HUNTSMAN

Enriching lives through innovation

Advanced Materials

Araldite® CW 2245	**100**	**pbw**
Aradur® HY 842	**18**	**pbw**

Optimally filled casting system for processing and curing at slightly higher temperatures.

Application	Inductive components.
Processing Methods	Casting / vacuum casting.
Key Properties	Good temperature shock resistance. Flexible castings. Low viscosity

Product Data (Guideline Values)

Araldite® CW 2245

Modified, solvent free epoxy resin containing an inorganic filler.

Viscosity at 25°C	ISO 2555	mPa*s	12000 – 24000*
Specific gravity at 20°C	ISO 2811	g/cm³	1.62 – 1.68*
Appearance	Visual		White, viscous liquid*

Araldite® CW 2245 N

Modified, solvent free epoxy resin containing an inorganic filler.

Viscosity at 25°C	ISO 2555	mPa*s	12000 – 24000*
Specific gravity at 20°C	ISO 2811	g/cm³	1.62 – 1.68*
Appearance	Visual		Black, viscous liquid*

Aradur® HY 842

Low-viscosity polyamidoamine

Viscosity at 25°C	ISO 3219	mPa*s	400 – 700*
Specific gravity at 20°C	DIN 51757	g/cm³	0.96
Appearance	Visual		Clear, yellow-brown liquid

*Specified range

Processing Data (Guideline Values)

Mix Ratio

		Parts by weight	Parts by volume
CW 2245	Resin	100	100
HY 842	Hardener	18	31

Gel Time, Viscosity and Curing

Mix viscosity at 25°C	CW 2245 / HY 842	Rheomat	mPa*s	3700
Mix viscosity at 40°C		Rheomat	mPa*s	1700
Gel time at 25°C		Gelnorm	min	180
Gel time at 40°C		Gelnorm	min	100
Gel time at 60°C		Gelnorm	min	35
Pot life at 40°C (Time to reach 15000 mPa*s)		Rheomat	min	60
Standard curing cycle		24 hours at RT + 6 hours at 60°C		

*Specified range

Processing and Storage (Guideline Values)

Preparation

CW 2245 contains fillers, which tend to settle over time. It is therefore recommended to carefully homogenize the complete contents of the container before use.
In the storage vessels of the production equipment, the pre-filled products should be stirred up from time to time to avoid sedimentation and irregular metering.

Mixing

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.

Curing

To determine whether cross-linking has been carried to completion and the final properties are optimal, it is necessary to carry out relevant measurements on the actual object or to measure the glass transition temperature. Different gel and cure cycles in the customer's manufacturing process could lead to a different degree of cross-linking and thus a different glass transition temperature.

Storage Conditions

Store the components in a dry place at RT, 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.

Mechanical and Physical Properties (Guideline Values)

Determined on standard test specimen at 23°C. Cured for 24h/RT + 6h/60°C.

Glass transition temperature	ISO 6721	°C	47
Modulus in torsion G' at RT	ISO 6721	MPa	1100
Thermal class	IEC 60085		
Tensile modulus	ISO 527	MPa	1100
Tensile strength	ISO 527	MPa	17
Elongation at break	ISO 527	%	7
Thermal linear coefficient	ISO 11359-2		
Alpha 1 Alpha 2		ppm/K	60 108
Thermal conductivity	ISO 8894-1	W/mK	0.6
Hardness	DIN 53505	Shore D	75
Water absorption	ISO 62/80		
1 day at 23°C 10 days at 23°C 30 min at 100°C		% by wt.	0.19 0.62 0.26

Electrical Properties (Guideline Values)

Determined on standard test specimen at 23°C. Cured for 6h/RT + 6h/60°C.

Dielectric strength (2 mm specimen)	IEC 60243-1	kV/mm	24
Dielectric loss factor (tan δ, 50Hz, 25°C)	IEC 60250	%	6.2
Dielectric constant (εr, 50Hz, 25°C)	IEC 60250		5.2
Volume resistivity (ρ, 25°C)	IEC 60093	Ω cm	10^{14}

Legal Notice

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