
® Araldite Casting Resin System

Araldite®	CW 2245	100 pbw or
Araldite®	CW 2245 N (black)	100 pbw
Aradur®	HY 2966	10 pbw or
Aradur®	HY 956 EN	9 pbw

Optimally filled casting system for processing and curing at room temperature or slightly higher temperatures

Bell transformers (liner transformer, switch modes, coils, chokes)

Applications

Casting / Vacuum casting

Processing

Good temperature shock resistance
Flammability: UL 94 approval V-0 for 6 mm thick layer with resin CW 2245 only

Properties

Product data

(Guideline values)

Modified, solvent free epoxy resin containing an inorganic filler

CW 2245	Viscosity	at 25°C		mPa s	ca. 18 000
CW 2245 N Black	Specific gravity	at 25°C		g/cm ³	1.65
	Flash point		ISO 1523	°C	190-200
	Filler content			%	58
	As supplied form				Filler containing, beige or black high viscosity 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

Aradur HY 2966	Viscosity (Hoeppler)	at 25°C		mPa s	ca. 500
	Specific gravity	at 25°C		g/cm ³	0.97
	Flash point		ISO 1523	°C	>200
	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 hardener based on aliphatic polyamine

Aradur HY 956 EN	Viscosity	at 25°C		mPa s	ca. 450
	Specific gravity	at 25°C		g/cm ³	1.02
	Flash point		ISO 1523	°C	175-185
	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 filled 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.

	System		1	2	
Mix ratios	Araldite CW 2245	parts by weight	100	100	
	Aradur HY 2966	parts by weight	10	–	
	Aradur HY 956 EN	parts by weight	–	9	
Processing data (Guideline values)	Initial viscosity (Hoeppler)	mPa s	at 25°C	ca. 10 000	ca. 7500
			at 40°C	ca. 3000	ca. 2500
	Time to double initial viscosity	min	at 25°C	ca. 20	–
			at 40°C	ca. 10	–
	Pot life to 15 000 mPa s (Hoeppler)	min	at 25°C	–	ca. 30
			at 40°C	–	ca. 30
Minimum curing time	h	at 25°C	≥ 24	≥ 24	
		at 40°C	8	12	
		at 60°C	2	6	

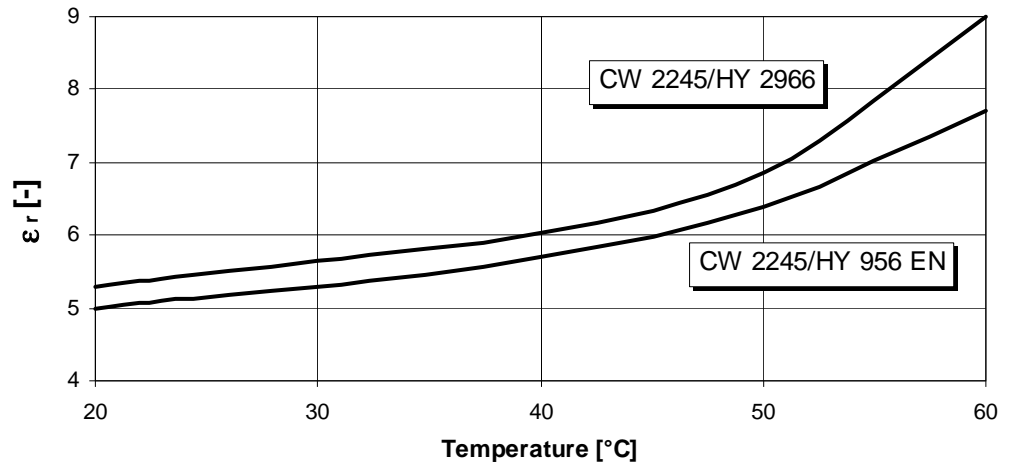
Properties

Guideline values determined on standard test specimens cured for 4 h/80°C+6 h/120°C

