



UPVC Plastic Pipe



PVC-U JOINTING PROCEDURES

PVC-U cement is gap filling

PVC-U cement softens the inside of the fitting and the outside of the pipe to form a joint chemically. Strength of joint is reduced if surfaces are not cleaned and properly prepared.

1. Cut the pipe end square.
2. Remove burrs and clean out swarf. A chamfer must be filed approx 3mm x 45° (This will prevent the layer of cement being scraped away as the pipe is pushed into the fitting).
3. Use a felt marker pen or pencil to mark the pipe at the distance which will penetrate the socket to the root/stop.
4. Thoroughly clean the surfaces of both pipe and fittings with MEK cleaner on a clean lint-free cloth. Please note it is not necessary to abrade pipe or fitting unless pipes are discoloured/sun bleached.
5. Stir the PVC-U Cement thoroughly.
6. Use a clean brush approximately half as wide as the pipe to be jointed.
Apply cement to the pipe and fittings using longitudinal strokes.
The pipe should have a slightly thicker coating than the fitting.
The prepared areas should be completely covered with cement.
Note: It is important to apply cement quickly to enable assembly without excessive force being required.
7. Immediately after application of cement push pipe fully home into the fitting without rotating.
Hold the pipe and fitting for up to a minute, depending on size, to ensure fitting does not slide off the pipe.
Note: When working under cold conditions ensure the joints are free from frost and moisture and allow extra curing time.
8. Wipe off excess cement from both sides of the joint using a clean lint-free cloth.
9. Replace lids on tins.
10. Clean brush in MEK cleaner.

PRECAUTIONS

The jointing area must be well ventilated

Do not allow a naked flame or smoking in the jointing area

Ensure cement is used prior to its expiry date (shown on bottom of tin)

Wear rubber or latex gloves when applying MEK cleaner and PVC-U cement

Never dilute PVC-U solvent cement

Always replace lids on tins when not in use

Always use clean brushes

Always use clean lint-free cloth or absorbent paper

Use a shelter to keep jointing surfaces dry in wet weather

CEMENT SETTING TIMES

PIPE DIAMETER	UP TO 2"		2 1/2" TO 4"		5" AND ABOVE	
	Up to 10 bar	Up to 16 bar	Up to 10 bar	Up to 16 bar	Up to 10 bar	Up to 16 bar
Temperature >10°C	2 h	4 h	4 h	8 h	8 h	16 h
5°C to 10°C	4 h	8 h	8 h	16 h	16 h	32 h

These times are applicable to Griffon cement.

CEMENT USAGE RECOMMENDATIONS

The following is an estimation of the number of joints likely to be achieved per litre of solvent cement.

NOMINAL BORE	NUMBER OF JOINTS	TYPE AND SIZE OF BRUSH	NUMBER OF PEOPLE
3/8" - 1/2"	300	4mm Round	1
3/4" - 1"	180	8mm Round	1
1 1/4" - 2"	100	1" Flat	1
2 1/2" - 3"	50	2" Flat	1
4"	20	2" Flat	2
5" - 6"	10	3" Flat	2
8"	8	3" Flat	3
10"	3	3" Flat	3
12"	2	3" Flat	3

INSTALLING THREADED FITTINGS

1. Ensure all threads are clean.
2. Apply PTFE tape to the male thread for 1½ turns in a clockwise direction.
3. Screw the female threaded fitting by hand onto the male thread.
4. It should be possible to screw the fitting on by hand for ¾ of the thread length.
5. After tightening by hand add an extra ½ turn with a suitable tool ie strap wrench

PRECAUTIONS

Use PTFE tape only. Do not use thread seal paste or any other jointing compound. Do not force tightening of the joint under any circumstances. For connecting plastic pipework systems to metal pipework systems composite unions and/or flanges must be used.

