

# js-link KDC-803P

## Silane Crosslinkable Polyethylene Compound (XLPE) for Pipe

**js-link KDC-803P** is a HDPE, moisture curable crosslinkable polyethylene compound which is silane system designed to produce pipes to be used for distribution of potable (drinking) water, hot water and chemical fluid.

The XLPE pipes to be produced by KDC-803P possess heat resistance, impact resistance, environmental stress cracking resistance and corrosion resistance.

As the compound contains no fillers, XLPE pipe is flexible and can be rolled into coils.

All components exist within the compound as a one pack system and no premixing except for a color masterbatch, no preheating is required.

The crosslinking of finished pipe is activated in the presence of moisture.

### Properties

Item	Unit	Typical Value	Test Method
Density	g/cm <sup>3</sup>	0.956	ASTM D1505
<b>Finished Pipe</b>			
Gel Content	%	65-80	IEC 540
Hot Set Test (20N/cm <sup>2</sup> at 200C)	%	Hot : 60 Set : 5	IEC 540
Tensile Strength	N/mm <sup>2</sup>	> 15	IEC 540
Elongation at break	%	1000 (25mm/min)	IEC 540
Impact Strength (notched izod)	j/m notch	700 not broken	ASTM D256 (0.25 mm notch)
ESCR	hrs	> 1500	ASTM 01693(A)
Thermal Conductivity	W/m C	0.3-0.5	
Hoop Stress			DIN 16892
° C	N/mm <sup>2</sup>		Time (hrs)
20	12		> 1
95	4.4		> 1000

### **Potable Water Test, Microbiological Growth Test**

Test : Presumptive coliform organisms and pseudomonas aeruginosa growth during 3 weeks.

	Colony forming units per 100 ml	
	Coliform	pseudomonas
Test sample	< 1 x 10	< 1 x 10
Control	< 1 x 10	< 1 x 10

Organoleptic Test	Taste	Water Dour	Color	Turbidity
24 hrs soaking in dechlorinated water	no change	no change	no change	no change
chlorinated (img/lit)	no change	no change	no change	no change
85 C chlorinated 1 <sup>st</sup> extract	slight	slight	no change	no change
final extract	no change	no change	no change	no change
Toxic Metals Test :	within requirements of UK water fittings quality test on water intended for Human Consumption.			

## **Processing Guide**

### **Extrusion Equipment**

Most extruders suitable for thermoplastics can be used.

L/D ratio : 23/1 – 27/1

Screw compression ratio : 3 : 1

Screen mesh : 30 – 60

### **Processing Temperature in °C**

Feed	Compression	Metering	Neck	Die
140-150	175-185	195-210	220-230	240-250

### **Curing System**

Curing depends on temperature, thickness of insulation, cure time and presence of moisture.

- a. Water (95° C) : 20 hours
- b. Steam (low pressure) : 32 hours
- c.. Ambient (80% RH, 28° C) : 10-15 days. (in sunlight with moisture)

Remark : Silane XLPE pipe will continue to crosslink during water distribution in the pipe.

**Shelf Life** : 6 – 9 months

**Form** : Pellets

**Packing System** : 25 kg paper bag with Aluminium/PE liner inside.

**Storage** : Store in a cool and dry place.

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