



ABS Plastic Pipe



ValvesTubesFittings.com

ABS JOINTING PROCEDURES

ABS pipework systems are designed to have an interference fit and are not designed to be dry fitted. ABS cement is not gap filling. ABS 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 ABS Cement **SLOWLY** but 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 ABS cement

Never dilute ABS 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 6"		8" AND ABOVE	
	Up to 5 bar	Up to 10 bar	Up to 5 bar	Up to 10 bar	Up to 5 bar	Up to 10 bar
Temperature >15°C	2 h	4 h	3 h	6 h	4 h	8 h
5°C to 15°C	4 h	8 h	6 h	12 h	8 h	16 h
0° to +5°C	6 h	12 h	9 h	18 h	12 h	24 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"	400	4mm Round	1
3/4" - 1"	400	8mm Round	1
1 1/4" - 2"	200	1" Flat	1
2 1/2" - 3"	60	2" Flat	1
4"	35	2" Flat	2
5" - 6"	20	3" Flat	2
8"	10	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 ⅓ 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.

ABS PRESSURE PIPES

MANUFACTURING STANDARDS

ABS products are generally manufactured in accordance with the following standards:

- Primeline Pipe - BS5391 Part 1
- Fittings - BS5392 Part 1
- Threaded Fittings - BS21, DIN2999, ISO7

Unless otherwise stated ABS Pressure Fittings have the following pressure ratings:

Solvent Weld - 1/2" to 8" = Class E/15 bar

Threaded = Class D/12 bar

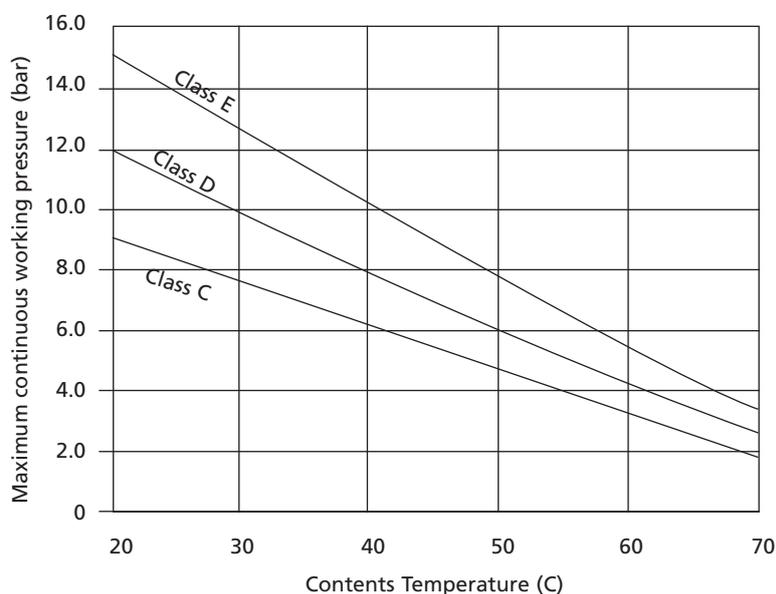
* All quoted at 20°C

ABS 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.

ABS systems should never be used for temperatures in excess of 70°C.

The following chart gives a rough guide as to the pressure/temperature relationship of ABS 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 following recommended maximum spacings are for ABS pipes operating under the following conditions:

1. Fluid density of not more than 1g/cm³
2. PN15 pipe
3. Horizontal pipe runs

ABS PIPEWORK SUPPORT CENTRES

NOMINAL BORE	20°C 50°C 70°C		
	SPACING GIVEN IN METRES		
3/8"	0.8	0.5	0.4
1/2"	0.9	0.6	0.5
3/4"	1.0	0.7	0.6
1"	1.1	0.8	0.7
1 1/4"	1.2	0.9	0.7
1 1/2"	1.3	1.0	0.7
2"	1.4	1.1	0.8
2 1/2"	1.5	1.2	0.8
3"	1.6	1.2	0.9
4"	1.8	1.3	1.0
5"	2.0	1.5	1.1
6"	2.1	1.6	1.2
8"	2.3	1.8	1.5

FOR VERTICAL PIPE RUNS SPACING SHOULD BE INCREASED BY 50%.

DIMENSIONS IN MM

NOMINAL BORE	MEAN O.D.
1/2"	21.4
3/4"	26.7
1"	33.6
1 1/4"	42.2
1 1/2"	48.3
2"	60.3
2 1/2"	75.2
3"	88.9
4"	114.3
5"	140.2
6"	168.3
8"	219.1

ABS PRESSURE PIPES

ABS PRESSURE PIPE TO BS 5391-1



SIZE	PART NO	CLASS	PIPE OD mm	WALL mm	PIPE ID mm	Wt (Kg/m)
3/8"	011.P.01EPE	E	17.1	1.7	13.7	0.09
1/2"	011.P.02EPE	E	21.4	2.0	17.4	0.13
	011.P.02TPE	T	21.4	3.6	14.2	0.22
3/4"	011.P.03EPE	E	26.7	2.5	21.7	0.20
	011.P.03TPE	T	26.7	3.6	19.5	0.28
1"	011.P.04CPE	C	33.6	2.0	29.6	0.21
	011.P.04EPE	E	33.6	3.1	27.4	0.31
	011.P.04TPE	T	33.6	4.3	25.0	0.43
1 1/4"	011.P.05CPE	C	42.2	2.5	37.2	0.32
	011.P.05EPE	E	42.2	3.9	34.4	0.49
	011.P.05TPE	T	42.2	5.3	31.6	0.65
1 1/2"	011.P.06CPE	C	48.3	2.8	42.7	0.42
	011.P.06EPE	E	48.3	4.5	39.3	0.64
	011.P.06TPE	T	48.3	6.0	36.3	0.85
2"	011.P.07CPE	C	60.3	3.6	53.1	0.67
	011.P.07EPE	E	60.3	5.6	49.1	1.00
	011.P.07TPE	T	60.3	7.2	45.9	1.28
2 1/2"	011.P.08CPE	C	75.2	5.0	65.2	1.14
3"	011.P.09CPE	C	88.9	5.2	78.5	1.40
	011.P.09EPE	E	88.9	8.3	72.3	2.16
4"	011.P.10CPE	C	114.3	6.6	101.1	2.32
	011.P.10EPE	E	114.3	10.6	93.1	3.59
5"	011.P.11CPE	C	140.2	9.3	121.6	3.97
6"	011.P.12CPE	C	168.3	9.9	148.5	5.12
	011.P.12DPE	D	168.3	12.8	142.7	6.50
8"	011.P.13CPE	C	219.1	12.7	193.7	8.57

PIPE IS SUPPLIED PLAIN ENDED
STANDARD PIPE LENGTH SUPPLIED IS 6 METRES OR 5.8 METRES
ALL WALL THICKNESSES AND PIPE ID'S ARE APPROXIMATE VALUES.