

Product Data Sheet

ISO-Epoxydharz HP 89/7

Description:

ISO-Epoxydharz HP 89/7 is a cold-curing cast resin for sealing electronic parts.

The cured product shows high transparency and has no tendency to form bubbles during the curing process. The surface is tack-free and mar-resistant. The product protects against corrosion and shows good adhesion to metal, ceramics and many plastics. The standard mixing ratio resin to hardener is 2 : 1 by weight but by varying the mixing ratio different hardnesses can be achieved.

Technical Data:

resin	viscosity / 20°C	app. 2000 mPa s		
	colour	colourless*		
	density / 20°C	1.1 g/cm ³		
hardener	viscosity / 20°C	app. 50 mPa s		
	colour	colourless		
	density / 20°C	1.0 g/cm ³		
mixture	mixing ratio resin : hardener	2 : 1 pbw (standard mixing ratio)	3 : 1 pbw	3.5 : 1 pbw
	viscosity / 20°C	app. 600 mPa s	app. 800 mPa s	app. 900 mPa s
	colour	colourless*	colourless*	colourless*
	density / 20°C	1.1 g/cm ³	1.1 g/cm ³	1.1 g/cm ³
	potlife / 20°C	app. 30 min	app. 45 min	app. 60 min
	gelttime / 20°C	app. 40 min	app. 60 min	app. 80 min
	max. temperature (200g, start at 20°C)	app. 100°C	app. 60°C	app. 30°C

* or on request

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Properties of cured product (typical values):

mixing ratio resin : hardener	2 : 1 pbw	3 : 1 pbw	3.5 : 1 pbw
hardness	99 Shore A / 75-80 Shore D	98 Shore A / 55-60 Shore D	92 Shore A / 40-45 Shore D
temperature resistance	long-time: 120°C short-time: 180°C	long-time: 120°C short-time: 180°C	long-time: 110°C short-time: 180°C
tensile strength	75 N/mm ²	15 N/mm ²	5 N/mm ²
elongation at break	5 %	7 %	40 %
dielectric strength	20 kV/mm	20 kV/mm	19 kV/mm
dielectric strength while still liquid	7 kV/mm	7 kV/mm	7 kV/mm
dissipation factor tan δ / 25°C / 50Hz	0.008	0.009	0.008
dielectric constant ϵ / 25°C / 50Hz	4.2	4.7	4.4
thermal conductivity	0.3 W/K m	0.3 W/K m	0.3 W/K m
thermal volume expansion coefficient	$60 \cdot 10^{-6} \text{ K}^{-1}$	$80 \cdot 10^{-6} \text{ K}^{-1}$	$90 \cdot 10^{-6} \text{ K}^{-1}$
tracing resistance	KA 3 c	KA 3c	KA 3c
water absorption after 30 days / 23°C	0.3 %	0.5 %	0.4 %
chemical resistance against mineral oil, 2n H ₂ SO ₄ , CaCO ₃ -solution	no visible degradation	no visible degradation	no visible degradation

Storage:

Store dry and well closed.

Processing:

Stir up resin compound well. Heat up (50°C) if partly crystallised. Then mix resin and hardener carefully in recommended ratio for 1 - 3 minutes (depending on size of mixture and potlife). The mixture has to be poured into the mould immediately after mixing. Air bubbles that have been stirred in can be removed before end of potlife by evacuating or by using hot air.

Please see material safety data sheet for additional information.