

PX806C

Hard-tough epoxy resin with high electrical resistance

Application

- Electrical potting
- Encapsulation
- Transformers

Key Properties

- High electrical insulating characteristics
- High thermal conductivity
- Good impact strength
- Long pot life
- UL approved to 3mm

Description

- Basic Two-component epoxy system
- Resin RX806C
- Hardener HX806C

Physical Data (approx. – values)	Resin	Hardener	Composite
Colour	Black	Orange	Black
Specific Gravity	1.87	0.98	1.73
Viscosity (mPas) @ 60°C	70000	400	7000

Cure Schedule (300g)	Working Life	Gel Time	Light Handling	Full Cure
Temperature	(minutes)	(minutes)	(hours)	(hours)
RT	120	180	16	72
40°C	60	90	8	24
60°C	-	30	2	6

*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 10.6: 1

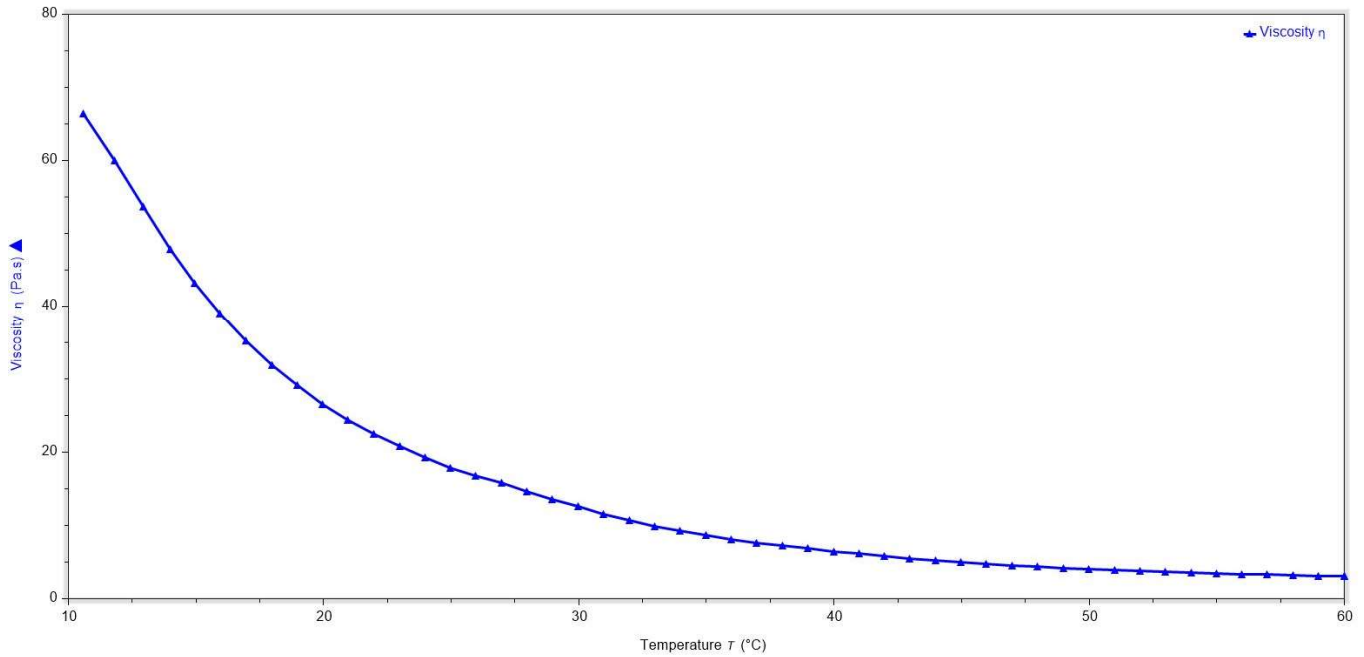
Mix ratio by volume 5.6: 1

Typical Properties (16h @ RT+ 6h @60°C)	Result	Unit
Water Absorption (30 days @ 20°C)	0.21	%
Thermal Conductivity	~1.0	W/mK
Operating Temperature Range	-40 to +150	°C (application & geometry dependent)
Dielectric Strength	18	kV/mm
Hardness	80	Shore D
Tensile Strength	9.5	MPa
Tensile Elongation	8.3	%
Surface Resistivity	2.77×10^{15}	Ω
Volume Resistivity	1.07×10^{14}	Ωcm
Flexural Strength	34.4	MPa
Flexural Modulus	2.32	GPa
Volume Shrinkage	2.83	%
Impact Strength (Izod, notched)	3.05	KJ/m ²
Co-efficient of Thermal Expansion (T<Tg)	30-40	ppm/°C
Flame Retardance	Meets requirements	UL94 V-0
Maximum Glass Transition Temperature	47.5	°C

Approvals

RoHS compliant	Yes
UL94 V-0	File Number: E76072
REACH (SVHC concentration)	Refer to SDS

PX806C/BK Mixed System Viscosity vs. Temperature



Packaging

PX806C is available on request

Availability

Available through distribution and www.robnor-resinlab.com sales@robnor.co.uk

Twinpacks - Part Numbers

Available on request	
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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

Bulk Materials - Part Numbers

Resin sizes available on request	Hardener sizes available on request
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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.

Kits and Sets - Part Numbers

Kits available on request	Sets available on request
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Kits and Sets are provided in separate containers to the correct ratio.

In Kit form, pour the contents of the smaller container into the larger container and use it as a mixing vessel.

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 is allowed to soak for a number of hours.

Storage and Shelf Life

12 months @25°C

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/HX806C Health and Safety data or our Technical Service Department for individual/specific advice.

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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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