▶ **Malaysia** · Kuala Lumpur
Phone +65 6560 0236
info@DELO.de
www.DELO.de/en

Headquarters

DELO Industrial Adhesives
▶ **Germany** · Windach/Munich
Phone +49 8193 9900-0
info@DELO.de
www.DELO.de

DELO Industrial Adhesives
▶ **China** · Shanghai
Phone +86 21 2898 6563
info@DELO.cn
www.DELO.cn

DELO Industrial Adhesives
▶ **South Korea** · Seoul
Phone +82 2 2190 3727
info@DELO.de
www.DELO.de/en

Our selection charts are a technical selection aid giving an overview of various product variants. We will be pleased to provide you with sales details, such as available container sizes, stock availability and minimum order quantities, on request.

The data and information provided are based on tests performed under laboratory conditions. Reliable information about the behavior of the product under practical conditions and its suitability for a specific purpose cannot be concluded from this. It is the user's responsibility to test the suitability of the product for the intended purpose by considering all specific requirements. Type, physical and chemical properties of the materials to be processed with the product, as well as all actual influences occurring during transport, storage, processing and use, may cause deviations in the behavior of the product compared to its behavior under laboratory conditions. All data provided are typical average values or uniquely determined parameters measured under laboratory conditions. The data and information provided are therefore no guarantee for specific product properties or the suitability of the product for a specific purpose. Nothing contained herein shall be construed to indicate the non-existence of any relevant patents or to constitute a permission, encouragement or recommendation to practice any development covered by any patents, without permission of the owner of this patent. All products provided by DELO are subject to DELO's General Terms of Business. Verbal ancillary agreements are deemed not to exist.

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Adhesives

Dispensing

Curing

Consulting

DELO

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SELECTION CHART

DELOMONOPOX

Epoxy resins
one-component · heat-curing · tough-hard

DELOMONOPOX

Epoxy resins

Product code	6093	6095	MG063	AD066	AD286	1197	AD297	AD295	AD298	AD288	AD289		
Color cured product	black	black	black	beige	silver gray	silver gray	silver gray	light beige	light beige	light beige	gray		
Filler	unfilled	unfilled	unfilled	unfilled	aluminum	aluminum	aluminum	minerals	minerals	minerals	aluminum		
Density [g/cm ³] at room temperature	1.2	1.2	1.2	1.2	1.43	1.4	1.4	1.6	1.6	1.38	1.42		
Viscosity [mPas] at +23°C	40,000 Brookfield	50,000 Brookfield	180,000 Brookfield	20,000 rheometer	310,000 Brookfield 110,000 rheometer	pasty	pasty	230,000 Brookfield	pasty	85,000 rheometer	190,000 rheometer		
Curing time	T [°C] / time		130 / 30 min	130 / 30 min	150 / 30 min	130 / 20 min	150 / 40 min	150 / 40 min	150 / 40 min	150 / 40 min	140 / 40 min	150 / 50 min	
Tensile shear strength [MPa] <small>Al/Al, sand-blasted</small>	1.6 mm		14	18	21	18	33	26	21	30	30	8	30
	6 mm		–	–	–	35	57	55	–	–	–	–	45
Tensile strength [MPa]	41	45	35	50	64	40	48	50	50	2.5	66		
Elongation at tear [%]	1.6	1.2	1.0	2.5	2.8	1.4	2.5	1.4	1.4	200	3.2		
Young's modulus [MPa]	2,900	3,800	3,000	2,900	3,800	3,300	4,000	5,500	5,500	–	3,100		
Shore hardness D	74	83	80	83	80	67	75	84	84	–	80		
Coefficient of expansion [ppm/K] <small>in temperature range [°C]</small>	59 +30 to +70	65 +30 to +70	71 +30 to +80	62 +30 to +70	61 +35 bis +100	65 +30 to +90	68 +30 to +80	42 +30 to +90	–	190 +30 to +90	70 +30 to +100		
Shrinkage [vol. %]	1.1	2.0	1.9	2.5	2.5	3.0	2.1	2.5	–	2.1	1.5		
Water absorption [weight %] <small>24 h at room temperature</small>	0.1	0.1	0.2	0.2	0.18	0.1	0.15	0.12	0.12	1.3	0.16		
Specific volume resistance [Ωcm]	> 1 x 10 ¹³	> 1 x 10 ¹³	> 1 x 10 ¹³	–	> 1 x 10 ¹³	> 1 x 10 ¹³	> 1 x 10 ¹³	> 1 x 10 ¹³	–	–	–		
Surface resistance [Ω]	> 1 x 10 ¹²	> 1 x 10 ¹²	> 1 x 10 ¹²	–	> 1 x 10 ¹³	> 1 x 10 ¹²	> 1 x 10 ¹²	> 1 x 10 ¹³	–	–	–		
Dielectric strength [kV/mm]	18.1	–	21	–	5.2	2	–	20	20	6.3	–		
Dielectric constant	3.9	–	4.3	–	–	3.6	–	–	–	4.4	–		
Storage conditions	0°C to +10°C	0°C to +10°C	0°C to +10°C	0°C to +10°C	0°C to +10°C	0°C to +10°C	0°C to +10°C	0°C to +10°C	0°C to +10°C	0°C to +10°C	0°C to +10°C		
Special features of product	good flow behavior	low chloride ion content < 0.02 % for the use in electronics	for tough-hard connections	fast curing	good flow behavior high strength	high run resistance high strength	high run resistance	high strength	high run resistance excellent chemical resistance very high temperature stability	high elongation at tear high impact resistance	high run resistance high temperature stability high decomposition temperature for magnet bonding		

AD = ADhesive

Product description

DELOMONOPOX are one-component, heat-curing epoxy resins.

Standard temperature range

The DELOMONOPOX epoxies are normally used in a temperature range of –55°C to +200°C. Many product properties depend on the temperature and can permanently change, especially at high temperatures. Therefore, the suitability of the respective adhesive for the intended temperature range of use must be tested according to the application before use. You can find details on the behavior of the products under the influence of elevated temperatures in the respective technical data sheet.

Processing

DELOMONOPOX products are supplied ready for use.

They are processed by means of equipment, for example with DELOMAT dispensing units. Manual processing directly from the cartridge is also possible.

Curing

DELOMONOPOX products require temperatures > +100°C for curing. The heating time of the components must be added to the curing time. Heating can be done for example in air convection ovens, with IR radiators or using inductive systems.

Surface pretreatment

For optimal adhesion, the surfaces to be bonded must be free of oil, grease, separating agents and other contaminations. We recommend our DELOTHEN cleaners. After cleaning, adhesion can be further improved by sand blasting, grinding or pickling.

Storage life

After delivery in unopened containers:
see technical data sheet of the specific product.

Use

DELOMONOPOX products are used for high-strength bonding of components which are extremely stressed to some extent. These products are constructional elements. The adhesive selection is supposed to be optimized regarding component material, stresses, construction and processing technology. Application areas are mainly found in automotive and automotive supplier industry, mechanical and electrical engineering, electronics, plant construction, construction technology, energy and environmental technology.

Further information

You can find more details on type-specific properties in the technical data sheets and material safety data sheets.

Our Engineering Department will be pleased to support you in technical application tests and questions resulting from using DELO products.