

**Araldite® EPN 1180<sup>#</sup>**  
**Araldite® EPN 1180 X 80<sup>#</sup>**  
**Araldite® EPN 1180 Y 86<sup>#</sup>**

**Semisolid, polyfunctional phenol novolak glycidyl ether and its solutions**

**Applications** Alone or in combination with liquid or solid bisphenol-A epoxy resins, Araldite EPN 1180 (former designation: Araldite GY 1180) and its solutions can be used for the production of low-solvent coatings showing very high resistance to chemicals and solvents. Suitable Aradur are particularly aliphatic polyamines and their adducts.

**Properties** Araldite EPN 1180 is a polyfunctional resin characterized after curing by a high cross-linking density. Formulations based on Araldite EPN 1180 or its solutions exhibit high reactivity. Cure at ambient temperature gives adequate film properties, but post-cure at 40 to 60 °C increases cross-linking and consequently improves resistance to chemicals and temperature.

Post-cured coatings show:

- very good resistance to inorganic and organic acids
- outstanding resistance to alkalis and to organic solvents
- good resistance to hot water.

Araldite EPN 1180 and its solutions are suitable for the production of coatings coming into contact with foodstuffs.

Key data	Specified key data (as supplied)	EPN 1180	EPN 1180	EPN 1180
			X 80	Y 86
	Aspect (visual)	clear	clear	clear
	Colour (Gardner, ISO 4630)	≤ 2	≤ 2	≤ 3
	Epoxy index (ISO 3001)	5.50-5.70	4.40-4.56	4.73-4.90 [eq/kg]
	Epoxy equivalent (ISO 3001)	175-182	219-227	204-211 [g/eq]
	Solids content (ISO 787-2)	100.0	79.0-81.0	85.0-87.0 [%]
	Viscosity at 52 °C (Falling-ball, ISO 12058-1)	20000-50000	-	- [mPa s]
	Viscosity at 25 °C (Falling-ball, ISO 12058-1)	-	1200-2000	9000-13000 [mPa s]

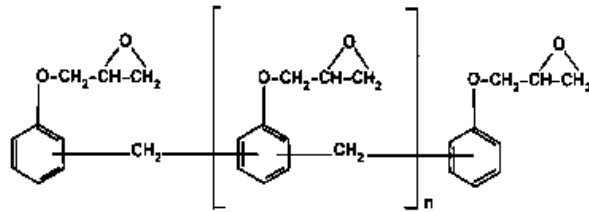
Specified key data are individually checked throughout and guaranteed.

**Typical key data**

Solvent	-	Xylene	Butyl glycol acetate
Vapour pressure at 20 °C (balance)	≤ 0.01	800	133 [Pa]
Density at 25 °C (ISO 8130-3)	1.22	1.13	1.18 [g/cm <sup>3</sup> ]
Flash point (ISO 2592)	≥ 200	28	84 [°C]
As-supplied form	Semisolid	Liquid	Liquid
Odour	yes	yes	yes
Shelf life (at storage temperature between 2 - 40 °C) (see expiry date on original container)	several years		
Hazardous decomposition products (when disposed of in fire)	carbon monoxide, carbon dioxide and other toxic gases and vapours		
Disposal	regular procedures approved by local authorities		

Typical key data are spot checked; the values are typical for the product and are indicated for information only. The values are not guaranteed.

<sup>#</sup> The majority of products are labelled with the following letter codes, which allows us to differentiate between our production sites:  
 ES = Spain, CH = Switzerland, BD = Germany, US = United States. These exist on packaging and invoicing documents.  
 Generally the same specifications apply, however, there are a few exceptions and clarification should be sought from the appropriate Huntsman contact.

**Theoretical formula**

Average value of n = 1.6; Epoxy functionality = 3.6

**Compatibility and dilution**

Araldite EPN 1180 and its solutions are fully compatible with modified and unmodified epoxy resins based on bisphenol-A as well as with aliphatic and aromatic reactive diluents. They are likewise miscible with most commercially available polyamines and their adducts.

Compatibility with polyamidoamines such as the Aradur 815-2, 825-2, 840-2 is limited.

**Mix ratios**

Components	Parts by weight			
Araldite EPN 1180 X 80	100	100	100	
Aradur 837	30	-	-	
Aradur 943	-	17	-	
Aradur 3776 XW 55	-	-	163	
Xylene/Butanol (4:1)	-	-	59	
Viscosity at 25 °C (ISO 12058-1)	[mPa s]	2500	2400	250
Gel time (Tecam, 100 ml, 20 °C, 65% RH)	[min]	45	30	145

**Storage**

Araldite EPN 1180 and its solutions should be stored in a dry place, preferably in the sealed original containers, at temperatures between 2 and 40 °C. The products should not be stored exposed to direct sunlight.

**Handling precautions**

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

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