Robnor Adhesive

Technical Data Sheet
PX800CS
(Two-Component Epoxy Resin)

Description

PX800CS is a very fast curing multi-purpose epoxy adhesive with excellent all round properties.

Features

Non-Toxic
Rapid curing
High adhesion to a wide variety of substrates
Excellent chemical resistance

Specification

Property	**Resin RX800CS**	**Hardener HX800CS**	**Mixed PX800CS**
Colour	Light Yellow	Amber	Pale Yellow
Specific Gravity g/ml	1.18	1.14	1.15
Viscosity m.Pa.s @ 25°C	150,000	100,000	120,000

Mix Ratio by Weight	1:1
Mix Ratio by Volume	1:1
Usable Life (20g @ 25°C)	4 minutes
No Flow Gel (20g @ 25°C)	5 minutes

Cure Schedule Temperature	**Working Life** (minutes *)	**Light Handling** (hours *)	**Full Cure** (hours *)	**Post Cure** (**)
10°C	4	6	24	3 days @ 25°C
20°C	4	3	12	4 hours @ 60°C
30°C	2	1	4	2 hours @ 80°C

*2mm cross sectional area
**For maximum properties

Cure time will depend on cross sectional area, ambient conditions and mixing method.
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 Robnor Technical Service Department for advice.

Typical Properties

Shore D Hardness	80	
Operating Temperature	-40 to +120°C	(Application and geometry dependant)
Thermal Conductivity	0.3 W/mK	
Tensile Strength	20 mPa	
Compressive Yield Strength	< 10 mPa	
Coefficient of Linear Expansion	70 - 90 ppm/C	
Volume Resistivity	13 Log_{10}ohmm	
Electric Strength	15 kV/mm	
Water Absorption (7 days @ 23°C)	0.80%	

Lap shear adhesion

Aluminium to Aluminium	7.6 MPa	ABS to ABS (1)	6.2 MPa
Copper to Copper	9.1 Mpa	Nylon 6 to Nylon 6	2.3 MPa
Stainless Steel	5.8 MPa	Acrylic to Acrylic	3.2 MPa

(1) Substrate failure

Robnor Resins Ltd, Hunts Rise, South Marston Park, Swindon, Wiltshire, SN3 4TE, United Kingdom

Tel: +44 (0) 1793 823741 **Fax: +44 (0) 1793 827033.**

Email: sales@robnor.co.uk **Web:** www.robnor.co.uk

Buy On-line: www.resins-online.com

Packaging	Part number
50g Twin Cartridge	PX800CS/NC/050 TC
200g Twin Cartridge	PX800CS/NC/200 TC

Availability:
Available through distribution and **www.resins-online.com**

Cartridge Mixing
It is essential for best results that the cartridge is 'balanced' before use to ensure correct mixing.
Loading the cartridge into the gun before attaching the mixer element and pumping the gun to push a small amount of the contents forward will achieve this. Wipe the excess from the cartridge tip and add the static mixer.
The cartridge is now ready for use.

Twinpacks
Twinpacks are pre-weighed resin and hardener contained in a tough flexible film, separated by a removable clip and rail.
Once the clip and rail is removed the resin and hardener can be thoroughly mixed within the bag and is then ready for use.
Mixing will normally take ~ 2 minutes depending on the operator and viscosity of the material.
Twinpacks are ideal for small to medium production runs, prototyping and on-site or field use.
Light sediment may be re-dispersed by carefully warming (to avoid distortion of the clip and rail) and kneading the pack.
The twinpack weight /volume may also be tailored to a specific size on request.
The use of twinpacks results in reduced chemical handling and less environmental impact as the waste product is inert.
For further mixing details please visit www.robnor.co.uk

Kits
In kit form, resin and hardener are provided in separate containers to the correct ratio.
In most cases, 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 variable or partial cure (even after extended time periods).

Cleaning
All equipment contaminated with mixed material should be cleaned before the material has hardened.
Robnor Resins TS130 is 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 in cool dry condition between 10 and 25°C will have a shelf life of at least two years.
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 then local exhaust ventilation (LEV) may be required especially for curing ovens.
The above is given as a guide only; please refer to RX/HX800CS health and safety data or our Technical Service Department for individual/specific advice.

Copyright Robnor Resins Limited
The results and information above does 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 his intended by proper evaluation and testing.