

PX771C

A low viscosity unfilled epoxy resin containing reactive diluent.

Application

- Impregnating
- Small castings
- Laminating
- Potting and encapsulation

Key Properties

- Low viscosity
- Excellent Insulation characteristics
- Transparency
- Room temperature or heat cured

Description

- Basic Two-component epoxy system
- Resin RX771C
- Hardener HX771C (HY1300GB)

Physical Data (approx. – values)	Resin		Hardener	Composite	
Colour	Clear	Black	Amber	Amber	Black
Specific Gravity	1.13		1.0	1.09	1.10
Viscosity (mPas) @ 25°C	800-1500		180	500-1000	

Cure Schedule (200g)	Working Life	Gel Time	Light Handling	Full Cure
Temperature	(minutes)	(minutes)	(hours)	(hours)
RT	30	60-90	24	48
60°C	-	15-25	2	8
80°C	-	-	1	2

*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	Black	Clear
Mix ratio by weight	3.09:1	3.03:1
Mix ratio by volume	2.72:1	2.68:1

Typical Properties	Result	Unit
Peak exotherm (150g @ 25°C)	90	°C
Shrinkage (volume)	0.6	%
Thermal conductivity	0.21	W/mK
Operating temperature range	-40 to +150	°C (application & geometry dependent)
Electric strength	12-14	kV/mm
Volume Resistivity	1.3×10^{13}	ohm.cm
Hardness	82-86	Shore D
Flexural strength	90	MPa
Flexural modulus	3.3	GPa
Deflection Temperature	60	°C
Co-efficient of expansion	65-75	ppm/°C
Loss Tangent	0.008	1 kHz
Permittivity	3.8	50 Hz
Comparative tracking index	>850	V
Water absorption (24 hrs @ 23°C)	15 -25	mg
Elongation at break	3-5	%

Approvals

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

Packaging

Available in Bulk, Twinpacks, kits & cartridges

Availability

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

Twinpacks - Part Numbers

PX771C/NC/100	PX771C/BK/100
	PX771C/NC/250

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

RX771C/NC/200KG	
CGM009/924-1 5kg	CGM031 0.5kg
CGM010 25kg	CGM032 5kg
CGM129 1kg	CGM079 25kg

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 & Sets - Part Numbers

PX771C/NC/1.3KGKIT	
PX771C/NC/4KGKIT	

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 can soak for several hours.

Storage and Shelf Life

12 months at 25 °C for twinpacks

36 months at 25 °C for bulk containers

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/HX771C Health and Safety data or our Technical Service Department for individual/specific advice.

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