

Product Data Sheet

ISO-PUR K 760

Description:

ISO-PUR K 760 is a mineral filled cold-curing 2-component polyurethane cast resin based on polyether- and -esterpolyols and precured aromatic diisocyanates. The cast resin was tested according to the German norm VDE 0291 / part 2 including hydrolysis and hydrophobic resistance. ISO-PUR K 760 is a standard material for casting electronic parts.

Cured samples of ISO-PUR K 760 do not become brittle. The system has a good thermal conductivity and minimum shrinkage while curing. ISO-PUR K 760 protects against corrosion and shows good adhesion to metal, ceramics and many plastics. The standard mixing ratio resin to hardener is 4 : 1 by weight. Different hardness can be achieved by varying the mixing ratio.

Technical Data:

resin	viscosity / 20°C colour density / 20°C	app. 4000 mPa s pale brown* 1.4 g/cm ³		
hardener	viscosity / 20°C colour density / 20°C	app. 120 mPa s brown 1.2 g/cm ³		
mixture	mixing ratio resin : hardener	3 : 1 pbw	4 : 1 pbw (standard mixing ratio)	4.5 : 1 pbw
	viscosity / 20°C colour density / 20°C potlife / 20°C geltime / 20°C max. temperature (200g, start at 20°C)	app. 2000 mPa s pale brown* 1.4 g/cm ³ Standard: App. 8 min * Standard: App. 12 min * app. 60°C *	app. 2200 mPa s pale brown* 1.4 g/cm ³ Standard: App. 10 min * Standard: App. 15 min * app. 50°C *	app. 2300 mPa s pale brown* 1.4 g/cm ³ Standard: App. 12 min * Standard: App. 18 min * app. 50°C *
mixture	mixing ratio resin : hardener viscosity / 20°C colour density / 20°C potlife / 20°C geltime / 20°C max. temperature (200g, start at 20°C)	5 : 1 pbw app. 2400 mPa s pale brown* 1.4 g/cm ³ Standard: App. 15 min * Standard: App. 25 min * app. 50°C *	6 : 1 pbw app. 2600 mPa s pale brown* 1.4 g/cm ³ Standard: App. 20 min * Standard: App. 35 min * app. 40°C *	7 : 1 pbw app. 2900 mPa s pale brown* 1.4 g/cm ³ Standard: App. 30 min * Standard: App. 60 min * app. 40°C *

* or on request

Continuation Technical Data ISO-PUR K 760

Properties of cured product (typical values):

mixing ratio resin : hardener	3 : 1 pbw	4 : 1 pbw (standard mixing ratio)	4.5 : 1 pbw	5 : 1 pbw	6 : 1 pbw	7 : 1 pbw
hardness	75-80 Shore D	65-70 Shore D	55-60 Shore D	93 Shore A / 40-45 Shore D	80 Shore A / 25-30 Shore D	60 Shore A / 10-15 Shore D
temperature resistance	long-time: 140°C short-time: 200°C	long-time: 140°C short-time: 200°C	long-time: 140°C short-time: 200°C	long-time: 130°C short-time: 180°C	long-time: 120°C short-time: 180°C	long-time: 110°C short-time: 160°C
tensile strength	60 N/mm ²	24 N/mm ²	20 N/mm ²	20 N/mm ²	15 N/mm ²	15 N/mm ²
elongation at break	50 %	70 %	80 %	90 %	90 %	100 %
dielectric strength	24 kV/mm	21 kV/mm	21 kV/mm	20 kV/mm	21 kV/mm	21 kV/mm
dielectric strength while still liquid	7 kV/mm	7 kV/mm	7 kV/mm	7 kV/mm	7 kV/mm	7 kV/mm
dissipation factor tan δ / 25°C / 50Hz	0.02	0.02	0.02	0.02	0.02	0.02
dielectric constant ϵ / 25°C / 50Hz	4.2	4.3	4.0	4.1	4.0	4.1
thermal conductivity	0.5 W/K m	0.5 W/K m	0.55 W/K m	0.6 W/K m	0.7 W/K m	0.8 W/K m
thermal volume expansion coefficient	45 x 10 ⁻⁶ K ⁻¹	50 x 10 ⁻⁶ K ⁻¹	60 x 10 ⁻⁶ K ⁻¹	75 x 10 ⁻⁶ K ⁻¹	110 x 10 ⁻⁶ K ⁻¹	120 x 10 ⁻⁶ K ⁻¹
tracing resistance	KA 3 c	KA 3c	KA 3c	KA 3 c	KA 3c	KA 3c
water absorption after 30 days / 23°C	0.2 %	0.2 %	0.2 %	0.2 %	0.25 %	0.4 %
chemical resistance against mineral oil, 2n H ₂ SO ₄ , CaCO ₃ -solution	no visible degradation	no visible degradation	no visible degradation	no visible degradation	no visible degradation	no visible degradation

Storage:

Store dry and well closed.

Processing:

Stir up resin component well. 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 the mixture can be removed before end of potlife by evacuating or by blowing hot air over the surface causing the bubbles to collapse.

Please see material safety data sheet for additional information.