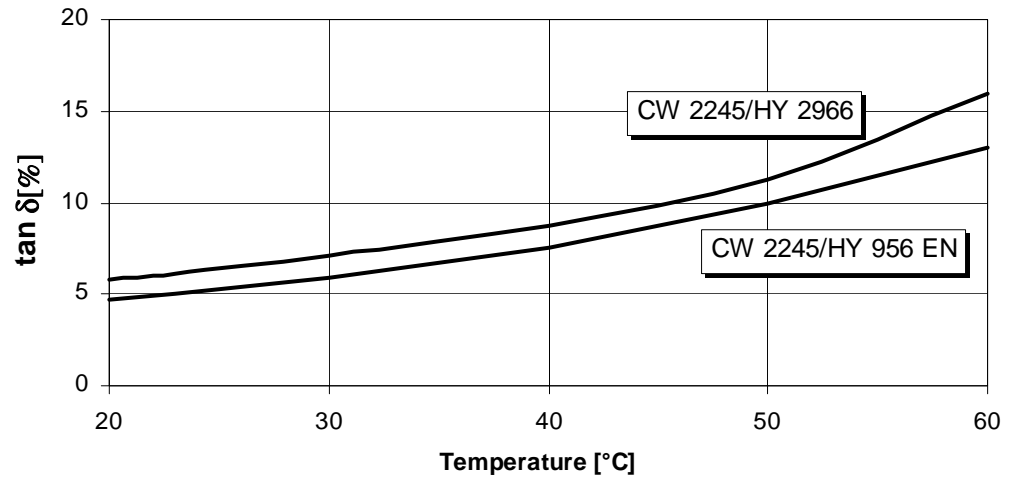
System				1	2			
Colour of castings				beige	beige or black			
Specific gravity	at 25°C	DIN 55 990	g/cm ³	1.60	1.61			
Shore D hardness (4 mm plate)	at 25°C	DIN 53 505		74	80			
Glass transition temperature derived from torsion in modulus				°C	55	63		
Martens temperature				DIN 53 458 °C	49	54		
Tensile strength								
max. tensile stress	at 25°C	ISO 527	MPa	38	36			
elongation at break	at 25°C	ISO 527	%	1.1	0.8			
Elastic modulus from tensile test				at 25°C	ISO 527	MPa	–	5500
Flammability (CW 2245)				UL 94	grade	V-0(6 mm)	V-0(6 mm)	
Water absorption								
1 day	at 23°C	ISO 62	%	0.06	0.17			
30 min	at 100°C	ISO 62	%	0.22	0.23			
Coefficient of linear thermal expansion				at 20-40°C	DIN 53 752	ppm/K	75·10 ⁻⁶	69
Thermal conductivity				at 23°C	DIN 52 612	W/mK	0.65	0.67
Electrolytic corrosion					DIN 53 489	grade	A-1	A/1.2
Tracking resistance					IEC 60112		CTI>600	CTI>600
Electric strength								
20 s value for 2 mm plate (50 Hz)	at 23°C	IEC 60243	kV/mm	18	16			

Properties

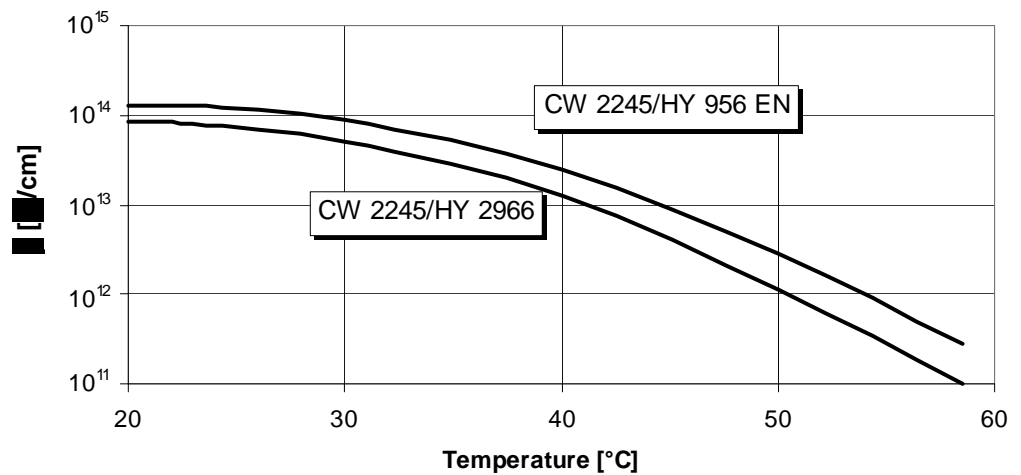
Dielectric constant ϵ_r vs temperature (IEC 250/DIN 53483)



Loss factor $\tan\delta$ vs temperature at 50 Hz (DIN 53483)



Specific volume resistivity ρ vs temperature DIN 53482



Industrial hygiene

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".

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	no

Skin protection

before starting work
after washing

Apply barrier cream to exposed skin
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
of workplace

Renew air 3 to 5 times an hour
Exhaust fans. Operatives should avoid inhaling vapours.

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.

Note

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