

**Encapsulating Systems**

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**® Araldite Casting Resin System**

**Araldite DBF** **100 pbw**  
**Hardener HY 956 EN** **20 pbw**

Low viscosity casting resin system, curing at room temperature  
High filler addition possibility.

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Encapsulation or potting of low voltage and electronic components

**Applications**

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Casting

**Processing**

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Good heat resistance  
Good resistance to atmospheric and chemical degradation

**Properties**

# Product data

(Guideline values)

## Liquid epoxy resin modified by the addition of a plasticizer

<b>Araldite DBF</b>	Viscosity (Hoeppler)	at 25°C	mPa s	ca. 1500
	Specific gravity	at 25°C	g/cm <sup>3</sup>	1.14
	Flash point		°C	192
	Epoxy content		Eq/kg	4.25
As supplied form	Clear, pale yellow liquid			
Hazardous decomposition products	Carbon monoxide, carbon dioxide and other toxic gases and vapours if burned			
Disposal	Regular procedures approved by national and/or local authorities			

## Formulated, low viscosity polyamine hardener

<b>HY 956 EN Hardener</b>	Viscosity (Hoeppler)	at 25°C	mPa s	ca. 450
	Specific gravity	at 25°C	g/cm <sup>3</sup>	1.02
	Flash point		DIN 51 758 °C	180
As supplied form	Clear, pale yellow liquid			
Hazardous decomposition products	Carbon monoxide, carbon dioxide and other toxic gases and vapours if burned			
Disposal	Regular procedures approved by national and/or local authorities			

## Storage

Store the components in a dry place at 18-25°C, in tightly sealed original containers. Under these conditions, the shelf life will correspond to the expiry date stated on the label. After this date, the product may be processed only after reanalysis. Partly emptied containers should be tightly closed immediately after use.

For information on waste disposal and hazardous products of decomposition in the event of a fire, refer to the Material Safety Data Sheets (MSDS) for these particular products.

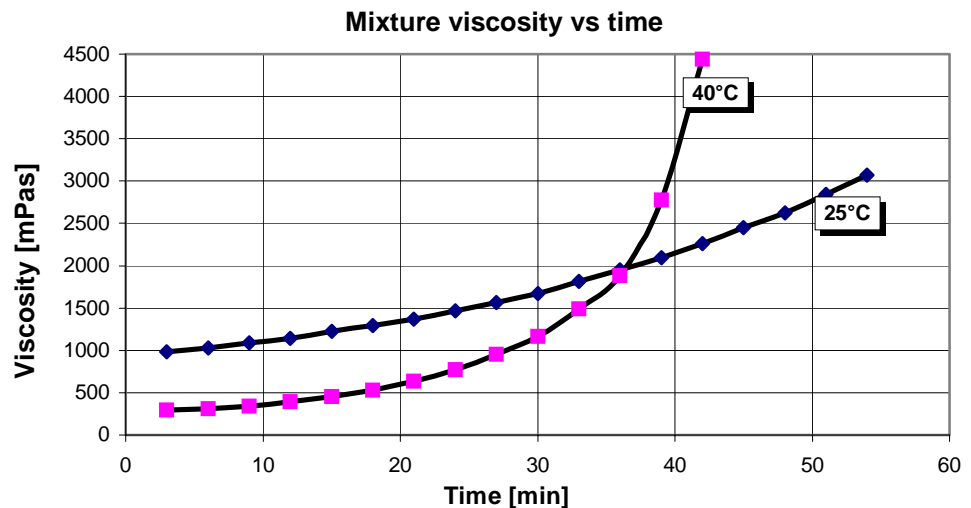
# Processing

The resin component should be stirred and homogenized in the original container before use.

The casting mix is best prepared by heating the resin up to 40-50°C before stirring in the hardener. Brief degassing of the mix under 5-10 mbar vacuum improves the mixture homogeneity and enhances the dielectric properties of the castings.

