

RX771C (formerly CY1301/MY778)

A liquid epoxy resin containing reactive diluent.
Mixed with Araldite hardener HY951 or HY956 it provides a very low viscosity easy to use system.

Application

- Impregnating
- Casting
- Laminating

Key Properties

- Good mechanical strength
- Resistant to chemical attack
- Excellent electrical properties

Description

- Basic Two-component epoxy system
- Resin RX771C
- Hardener HY951 or HY956EN (Aliphatic polyamine)

Physical Data (approx. – values)	RX771C	HY951 (HX771D)	HY956 (HX771F)
Colour	Clear	Clear	Clear
Specific Gravity	1.2	1.17	1.16
Viscosity (mPas) @ 25°C	2000	4000-8000	8000-12000

Cure Schedule (150ml sample)				
	Temperature	Working Life (minutes)	Light Handling (hours)	Full Cure (hours)
RX771C + HY951 (PX771D/NC)	RT	25-35	24	72
	40°C	10-15	16	24
	80°C	5-8	8	16
RX771C + HY956 (PX771F/NC)	RT	20-30	24	72
	40°C	8-12	16	24
	80°C	4-6	8	16

*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

	Parts by weight	Parts by volume		Parts by weight	Parts by volume
Resin RX771C	100	100	Resin RX771C	100	100
Hardener HY951	10-12	12 -14	Hardener HY956	22-25	24-27

Typical Properties

	RX771C + HY951 (PX771D/NC)	RX771C + HY956 (PX771F/NC)
Tensile Strength	55-75 MPa	55-75 MPa
Elongation at Break	1.5-3.5%	3-6%
Modulus of elasticity (GN/m ²) (tension)	3.5-5.0	3.5-5.5
Flexural strength (MN/m ²)	120-135	135-140
Modulus of elasticity (GN/m ²) (flexure)	3.5-4.2	3.5-5.0
Impact strength	0.3-0.6	0.4-0.6
Compressive Yield Strength (MN/m ²)	100-115	120-140
Heat deflection temperature	50-65°C	50-65°C
Coefficient of Linear Expansion	60-80 x 10 ⁶ ohm.cm	60-80 x 10 ⁶ ohm.cm
Thermal Conductivity	0.205-0.22 W/m°C	0.195-0.21 W/m°C
Volume Resistivity	14 ¹⁰ ohm-cm	14 ¹⁰ ohm-cm
Water Absorption (24 hours @ 23°C)	10 – 15mg	15 – 20mg
(30 minutes @ 100°C)	37 – 45mg	55 – 62mg
Electric Strength	11-12 kV/mm	11.5-12.5 kV/mm
Permittivity (50 Hz @ 20°C)	3.95-4.15	4.05-4.25
(1 kHz @ 20°C)	3.95-4.15	3.9-4.1
(1 MHz @ 20°C)	3.6-3.8	3.5-3.7
Loss Tangent (50 Hz @ 20°C)	0.005-0.01	0.005-0.01
(1 kHz @ 20°C)	0.007-0.012	0.01-0.015
(1 MHz @ 20°C)	0.025-0.035	0.03-0.04

Approvals	
RoHS compliant	Yes
UL94-V0	No
REACH (SVHC concentration)	0%

Packaging

RX771C is available in: Bulk and Twinpacks

Availability

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

Cartridge

Not available

Twinpacks – Part Numbers

Available on application	
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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.co.uk

Bulk Materials – Part Numbers

CGM009/924-1 (5kg RX771C/NC)	CGM039 (25kg HX771F/NC)
CGM010 (25kg RX771C/NC)	CGM075 (0.5kg HX771F/NC)
CGM035 (5kg HX771F/NC)	CGM129 (1kg RX771C/NC)
CGM036 (0.5kg HX771D/NC)	CGM159 (25kg HX771D/NC)
CGM037 (2.5kg HX771D/NC)	CGM488 (1kg HX771F/NC)

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 and Robnor Resins produce a range of these machines, details that can be provided on request.

Kits and Sets – Part Numbers

Available on request	

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

In Kit form, pour the hardener into the larger resin 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

Material stored in the original unopened containers under cool dry condition between 15° and 25°C will have a shelf life of at least one year.

Once used the containers must be kept sealed to prevent effects from water, air or contaminants.

Health and Safety

Epoxy resin systems may cause sensitisation by skin contact or inhalation may be corrosive, harmful or toxic. It is therefore strongly recommended that skin and eye contact is avoided by the using of appropriate personal protective equipment such as gloves, safety glasses or goggles and overalls. Wash any contamination from the skin immediately and thoroughly and do not eat, smoke or drink in the working vicinity. Under normal working conditions a good source of ventilation is adequate, however if the material is heated, or where vapour levels are likely to exceed the occupational exposure limits appropriate respiratory protection must be worn. Local exhaust ventilation (LEV) may be required especially for curing ovens or where large volumes of material are curing. The above is given as a guide only; please refer to RX771C Health and Safety data or our Technical Service Department for individual/specific advice.

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