



# Metric Pipe Pressure Re-Rating Chart for Water

## Metric Polyethylene Pipe – AS4130 Series 1 – All Diameters

[www.polypipe.com.au](http://www.polypipe.com.au)  
1300 661 417

This chart is used to determine the maximum working pressure and expected life of AS4130 metric polyethylene pipe when it is subjected to temperatures greater than 20°C.

Both the maximum pressure rating and life expectancy of polyethylene pipe are affected by temperature and operation above 40°C is not recommended without further consultation.

### Example

Metric PE80B pipe is to be used above ground where the water supply and pipe can reach temperatures of 40°C. The maximum pressure in the system is 900kPa.

The chart below indicates that PN10 has a maximum pressure rating of 750kPa at 40°C and therefore is clearly not sufficient.

After factoring in a 10% safety margin (990kPa), PN16 can be recommended for this system. At this temperature the pipe has a design life in excess of 50 years.



PE80B		Maximum Working Pressure (kPa) at Various Temperatures				
SDR*	Nominal Pressure Rating	50 yrs				
		20°C	25°C	30°C	35°C	40°C
41	PN3.2	320	300	280	250	240
33	PN4	400	370	350	320	290
21	PN6.3	630	590	550	510	470
17	PN8	800	750	700	640	600
13.6	PN10	1000	940	880	800	750
11	PN12.5	1250	1190	1110	1010	950
9	PN16	1600	1500	1400	1280	1200
7.4	PN20	2000	1890	1760	1610	1510

PE100		Maximum Working pressure (kPa) at Various Temperatures				
SDR*	Nominal Pressure Rating	50 yrs				
		20°C	25°C	30°C	35°C	40°C
41	PN4	400	370	340	320	290
26	PN6.3	630	590	550	500	460
21	PN8	800	740	690	630	580
17	PN10	1000	940	870	800	730
13.6	PN12.5	1250	1180	1100	1010	920
11	PN16	1600	1490	1380	1270	1160
9	PN20	2000	1880	1740	1607	1460
7.4	PN25	2500	2370	2200	2020	1840

\* Standard Dimension Ratio