<b>Mix ratio</b>	Araldite DBF	parts by weight	100
	Hardener HY 956 EN	parts by weight	20

<b>Processing data</b> (Guideline values)	Initial viscosity (Rheolab MC 20)	mPa s	at 25°C 1000
			at 40°C 300
	Time to double initial viscosity (Rheolab MC 20)	min	at 25°C 65
			at 40°C 35
	Time to 3000 mPa s (Rheolab MC 20)	min	at 25°C 100
			at 40°C 75
	Minimum cure time		h/°C 24-48/RT
		or	h/°C 24/RT+6/60



# Properties

Guideline values determined on standard test specimens cured for 24 h/RT+ 6/60 °C

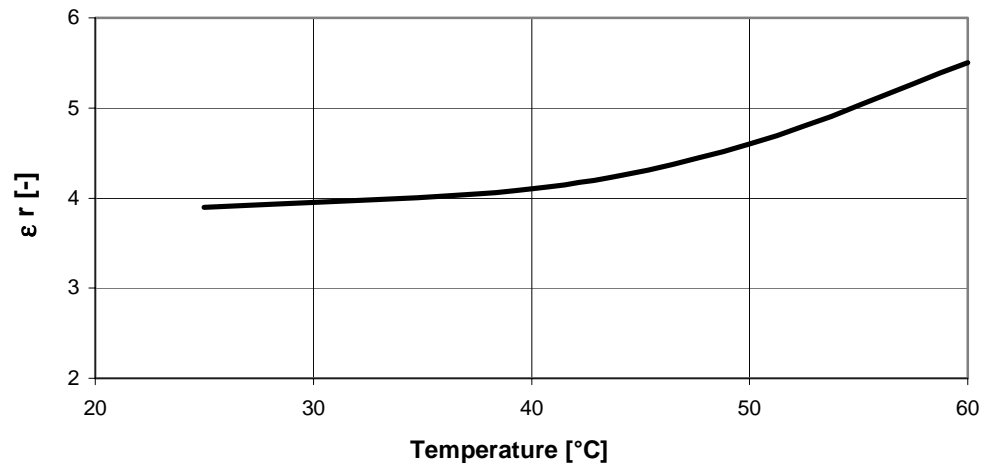
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Colour of castings				clear yellow
Specific gravity	at 25°C	DIN 55 990	g/cm <sup>3</sup>	1.1
Shore D hardness (4 mm plate)	at 25°C	DIN 53 505		80
Martens temperature		DIN 53 458	°C	-
Tensile strength				
max. tensile stress	at 25°C	ISO/R 527	MPa	61
elongation at break	at 25°C	ISO/R 527	%	5
Flexural strength				
max. bending stress		ISO 178	MPa	112
surface strain (failure)		ISO 178	%	10
Impact strength		ISO 179	kJ/m <sup>2</sup>	68
Water absorption				
10 days	at 23°C	ISO 62	%	0.38
30 min	at 100°C	ISO 62	%	0.41
Electrolytic corrosion		DIN 53 489	grade	A-1
Electric strength				
20 s value for 2 mm plate (50 Hz)	at 23°C	IEC 243	kV/mm	24