PVC-U PRESSURE PIPES

MANUFACTURING STANDARDS

Imperial PVC-U products are generally manufactured in accordance with the following standards:

Pipe - EN1452-2

Fittings - EN1452-3 / BS4346 Part 1

Threaded Fittings - BS21, DIN2999, ISO7

Unless otherwise stated PVC-U Pressure Fittings have the following pressure ratings:

Solvent Weld - 3/8" to 8" = Class E/15 bar

Threaded = Class D/12 bar

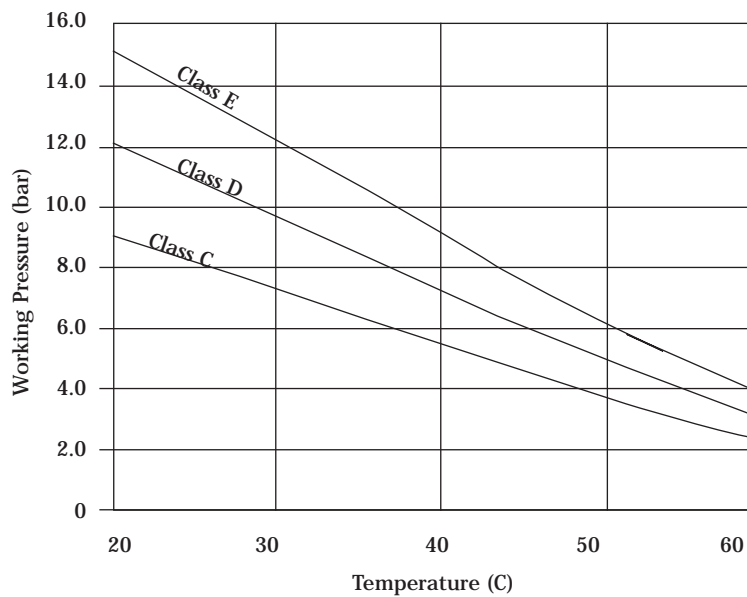
* All quoted at 20°C

PVC-U SYSTEM PRESSURE/TEMPERATURE RELATIONSHIP

Pressure ratings for plastic pipework systems are always quoted at 20°C, it is a fundamental principle of such systems that if the temperature is increased then the pressure rating must be reduced.

PVC-U systems should never be used for temperatures in excess of 60°C.

The following chart gives a rough guide as to the pressure/temperature relationship of PVC-U pipework systems.



In above ground installations it is essential to provide support to ensure that the weight of the pipe and its contents are adequately supported. The recommended maximum support spacings for horizontal runs of PVC-U pipe are given in the table below. Spacings are calculated assuming the pipes are carrying water.

PVC-U PIPEWORK SUPPORT CENTRES

NOMINAL BORE	20°C	25°C	SPACING GIVEN IN METRES				20°C-45°C VERTICAL PIPES
			30°C	35°C	40°C	45°C	
3/8"	0.75	0.67	0.60	0.50	0.40		0.80
1/2"	0.85	0.77	0.70	0.60	0.50		0.90
3/4"	0.90	0.82	0.75	0.65	0.55	0.50	1.00
1"	1.00	0.92	0.85	0.75	0.65	0.57	1.20
1 1/4"	1.10	1.05	1.00	0.90	0.80	0.70	1.40
1 1/2"	1.25	1.20	1.15	1.05	0.95	0.82	1.60
2"	1.40	1.35	1.30	1.20	1.10	0.97	1.80
2 1/2"	1.50	1.45	1.40	1.30	1.20	1.07	2.00
3"	1.65	1.60	1.55	1.45	1.35	1.20	2.20
4"	1.85	1.80	1.75	1.65	1.55	1.37	2.40
5"	2.15	2.10	2.05	1.95	1.85	1.72	2.50
6"	2.25	2.20	2.15	2.07	2.00	1.85	2.50
8"	2.50	2.45	2.40	2.32	2.25	2.12	2.50

