

## Product Data Sheet

### ISO-PUR K 760

#### Description:

ISO-PUR K 760 is a minerally 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 but by varying the mixing ratio different hardnesses can be achieved.

#### Technical Data:

resin	viscosity / 20°C colour density / 20°C	app. 4000 mPa s pale brown* 1.4 g/cm <sup>3</sup>		
hardener	viscosity / 20°C colour density / 20°C	app. 120 mPa s brown 1.2 g/cm <sup>3</sup>		
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 <sup>3</sup> app. 12 min * app. 19 min * app. 60°C *	app. 2200 mPa s pale brown 1.4 g/cm <sup>3</sup> app. 14 min * app. 19 min * app. 50°C *	app. 2300 mPa s pale brown 1.4 g/cm <sup>3</sup> app. 14 min * app. 21 min * app. 50°C *
mixture	mixing ratio resin : hardener	5 : 1 pbw	6 : 1 pbw	7 : 1 pbw
	viscosity / 20°C colour density / 20°C potlife / 20°C geltime / 20°C max. temperature (200g, start at 20°C)	app. 2400 mPa s pale brown* 1.4 g/cm <sup>3</sup> app. 15 min * app. 25 min * app. 50°C *	app. 2600 mPa s pale brown* 1.4 g/cm <sup>3</sup> app. 18 min * app. 30 min * app. 40°C *	app. 2900 mPa s pale brown* 1.4 g/cm <sup>3</sup> app. 20 min * 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	99 Shore A / 75-80 Shore D	98 Shore A / 65-70 Shore D	97 Shore A / 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 <sup>2</sup>	24 N/mm <sup>2</sup>	20 N/mm <sup>2</sup>	20 N/mm <sup>2</sup>	15 N/mm <sup>2</sup>	15 N/mm <sup>2</sup>
elongation at break	5 %	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 * 10 <sup>-6</sup> K <sup>-1</sup>	50 * 10 <sup>-6</sup> K <sup>-1</sup>	60 * 10 <sup>-6</sup> K <sup>-1</sup>	75 * 10 <sup>-6</sup> K <sup>-1</sup>	110 * 10 <sup>-6</sup> K <sup>-1</sup>	120 * 10 <sup>-6</sup> K <sup>-1</sup>
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 <sub>2</sub> SO <sub>4</sub> , CaCO <sub>3</sub> -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 compound 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 can be removed before end of potlife by evacuating or by using hot air.

Please see material safety data sheet for additional information.

This data sheet replaces previous issues.

Stand: 02.02.04