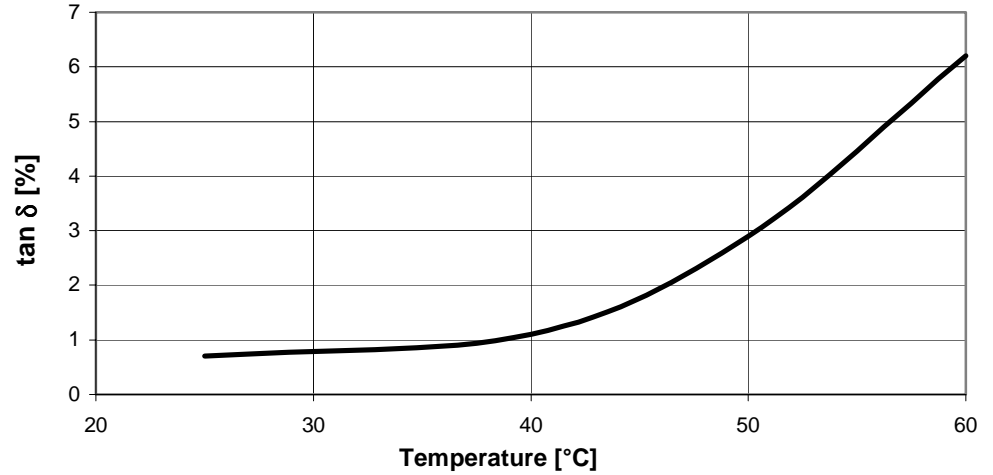
# Properties

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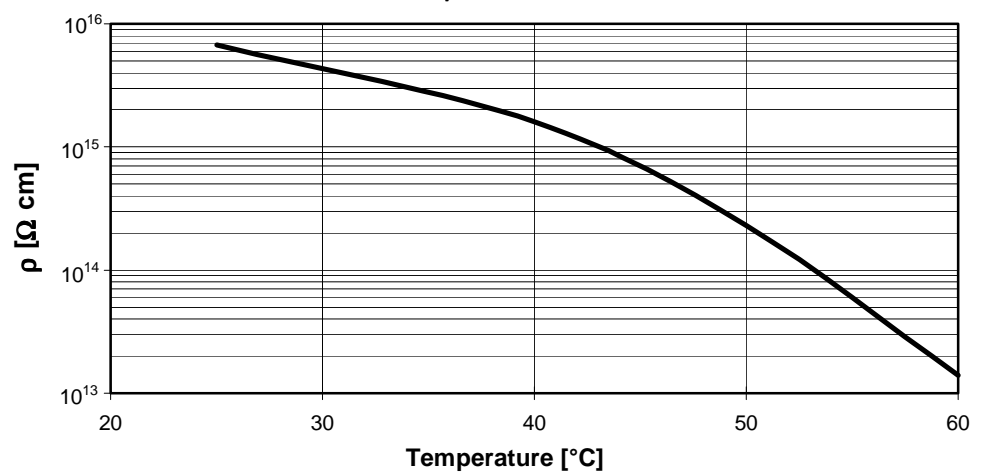
Dielectric constant  $\epsilon_r$  vs temperature (DIN 53483)



Loss factor  $\tan \delta$  vs temperature (DIN 53483)



Volume resistivity  $\rho$  vs temperature (DIN 53482)



# Industrial hygiene

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Mandatory and recommended industrial hygiene procedures should be followed whenever our products are being handled and processed. For additional information please consult the corresponding Safety Data Sheets and the brochure "Hygienic precautions for handling plastics products of Vantico (Publ. No. 24264/e).

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## Handling precautions

Safety precautions at workplace:	
protective clothing	yes
gloves	essential
arm protectors	recommended when skin contact likely
goggles/safety glasses	yes
respirator/dust mask	recommended
Skin protection	
before starting work	Apply barrier cream to exposed skin
after washing	Apply barrier or nourishing cream
Cleansing of contaminated skin	Dab off with absorbent paper, wash with warm water and alkali-free soap, then dry with disposable towels. Do not use solvents
Clean shop requirements	Cover workbenches, etc. with light coloured paper. Use disposable beakers, etc.
Disposal of spillage	Soak up with sawdust or cotton waste and deposit in plastic-lined bin
Ventilation:	
of workshop	Renew air 3 to 5 times an hour
of workplace	Exhaust fans. Operatives should avoid inhaling vapours.

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## First Aid

Contamination of the **eyes** by resin, hardener or casting mix should be treated immediately by flushing with clean, running water for 10 to 15 minutes. A doctor should then be consulted.

Material smeared or splashed on the **skin** should be dabbed off, and the contaminated area then washed and treated with a cleansing cream (see above). A doctor should be consulted in the event of severe irritation or burns. Contaminated clothing should be changed immediately.

Anyone taken ill after **inhaling** vapours should be moved out of doors immediately. In all cases of doubt call for medical assistance.

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Electricin Polymers  
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All recommendations for use of our products, whether given by us in writing, verbally, or to be implied from results of tests carried out by us are based on the current state of our knowledge. Notwithstanding any such recommendations the Buyer shall remain responsible for satisfying himself that the products as supplied by us are suitable for his intended process or purpose. Since we cannot control the application, use or processing of the products, we cannot accept responsibility therefore. The Buyer shall ensure that the intended use of the products will not infringe any third party's intellectual property rights. We warrant that our products are free from defects in accordance with and subject to our general conditions of supply.