PVC-U PRESSURE PIPES

UPVC PRESSURE PIPE TO BS EN 1452-2



SIZE	PART NO	CLASS	PIPE OD mm	WALL mm	PIPE ID mm	Wt (Kg/m)
3/8"	021.P.01EPEA	E	17.1	1.5	14.1	0.09
	021.P.017PEA	7	17.1	3.2	9.5	0.22
1/2"	021.P.02EPEA	E	21.4	1.7	18.0	0.17
	021.P.027PEA	7	21.4	3.7	13.4	0.32
3/4"	021.P.03EPEA	E	26.7	1.9	22.9	0.24
	021.P.037PEA	7	26.7	3.9	18.3	0.44
1"	021.P.04EPEA	E	33.6	2.2	29.2	0.35
	021.P.047PEA	7	33.6	4.5	24.0	0.65
1 1/4"	021.P.05DPEA	D	42.2	2.2	37.8	0.45
	021.P.05EPEA	E	42.2	2.7	36.8	0.55
	021.P.057PEA	7	42.2	4.8	31.8	0.89
1 1/2"	021.P.06DPEA	D	48.3	2.5	43.3	0.59
	021.P.06EPEA	E	48.3	3.1	42.1	0.71
	021.P.067PEA	7	48.3	5.1	37.3	1.10
2"	021.P.07CPEA	C	60.3	2.5	55.3	0.75
	021.P.07DPEA	D	60.3	3.1	54.1	0.90
	021.P.07EPEA	E	60.3	3.9	52.5	1.10
	021.P.077PEA	7	60.3	5.5	48.3	1.50
2 1/2"	021.P.08CPEA	C	75.2	3.6	68.8	1.24
	022.P.07516PEA	E	75.2	5.6	64.0	1.86
3"	021.P.09CPEA	C	88.9	3.5	81.9	1.51
	021.P.09DPEA	D	88.9	4.6	79.7	1.93
	021.P.09EPEA	E	88.9	5.7	77.5	2.37
4"	021.P.10CPEA	C	114.3	4.5	105.3	2.47
	021.P.10DPEA	D	114.3	6.0	102.3	3.24
	021.P.10EPEA	E	114.3	7.3	99.7	3.86
5"	021.P.11CPEA	C	140.2	6.0	128.2	3.71
	022.P.14016PEA	E	140.2	8.3	123.6	6.60
6"	021.P.12CPEA	C	168.3	6.6	155.1	5.30
	021.P.12DPEA	D	168.3	8.8	150.7	6.95
	021.P.12EPEA	E	168.3	10.8	146.7	8.37
8"	021.P.13CPEA	C	219.1	7.8	203.5	8.20
	021.P.13DPEA	D	219.1	10.3	198.5	10.56
	021.P.13EPEA	E	219.1	12.6	193.9	12.50
10"	021.P.14CPEA	C	273.0	9.7	253.6	12.00
	021.P.14DPEA	D	273.0	12.8	247.4	15.80
	021.P.14EPEA	E	273.0	15.7	241.6	18.90
12"	021.P.15CPEA	C	323.9	11.5	300.9	16.60
	021.P.15DPEA	D	323.9	15.2	293.5	22.20
	021.P.15EPEA	E	323.9	18.7	286.5	26.70
14"	021.P.16CPEA	C	355.6	14.1	327.4	20.20
	021.P.16DPEA	D	355.6	18.6	318.4	26.50
	021.P.16EPEA	E	355.6	22.8	310.0	32.00
16"	021.P.17CPEA	C	406.4	14.5	377.4	26.50
	021.P.17DPEA	D	406.4	19.0	368.4	34.60
	021.P.17EPEA	E	406.4	23.4	359.6	41.5
18"	021.P.18CPEA	C	457.2	16.3	424.6	33.3
	021.P.18DPEA	D	457.2	21.4	414.4	43.9
20"	021.P.19CPEA	C	508.0	18.1	471.8	41.5
24"	021.P.20CPEA	C	609.6	21.7	566.2	59.9

PIPE IS SUPPLIED PLAIN ENDED.

PRICE ON APPLICATION FOR OTHER END CONFIGURATIONS IE SPIGOT AND SOCKET/RUBBER RING.

PIPES WITH SPIGOT/SOCKET AND RUBBER RING ENDS MAY BE SUBJECT TO MINIMUM

MANUFACTURING QUANTITIES AND/OR LEAD TIMES.

STANDARD PIPE LENGTH SUPPLIED IS 6 METRES OR 5.8 METRES.

ALL WALL THICKNESSES AND PIPE ID'S ARE APPROXIMATE VALUES.