

## PX900D

A low viscosity unfilled epoxy resin system

### Application

- Castings
- Impregnating and laminating
- Coils

### Key Properties

- Low viscosity
- Long pot life
- Excellent Insulation characteristics
- Excellent long-term heat resistance
- Excellent chemical resistance

### Description

- Basic Two-component epoxy system
- Resin RX900D
- Hardener HX900D

Physical Data (approx. – values)	Resin	Hardener	Mixed
Colour	Clear Black	Amber Amber	Clear Black
Specific Gravity	1.17	0.94	1.09
Viscosity (mPas) @ 25°C	1200	50	650

Cure Schedule (150ml sample)	Working Life	Gel Time	Light Handling	Full Cure
Temperature	(minutes)	(minutes)	(hours)	(hours)
RT	150	360	36	72
60°C	40	-	4	8
80°C	10	-	2	4

\*RT is defined as 20-25°C

The above are typical values and will vary depending on the cured mass and application. Hotter temperatures may be used for faster cure but will result in higher post cure shrinkage and higher cure exotherm. Experimentation and testing is suggested to avoid side effects. For maximum properties a post cure may be required – Contact our technical service department for advice.

### Processing

Mix ratio by weight 2.63:1

Mix ratio by volume 2.14:1

Typical Properties	Result	Unit
Peak Exotherm (150ml @ 25°C)	40	°C
Shrinkage (volume)	0.6	%
Thermal Conductivity	0.21	W/mK
Thermal expansion	65-75	
Operating Temperature	- 62 to + 180	°C (Application and geometry dependant)
Electric Strength	22	kV/mm
Volume Resistivity	10 x 10 <sup>13</sup>	ohm.cm
Hardness	90	Shore D
Tensile strength	85	MPa
Compressive strength	120	MPa
Flexural Strength	120 - 140	MPa
Deflection temperature	140	°C
Coefficient Linear Expansion	65 – 75	ppm/°C
Loss Tangent	0.019	1kHz
Permittivity	3.9	1kHz
Comparative tracking index	>850	V
Water Absorption (30 days @ 20°C)	0.4	%
Elongation at break	1-3	%
Tg	120-140	°C

Approvals	
RoHS compliant	Yes
UL94 V-0	No
REACH (SVHC concentration)	Refer to SDS

## Packaging

PX900D is available in Bulk, Twinpacks & kits

## Availability

Available through distribution and [www.resins-online.com](http://www.resins-online.com) sales@robnor.co.uk

Twinpacks – Part Numbers	
PX900D/BK/010	PX900D/NC/050
PX900D/BK/050	PX900D/NC/100
PX900D/BK/100	PX900D/NC/250
PX900D/BK/150	

Twinpacks are pre-weighed resin and hardener components contained in a tough flexible film, separated by a removable clip and rail.

Once the clip and rail is removed the resin and hardener is thoroughly mixed within the bag and is immediately ready for use. Mixing will normally take ~ 2 minutes due to the viscosity; but pay special attention to the corners.

Twinpacks are ideal for small to medium production runs, prototyping and on-site or field use.

The twinpack weight/volume may also be tailored to a specific size on request.

For further details please visit [www.robnor-resinlab.com](http://www.robnor-resinlab.com)

Bulk Materials – Part Numbers	
RX900D/BK/1KG	HX900D/NC/500G
RX900D/BK/5KG	HX900D/NC/1KG

Both resin and hardener are supplied in 5kg, 25kg and 200ltr drums and fully evacuated and ready for use.

Care should be taken to ensure when mixing the resins air is not entrained in the mixture.

If this is unavoidable the mixed resin and hardener should be re-evacuated before dispensing.

The bulk resin and hardener materials can be dispensed from suitable dispensing machinery, details provided by Fluid Research on request.

Sets – Part Numbers	
PX900D/BK/1.4KGSET	PX900D/NC/1.4KGSET
PX900D/BK/8KGSET	

Sets are provided in separate containers to the correct ratio.

Stir well using an appropriate mixer until homogeneous.

Note: Incomplete mixing will be characterised by erratic or partially incomplete cure even after extended time periods.

## Cleaning

All equipment contaminated with mixed material should be cleaned before the material has hardened.

TS130 is a suitable non-flammable cleaning agent, although other solvents may be found suitable.

TS130 will also remove cured material provided it can soak for several hours.

## Storage and Shelf Life

12 months at 25 °C Specialty packaging may be less.

Many epoxy resin systems are prone to crystallization as epoxy resin is a super-cooled fluid. This condition may give the product a gritty or grainy appearance (or hazy in clear products). Products in this state will not usually cure to normal and expected properties. In extreme cases it may appear solid and cured. Fluctuating temperatures (within 5 to 50 °C) aggravate this phenomenon. Heating the individual component to 50 to 60 °C while stirring can usually restore products to original state. Storage at 25 +/- 10 °C is optimum for most products

Some epoxy systems are prone to settling due to high filler content and should be inverted every two to three weeks to reduce the accumulation of the fillers on the bottom of the containers.

Inventory should be rotated on a FIFO (first in, first out) basis.

## Health and Safety

Please refer to RX/HX900D Health and Safety data or our Technical Service Department for individual/specific advice.

## Copyright & Warranty - Robnor Resinlab Limited

The results and information above do not constitute a specification and is given in good faith and without warranty. The information is derived from test/or extrapolations believed to be reliable and is quoted for guidance only. The product is offered for evaluation on the understanding the customer satisfies himself that the product is suitable for the intended application by proper evaluation and testing.

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