Low Density Three Part Polyurethane (Sand Filled)

Prysmian low density three part resin has enhanced performance characteristics compared with conventional three part systems. The resin is supplied as a combination of twin pack pouch and supplementary sand filler. Bulk filling with sand allows up to 8 litres to be supplied in a single kit.

Features and Benefits

- The combination of fillers used provides enhanced filler dispersion (i.e. no sand settlement)
- The enhanced flow characteristics allow more uniform filling in complex joint configurations
- The resin has excellent adhesion to XLPE, PVC, Lead etc.
- Can be supplied for use in both tropical and temperate climates
- Filled joints may be energised immediately if left undisturbed
- Type approved in LV joints (ENA TS C81/3 and BS EN 50393)
- Tested in accordance with CENELEC Specification HD631.1

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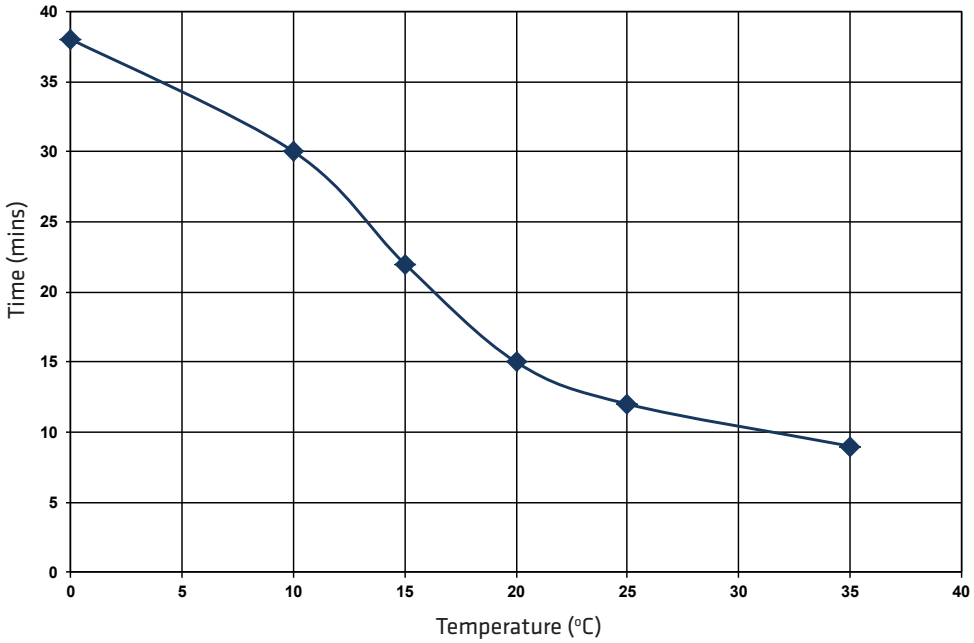
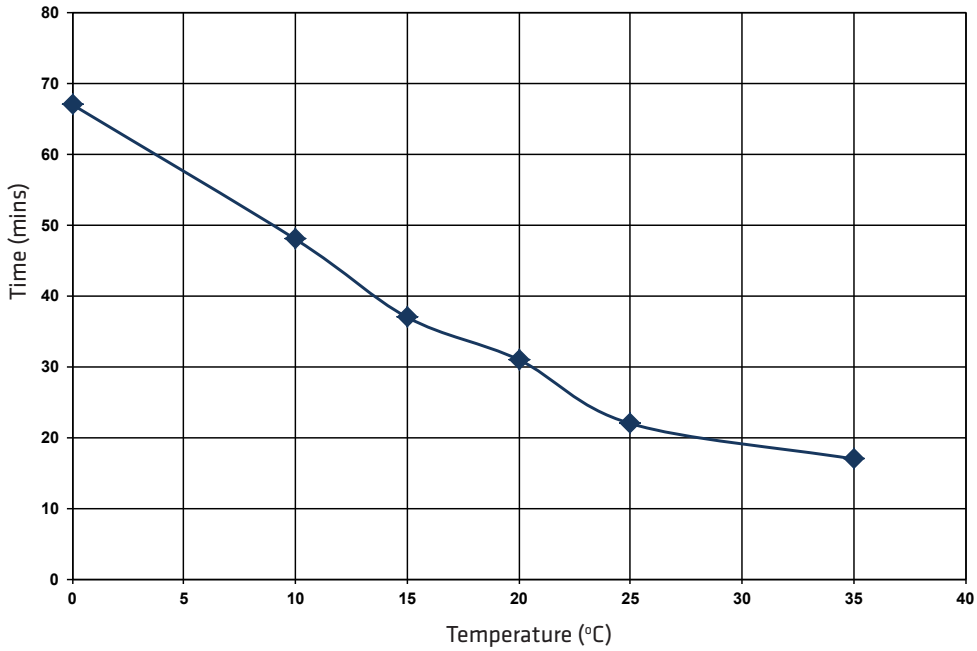
Technical Information

Resin Base - Polyurethane		
1	Type, description and shelf life	Castor oil based polyol, indefinite shelf life
2	Appearance	Brown/beige liquid
3	Viscosity	90 cps @ 20°C
4	Relative density	0.97 g/cm^3 @ 20°C
5	Flash point	>250°C
Hardener - 4,4' diphenylmethane diisocyanate		
1	Shelf life	Two years
2	Appearance	Brown liquid
3	Viscosity	125 cP @ 20°C
4	Relative density	1.24 g/cm^3 @ 20°C
5	Flash point	>250°C
Fillers		
1	Type and description	Mineral fillers - calcium carbonate, glass micro-spheres
2	Proportion by volume	55%
Mixed Systems		
1	Mix ratio	1 resin: 0.26 hardener : 1.96 fillers
2	Viscosity when mixed	20000 cps @ 20°C
3	Gel time	See attached curve
4	Volume contraction during cure	<1%
5	Shelf life	Two years from date of manufacture (as indicated on packaging)
Physical Properties		
1	Relative density	1.48 g/cm^3 @ 20°C
2	Coefficient of expansion	0.16 x 10^{-3} cm^3/cm^3/°C
3	Tensile strength	1-5 MPa
4	Ultimate elongation	17%
5	Impact strength (Izod)	0.38 J/m
6	Water absorption	<1% (24 hour water boil)
7	Adhesion in shear to XLPE	0.62 N/mm^2
8	Continuous operating temperature	95°C
9	Thermal conductivity	0.4 W/m°C
Electrical Properties		
1	Volume resistivity	1 x 10^{12} ohm.m @ 20°C
2	Dielectric strength (1mm sphere gap)	7 kV/mm @ 20°C

Temperature effect on gel time - three part LDPU



Temperature effect on backfill time - three part LDPU



Mixing Instructions

Step 1

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1. Open bucket and remove all contents. Check foil bag for any signs of damage before proceeding.

Step 2

2. To start the mixing process hold the bag as shown by the hardener (small) compartment.

Step 3

3. Squeeze the hardener through the membrane into the resin (large) compartment.

Step 4

4. Ensure that the membrane is completely open along full pouch length.

Step 5

5. Tumble and knead the bag to mix the two liquids for up to two minutes.

Step 6

6. Cut the corner off the pouch and pour into empty bucket

Step 7

7. Commence mixing with paddle. Add the remaining sand and mix until all sand is wet out.

Step 8

8. Pour fully mixed resin from the bucket into the joint shell.

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