

# DELO<sup>®</sup> MONOPOX DA255

**modified epoxy resin | 1C | heat-curing**

free of solvents

### Special features of product

- halogen-free according to IEC 61249-2-21
- compliant with RoHS Directive 2015/863/EU

### Function

- die attach adhesive
- electronic adhesive

### Typical area of use

- -40 - 180 °C

### Curing

Recommended curing time

<i>at +180 °C with thermode</i>	6	s
<i>at +150 °C in air convection oven</i>	2	min
<i>at +120 °C in air convection oven</i>	8	min

### Processing

Conditioning time (typical)

<i>when stored in cold conditions in containers up to 10 ml</i>	0.5	h
<i>when stored in cold conditions in containers up to 50 ml</i>	1	h
<i>when stored in cold conditions in containers up to 170 ml</i>	2	h

Processing time

<i>in standard climate +23 °C / 50 % r. h.</i>	72	h
--	----	---

Storage life in unopened original container

<i>at -18 °C</i>	6	month(s)
------------------	---	----------

**Technical properties**

Color in cured condition in 1 mm layer thickness	gray
Transparency in cured condition in 1 mm layer thickness	opaque

**Parameters**

Density <i>DELO Standard 13   Liquid</i>	1.34	g/cm <sup>3</sup>
Viscosity <i>Liquid   Rheometer   Shear rate: 10 1/s</i>	33000	mPa·s
Compression shear strength <i>DELO Standard 5   AI   AI   150 °C   20 min</i>	48	MPa
Compression shear strength <i>DELO Standard 5   LCP E130i   LCP E130i   150 °C   20 min</i>	15	MPa
Compression shear strength <i>DELO Standard 5   LCP E471i   LCP E471i   150 °C   20 min</i>	9	MPa
Compression shear strength <i>DELO Standard 5   LCP E540i   LCP E540i   150 °C   20 min</i>	10	MPa
Compression shear strength <i>DELO Standard 5   PA6   PA6   150 °C   20 min</i>	33	MPa
Compression shear strength <i>DELO Standard 5   PBT   PBT   150 °C   20 min</i>	14	MPa
Die shear strength <i>DELO Standard 30   Chip 2 mm x 2 mm   Si   FR4   150 °C   20 min</i>	210	N
Die shear strength <i>DELO Standard 30   Chip 2 mm x 2 mm   Si   Au   150 °C   20 min</i>	149	N
Tensile strength <i>Based on DIN EN ISO 527   130 °C   45 min</i>	40	MPa
Elongation at tear <i>Based on DIN EN ISO 527   130 °C   45 min</i>	1.2	%
Young's modulus <i>DMTA   130 °C   20 min</i>	3200	MPa

Shore hardness D <i>Based on DIN EN ISO 868   150 °C   20 min</i>	86	
Glass transition temperature <i>DMTA   150 °C   20 min</i>	139	°C
Coefficient of linear expansion <i>DELO Standard 26   TMA   Evaluation T: 120 °C - 160 °C   150 °C   20 min</i>	170	ppm/K
Coefficient of linear expansion <i>DELO Standard 26   TMA   Evaluation T: 30 °C - 100 °C   150 °C   20 min</i>	58	ppm/K
Shrinkage <i>DELO Standard 13   150 °C   20 min</i>	1.7	vol. %
Water absorption <i>Based on DIN EN ISO 62   150 °C   20 min   Type of storage: Media   Medium: Distilled water   Temp.: at approx. +23 °C</i>	0.2	wt. %
Extractable fluoride ions	<10	ppm
Extractable chloride ions	<20	ppm
Extractable potassium ions	<10	ppm
Extractable sodium ions	<10	ppm

**Converting table**

°F = (°C x 1.8) + 32	1 MPa = 145.04 psi
1 inch = 25.4 mm	1 GPa = 145.04 ksi
1 mil = 25.4 µm	1 cP = 1 mPa·s
1 oz = 28.3495 g	1 N = 0.225 lb

**General curing and processing information**

The curing time stated in the technical data was determined in the laboratory. It can vary depending on the adhesive quantity and component geometry and is therefore a reference value. The heating time of the components must be added to the actual curing time. It depends on component size and oven type. The specified curing temperature must be reached directly at the adhesive. Increasing or decreasing the curing temperature and / or irradiation intensity shortens or prolongs the curing time and can lead to changed physical properties. Depending on the adhesive quantity used, exothermic reaction heat is generated which can lead to overheating. In this case, a lower curing temperature is to be selected. Values measured after 24 h at approx. 23 °C / 50 % r.h., unless otherwise specified.

## General

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 customer's responsibility to test the suitability of a product for the intended purpose by considering all specific requirements and by applying standards the customer deems suitable (e. g. DIN 2304-1). 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.

## Instructions for use

The instructions for use are available on [www.DELO-adhesives.com](http://www.DELO-adhesives.com).

We will be pleased to send them to you on demand.

## Occupational health and safety

See material safety data sheet.

## Specification

Nothing contained in this Technical Datasheet shall be interpreted as any express warranty or guarantee. This Technical Datasheet is for reference only and does not constitute a product specification. Please ask our responsible Sales Engineer for the applicable product specification which includes defined ranges. DELO is neither liable for any values and content of this Technical Datasheet nor for oral or written recommendations regarding the use, unless otherwise agreed in writing. This limitation of liability is not applicable for damages resulting from intent, gross negligence or culpable breach of cardinal obligations, nor shall it apply in case of death or personal injury or in case of liability under any applicable compulsory law.

# CONTACT

DELO MONOPOX DA255 | as of 17.03.2020 09:24 | Page 4 of 4

**DELO** Industrial Adhesives  
Headquarters

► Germany · Windach / Munich ... [www.DELO-adhesives.com](http://www.DELO-adhesives.com)

ADHESIVES

DISPENSING

CURING

CONSULTING

**DELO**