DELO-DUOPOX® 6963
Multi-purpose 2c epoxy castin resin, cures at room temperature, low-viscous, filled

**Base**
- epoxy casting resin
- two-component

**Use**
- multi-purpose casting compound
- for casting in mechanical engineering and tool construction
- for casting in electrical engineering and electronics
- high temperature resistance
- low exothermy, suitable for larger preparations, multi-purpose
- the cured product is normally used in a temperature range of -40 °C to +150 °C; depending on
  the application, other limits may be more reasonable
- compliant with RoHS directive 2015/863/EU

**Processing**
- the high purity of the resin can lead to crystallization (solidification of the product); heating to
  approx. +40 to +50 °C can reverse crystallization
- sedimentation of the filler is possible; therefore, please stir single components before use
- components A and B must be mixed homogeneously in the mixing ratio stated below
- the surfaces to be bonded must be dry as well as free of dust, grease and other contaminations
- use DELOTHEN cleaners for the cleaning of bonding surfaces

**Curing**
- proceeds at room temperature (approx. 23 °C)
- increased temperatures accelerate curing
- applying heat could change physical characteristics

**Technical data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>beige</td>
</tr>
<tr>
<td>Filler</td>
<td>minerals</td>
</tr>
<tr>
<td>Mixing ratio</td>
<td></td>
</tr>
<tr>
<td>(A : B) according to weight</td>
<td>3 : 1</td>
</tr>
<tr>
<td>(A : B) according to volume</td>
<td>9 : 4</td>
</tr>
<tr>
<td>Density of component A [g/cm³]</td>
<td>1.48</td>
</tr>
<tr>
<td><strong>DELO Standard 13</strong></td>
<td></td>
</tr>
<tr>
<td>at room temperature (approx. 23 °C)</td>
<td></td>
</tr>
<tr>
<td>Density of component B [g/cm³]</td>
<td>1.09</td>
</tr>
<tr>
<td><strong>DELO Standard 13</strong></td>
<td></td>
</tr>
<tr>
<td>at room temperature (approx. 23 °C)</td>
<td></td>
</tr>
</tbody>
</table>
Viscosity of component A [mPas]
Brookfield at 23 °C
4000

Viscosity of component B [mPas]
Brookfield at 23 °C
27000

Processing time in 100 g preparation [min]
at room temperature (approx. 23 °C)
240

Maximum reaction temperature [°C]
in 100 g preparation
30

Maximum reaction temperature [°C]
in 1 kg preparation
70

Curing time until final strength [h]
at room temperature (approx. 23 °C)
48

Curing time until final strength [h]
at +80 °C
4

**Tensile shear strength Al/Al [MPa]**
18

by the criteria of DIN EN 1465, sand-blasted component thickness 1.6 mm, gap 0.1 mm curing: 48 h at room temperature (approx. 23 °C)

Tensile shear strength
According to standard DIN EN 1465
Curing: 7 d room temperature (approx. 23 °C)

**Tensile strength [MPa]**
20

according to DIN EN ISO 527

**Elongation at tear [%]**
5

according to DIN EN ISO 527

**Young's modulus [MPa]**
1100

according to DIN EN ISO 527

**Shore hardness D**
70

according to DIN EN ISO 868

**Ball indentation hardness [MPa]**
77

ISO 2039, part 1

**Glass transition temperature [°C]**
67

Rheometer, 2nd heating process

**Coefficient of linear expansion [ppm/K]**
164

TMA, in a temperature range of +30 to +140 °C

**Shrinkage [vol. %]**
2

DELO Standard 13
Water absorption [weight %] according to DIN EN ISO 62, 24 h at room temperature (approx. 23 °C) 0.2

Short-term temperature of use [°C] +200

Specific volume resistance [Ωcm] VDE 0303, part 3 >1xE13

Surface resistance [Ω] VDE 0303, part 3 >1xE12

Dielectric strength [kV/mm] VDE 0303, part 2 22

Dielectric constant VDE 0303, part 4 4.2

Creep resistance CTI VDE 0303, part 1, IEC 112 600 M

Storage life at room temperature (approx. 23 °C) in unopened original container (volume per component < 1l) 12 months

Instructions and advice

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 of DELO-DUOPOX are available on: www.DELO.de. We will be pleased to send them to you on demand.

Occupational health and safety
see material safety data sheet

Specification
The properties in italics are part of the specification. Ranges with clear limits are defined for them and others, where applicable. In the course of the QA test, each batch is tested for these properties and the maintenance of the limits is ensured. The measuring methods used can deviate from those specified in the data sheet. Details can be found in the QA test report.