Prysmian Group

JEM

THORNE & DERRICK INTERNATIONAL

Thorne & Derrick
+44 (0) 191 410 4292
www.powerandcables.com

Jem Resin

JEM Resin was developed to meet the growing concerns regarding exposure to isocyanates in the workplace. JEM is a non-isocyanate system with all the technical performance characteristics of conventional resins but with additional features and benefits.

Features and benefits

- Low viscosity (very searching, no voids, easier mixing)
- Easy mixing at low ambient temperatures (e.g. -15°C)
- Curing reaction not sensitive to moisture (will cure under water)
- Filled joints may be energised immediately if undisturbed
- Supplied in clear pouches which allows mixing to be observed in process
- Excellent adhesion to XLPE, PVC, Lead etc.
- Type approved in LV joints (ENA TS C81/3 and BS EN 50393).
- Tested in accordance with HD631.1
- Re-enterable version available.

PRYSMIAN Draka

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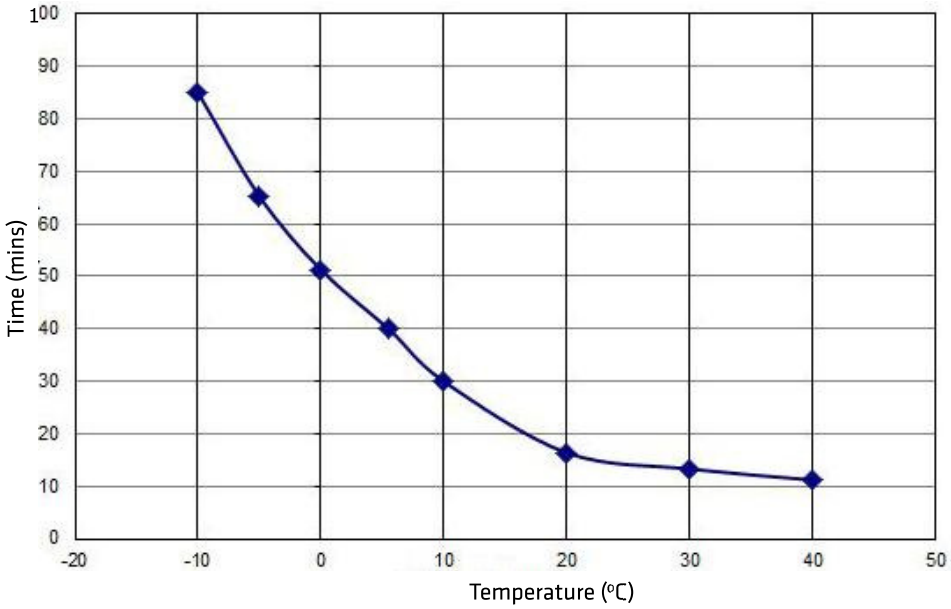
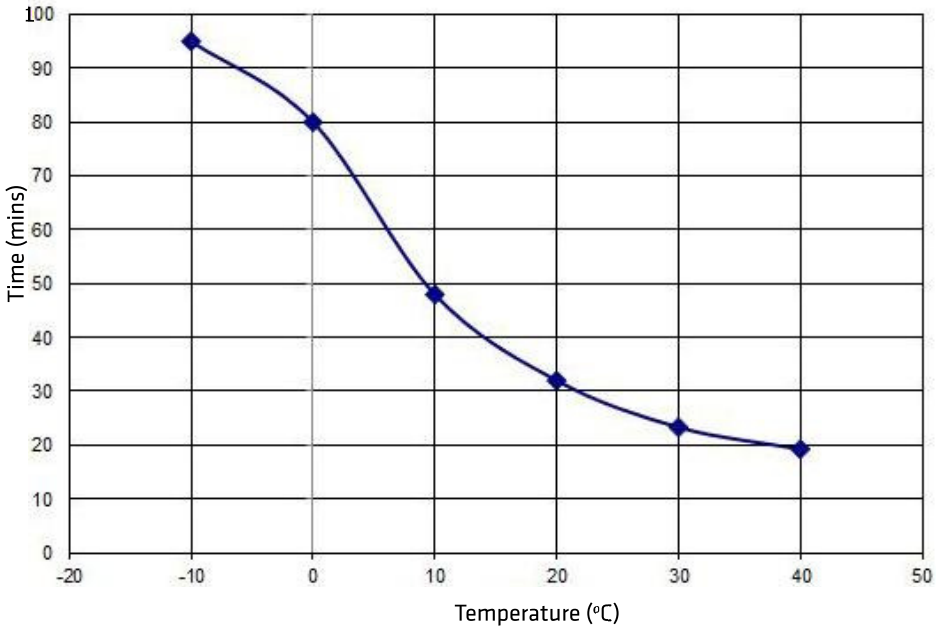
Performance Data

Properties of Resin		
1	Type	Low hazard, isocyanate free
2	Appearance/colour	Grey/brown fluid when mixed
3	Viscosity of mixture @ 5°C	3700 mPa.s
4	Relative density	2.0 g/cm^3 @ 25°C
5	Flash point	>110°C
6	Non-volatile content	85%
7	Storage conditions	Away from direct sunlight, <50°C
Application Properties		
1	Mixing ratio - (by weight)	5.6 powder: 1 liquid
2	Flash point	>110°C
3	Pot life	16 mins @ 5°C 5 mins @ 40°C
4	Gel time	15 mins (0.5 litre @ 25°C)
5	Peak exothermic temperature (0.5 litres)	35°C @ 5°C 70°C @ 40°C
6	Complete cure time	24 hours @ 25°C
Performance Properties		
1	Colour of mixture	Grey/Brown
2	Class of resin	Methacrylate
3	Water absorption rate	0.011% @ 24 hrs, 25°C 0.8% @ 42 days, 50°C
4	Hardness	74 Shore A
5	Volume shrinkage after curing	<1.0%
6	Tensile strength	2.5 N/mm^2
7	Ultimate elongation	50%
8	Impact strength	No break
9	Volume resistivity	5.0 x 10^{13} Ohm.cm @ 20°C 7.4 x 10^{11} Ohm.cm @ 90°C
10	Surface resistivity	1 x 10^{13} Ohms
11	Dielectric strength	9.3 KV/mm
12	Thermal conductivity	1.31 W/m.K
13	Maximum continuous operating temperature	95°C
14	Time to energise LV joints (undisturbed)	Immediately
15	Time to energise LV joints (backfilled or moved)	2 hrs
Other Information		
1	Shelf life of the material stored below 35°C in original packaging and away from direct sunlight	Two years from date of manufacture (as indicated on packaging)
2	Expected service life time of joint (year)	Life of cable

Temperature effect on gel time



Temperature effect on backfill time



Mixing Instructions

Step 1

1. Open container and remove JEM Kit. Check bag for any signs of damage before proceeding

Step 2

2. Aerate the powder by gripping the pouch at each end and tumbling the powder for up to thirty seconds, this will facilitate mixing

Step 3

3. To start the mixing process, hold the bag as shown above, so that the **liquid is forced onto the powder**.

Step 4

4. Squeeze the liquid through the membrane seal and onto the powder.

Step 5

5. Make sure that the membrane seal is completely open before mixing the powder and liquid together.

Step 6

6. Before mixing rotate and shake at the corners to free the powder.

Step 7

7. Tumble mix and knead the bag for up to two minutes, to ensure that there are no lumps in the bag.

Step 8

8. Finally cut one corner and pour the contents into the joint shell.

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