Technical Data Sheet
April 2020

PX628FD

Is a rigid, high strength, room temperature curing adhesive

Application

- Bonding of dissimilar materials

Key Properties

- High adhesion
- Thixotropic
- Excellent chemical resistance
- Formulated with FDA approved chemicals

Description

- Basic Two-component epoxy system
- Resin RX628FD
- Hardener HX628FD

Physical Data (approx. – values)	**Resin**	**Hardener**	**Composite**
Colour	Natural White	Natural White	Natural White
Specific Gravity	1.29	1.73	1.42
Viscosity (mPas) @ 25°C	1500-3000	2500-3500	Thixotropic

Cure Schedule (200g)	**Working Life**	**Gel Time**	**Light Handling**	**Full Cure**
Temperature	(minutes)	(minutes)	(hours)	(hours)
20°C	20-35	25-40	24	96
30°C	20	35	12	32
40°C	15	25	6	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

Mix ratio by weight 1.64:1

Mix ratio by volume 2.2:1

Typical Properties	**Result**	**Unit**
Hardness	85	Shore D
Operating Temperature	-40 to +160	°C (Application and geometry dependant)
Thermal Conductivity	0.5	W/mK
Tensile Strength	70	MPa
Compressive Yield Strength	95	MPa
Coefficient of Linear Expansion	60-80	ppm/C
Volume Resistivity	3 x 13^{10}	ohm.cm
Electric Strength	20	kV/mm
Thixotropy	6-10	mm
Water absorption (7 days @ 23°C)	0.4	%

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

Lap Shear Adhesion			
Aluminium to Aluminium	12 MPa	ABS to ABS	3.8 MPa
Copper to Copper	9 MPa	Nylon 6 to Nylon 6	2.3 MPa
Stainless Steel	12.5 MPa	Acrylic to Acrylic	3.2 MPa

Packaging

PX628FD is available in Cartridges, Bulk, Twinpacks & kits

Availability

Available through distribution and www.resins-online.com

Cartridge Mixing - Part Numbers	
PX628FD/WT/050TC	PX628FD/WT/200TC

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 - Part Numbers	
Available on request	

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	
Available on request	

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	
Available on request	

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.

Food Contact Declaration

USA
The above product may be used in coatings intended for food contact in full compliance with the Federal Food, Drug and Cosmetic [FDA] Act and all applicable regulations regarding food contact coatings, including 21 CFR175.300 [resinous and polymeric coatings], providing that the finished coating meets the applicable end tests identified in 21 CFR175.300. Compliance of the above product under 21 CFR175.300 is conditional upon the coating being properly cured so that solvents and residual monomers are volatilized so that the cured coating will be of suitable purity.

EU
Regulation 1935/2004/EC on materials and articles intended to come into contact with food: The above product falls within the scope of framework Regulation 1935/2004/EC and complies with the specific measures below:
Regulation 10/2011/EC on plastic materials and articles intended to come into contact with food: All starting components are authorised for use [some with restrictions for migration].
Regulation 1895/2005/EC on the restriction of use of certain epoxy derivatives in materials and articles intended to come into contact with food: None of the components within this product are listed within Regulation 1895/2005/EC.

GMP
The above product is manufactured to GMP in accordance with ISO 9001:2008.
It is the user's responsibility to conduct their own evaluations of its final coating formulation and processing to confirm suitability for intended use in food contact applications.

The above information is correct to date. This declaration will not be automatically reissued if changes to the formulation are made.

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

24 months at 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/HX628FD Health and Safety data or our Technical Service Department for individual/specific advice.

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