

PVC IMPERIAL JOINTING PROCEDURES

ABS

U-PVC IMPERIAL

U-PVC METRIC

C-PVC METRIC

POLYPROPYLENE

COMPRESSION FITTINGS

GUIDELINES



ACCESSORIES



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 cement
- Never dilute PVC 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

PVC cement is gap filling.

PVC 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 ends 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 fitting 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 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 as lightly 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 to the stop in 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.

INSTALLING THREADED FITTINGS USING PTFE TAPE

1. Ensure all threads are clean.
2. Apply PTFE Tape to the male thread for 1 1/2 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 2/3 of the thread length.
5. After tightening by hand add an extra 1/2 turn with a suitable tool i.e strap wrench.

PRECAUTIONS

Use PTFE Tape or Kolmat Fibre Tape/Paste. 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.

CEMENT SETTING TIMES

PIPE DIAMETER	UP TO 2"		2 1/2" TO 4"		5" AND ABOVE		
	Temp	Up to 10 bar	Up to 16 bar	Up to 10 bar	Up to 16 bar	Up to 10 bar	Up to 16 bar
>10°C		2 h (4 h)	4 h (8 h)	4 h (8 h)	8 h (16 h)	8 h (24 h)	16 h (-)
5°C to 10°C		4 h (12 h)	8 h (24 h)	8 h (24 h)	16 h (48 h)	16 h (72 h)	32 h (-)

These times are applicable to UNI-100 Griffon cement with UNI-100 XT in brackets.

PIPE DIAMETER	UP TO 1 1/2"			2" TO 4"			5" AND ABOVE			
	Temp	5 bar	10 bar	16 bar	5 bar	10 bar	16 bar	5 bar	10 bar	16 bar
>15°C		15 min	30 min	2 h	30 min	1 h	4 h	2 h	8 h	16 h
5°C to 15°C		30 min	1 h	4 h	1 h	2 h	8 h	4 h	16 h	32 h

These times are applicable to WDF-05 Griffon cement.

- Solvent cement setting times are given for guidance only and can vary depending on a number of factors.

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"	1300	4mm Round	1
3/4" – 1"	650	8mm Round	1
1 1/4" – 2"	160	1" Flat	1
2 1/2"	90	2" Flat	1
3"	70	2" Flat	2
4"	30	3" Flat	2
5" – 6"	20	3" Flat	3
8"	12	3" Flat	3
10"	8	3" Flat	3
12"	4	3" Flat	3

PVC METRIC JOINTING PROCEDURES

MANUFACTURING STANDARDS

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

Pipe – EN1452–2

Fittings – EN1452–3, ISO161/1

Threaded Fittings – BS21, DIN2999, ISO7

Pressure ratings for solvent weld fittings are clearly stated alongside each item in this section.

Threaded fittings are rated at 12 bar.

* All quoted at 20°C

CEMENT SETTING TIMES

PIPE DIAMETER	16 – 63mm		75 – 110mm		125 – 315mm	
Temp	Up to 10 bar	Up to 16 bar	Up to 10 bar	Up to 16 bar	Up to 10 bar	Up to 16 bar
>10°C	2 h (4 h)	4 h (8 h)	4 h (8 h)	8 h (16 h)	8 h (24 h)	16 h (-)
5°C to 10°C	4 h (12 h)	8 h (24 h)	8 h (24 h)	16 h (48 h)	16 h (72 h)	32 h (-)

These times are applicable to UNI-100 Griffon cement with UNI-100 XT in brackets.

PIPE DIAMETER	UP TO 50mm			63 – 125mm			140mm AND ABOVE		
Temperature	5 bar	10 bar	16 bar	5 bar	10 bar	16 bar	5 bar	10 bar	16 bar
>15°C	15 min	30 min	2 h	30 min	1 h	4 h	2 h	8 h	16 h
5°C to 15°C	30 min	1 h	4 h	1 h	2 h	8 h	4 h	16 h	32 h

These times are applicable to WDF–05 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
16mm – 20mm	1300	4mm Round	1
25mm – 32mm	650	8mm Round	1
40mm – 63mm	160	1" Flat	1
75mm	90	2" Flat	1
90mm	70	2" Flat	2
110mm	30	3" Flat	2
140mm – 160mm	20	3" Flat	3
225mm	12	3" Flat	3
280mm	8	3" Flat	3
315mm	4	3" Flat	3

FOR INSTALLATION INSTRUCTIONS SEE PAGE 45-50

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.

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UK Wide Next Day Delivery*

epco customers can place orders up to 5pm for next day delivery to most addresses in the UK*



PVC-U PIPEWORK SUPPORT CENTRES

PIPE OD mm	20°C	25°C	30°C	35°C	40°C	45°C	20°C – 45°C
	SPACING GIVEN IN METRES						VERTICAL PIPES
16	0.75	0.67	0.60	0.50	0.40		0.80
20	0.85	0.77	0.70	0.60	0.50		0.90
25	0.90	0.82	0.75	0.65	0.55	0.50	1.00
32	1.00	0.92	0.85	0.75	0.65	0.57	1.20
40	1.10	1.05	1.00	0.90	0.80	0.70	1.40
50	1.25	1.20	1.15	1.05	0.95	0.82	1.60
63	1.40	1.35	1.30	1.20	1.10	0.97	1.80
75	1.50	1.45	1.40	1.30	1.20	1.07	2.00
90	1.65	1.60	1.55	1.45	1.35	1.20	2.20
110	1.85	1.80	1.75	1.65	1.55	1.37	2.40
140	2.15	2.10	2.05	1.95	1.85	1.72	2.50
160	2.25	2.20	2.15	2.07	2.00	1.85	2.50
225	2.50	2.45	2.40	2.32	2.25	2.12	2.50

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 above. Spacings are calculated assuming the pipes are carrying water.

