Technical Data Sheet
March 2020

PX672H

A low viscosity, fast curing, epoxy resin formulated for high impregnation and toughness

Application

- Laminating
- Impregnating

Key Properties

- Low shrinkage
- High gloss
- Fast curing
- Good electrical insulation characteristics
- High toughness

Description

- Basic — Two-component epoxy system
- Resin — RX672H
- Hardener — HX672H

Physical Data (approx. – values)	**Resin**	**Hardener**	**Mixed**
Colour	Clear Black White	Clear	Clear Black White
Specific Gravity	1.10	1.00	1.1
Viscosity (mPas) @ 25°C	1500	70	300

Cure Schedule (150ml sample)	**Working Life**	**Gel Time**	**Light Handling**	**Full Cure**
Temperature	(minutes)	(minutes)	(hours)	(hours)
RT*	30	50	24	72
60°C	-	-	2	4
80°C	-	-	1	2

*RT is defined as 20-25°C

Note: Material cured at room temperature may cure 'cloudy'. Material cured above 60°C will cure clear. Small castings may be hot cured immediately; larger samples should be gelled at ambient temperature before curing to prevent excessive exotherm. 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 - call our Technical Service Department for advice.

Processing	**Black**	**Clear**	**White**
Mix ratio by weight	2.43:1	2.39:1	2.44:1
Mix ratio by volume	2.14:1	2.12:1	2.16:1

Typical Properties	**Result**	**Unit**
Thin film cure (<1mm)	~8	Hours
Peak Exotherm (150g @ 25°C)	70	°C
Shrinkage (Volume)	0.5	%
Thermal Conductivity	< 0.25	W/mK
Thermal expansion	80-100	
Operating Temperature	- 40 to + 120	°C (application and geometry dependant)
Dielectric Strength	18	kV/mm
Volume Resistivity	10 x 14^{13}	ohm.cm
Hardness	80	Shore D
Tensile Strength	55	MPa
Compressive Strength	40	MPa
Deflection Temperature	45	°C
Coefficient of Expansion	80-100	ppm/°C
Loss Tangent (@ 20°C)	0.060	50 Hz
Permittivity (@ 20°C)	3.8	50 Hz
Comparative tracking index	>850	V
Water absorption (30 days @ 20°C)	0.3	%
Elongation at Break	4 - 5	%
Flexural Strength	80 - 85	MPa
Power Factor	0.03	
Tg	50-60	°C

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

Packaging

Available in Bulk, twinpacks & kits

Availability

Available through distribution and sales@robnor.co.uk

Twinpacks – Part Numbers	
PX672H/BK/050	PX672H/NC/025
PX672H/BK/100	PX672H/NC/100
PX672H/BK/250	PX672H/NC/250
PX672H/BK/500	

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	
HX672H/NC/1KG	RX672H/BK/5KG
HX672H/NC/5KG	RX672H/NC/5KG
HX672H/NC/10KG	RX672H/NC/10KG
HX672H/NC/20KG	RX672H/NC/25KG
	RX672H/WT/5KG

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	
PX672H/BK/25KGKIT	PX672H/BK/3.4KGSET
	PX672H/BK/7.5KGSET
	PX672H/NC/1.4KGSET
	PX672H/NC/3.4KGSET
	PX672H/WT/1.4KGSET

Kits and Sets are provided in separate containers to the correct ratio.
In Kit form, pour the contents of the small 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 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/HX672H Health and Safety data or our Technical Service Department for individual/specific advice.

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