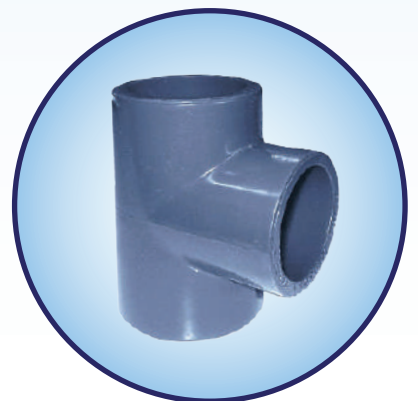
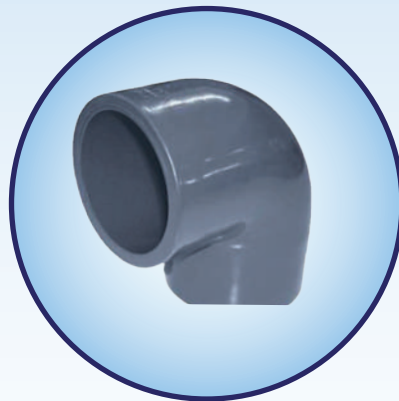
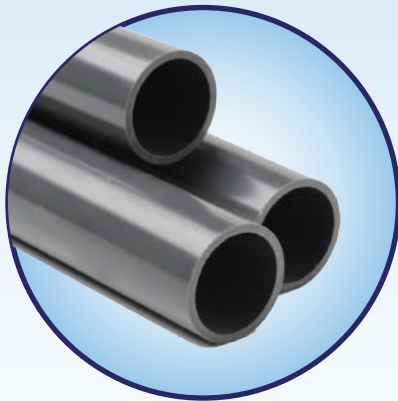




UPVC Pipes & Fittings



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Company Profile

Prime Plastic Industry LLC is one of the manufacturer of UPVC pipes system located in UAE having manufacturing facility in the emirates of Umm Al Quwain.

Prime Plastic Industry is an ISO 9001: 2015, ISO 14001: 2015 and ISO 45001: 2018 certified company and is ever committed to delivering quality products and services to the customer.



Product Profile

Prime UPVC Pipes and Fittings are ideally suited for variety applications where high quality and durable pipe work system required..

- ◆ Drinking Water Networks
- ◆ Under Ground Water Distribution Networks
- ◆ Under Ground Drainage Networks
- ◆ Drainage Installations between Manholes
- ◆ Irrigations Networks for Landscaping & Farm Jobs
- ◆ Aquaculture Networks
- ◆ Air Coditioning Drain Systems
- ◆ Industrial & Chemical Applications
- ◆ Swimming Pool, Water Features, Jacuzzi & Water Fountains, Lining & Waste Water Networks

Prime offers a complete range of imperial and metric size UPVC pipes and fittings and satisfy the requirment of installers and specifiers.

Standards and Approvals

Prime UPVC high pressure pipes are manufactured as per the follwing standards.

◆ Imperial Standard (Inch Size)

High Pressure Pipes : BSEN 1452-2:2009 (This standard supercedes BS 3505 : 1986)

High Pressure Fittings : BSEN 1452-3:2010 (This standard supercedes BS 4346-3 : 1882)

Threaded Joints are as per BS 21 & ISO 7-1

◆ Metric Standard (Millimeter Size)

High Pressure Pipes : DIN 8061/8062

High Pressure Fittings : DIN 8063

◆ Colour & Length

The colour of the pipe dark grey, grey, orange & white. The fittings colours is dark grey and all pipes are manufactured in 4mtr, 5.80mtr & 6.00mtr length.

All pipes sizes are supplied with plain ends, solvent socketed & push fits (R/R).



General Properties of UPVC

Composition

Unplasticized polyvinyl chloride K67 (PVC-U) is alloyed with Calcium Zinc stabilizer and Filler. Therefore our PVC pipes does not contains any Lead.

UPVC Pipes & fittings are recomended/edible for drinking water networks by authorities due to absence of Lead, long life time & reprocessing after that.

Sr	Properties	Value	Unit
1	Density	1.42 - 1.45	G/cm ³
2	Thermal Conductivity	1.60	W/m°C
3	Specific Heat	1100	J/Kg/°C
4	Elastic Limit	35-52	Mpa
5	Tensile Strength	30-70	Mpa
6	Compressive Strength	55-60	Mpa
7	Poissons Ratio	0.38 - 0.43	

Mechanical, Physical, Characteristics of UPVC Pipes

Sr.	Characteristics	Parameters	Test Method
1	Resistance to Internal Pressure	At 20°C, 42Mpa for 1 hr	ISO 1161-1
2	Impact Strength	True Impact Rate < 10%	EN 744
3	Vicat Softening Temperature	> 80°C	ISO 2507-1
4	Longitudinal Reversion	< 5% at 150°C	ISO 2505
5	Resistance to Dichloromethane	No attack at any part of test piece	ISO 9852
6	Opacity	at 15°C. The wall of the pipe shall be opaque and shall not transmit more than 0.2 %	ISO 7686

Mechanical, Physical, Characteristics of UPVC Fittings

Sr.	Characteristics	Parameters	Test Method
1	Resistance to Internal Pressure	At 20°C , 3.36XPN for 1 hr	ISO 1161-1
2	Vicat Softening Temperature	> 74°C	ISO 2507-1
3	Effect on Heating	At 150°C 1 hr depth of crack, delamination	ISO 2505
4	Opacity	< 30% of wall thickness shall not transmit more than 0.2 % of visible light	Method B : Air ISO 7686

Quality Control

The Quality Assurance Laboratory

of Prime is equipped with state-of-the art equipment and staffed with trained quality control inspectors. The laboratory performs 'round the clock' testing on products manufactured at our factories to ensure that quality is guaranteed. A continuous rigorous type test program is carried out including process verification and long term pressure testing to ensure our fullest commitment to the highest industry quality standards.

We ensure the quality requirements of the client are met at every stage. This is typically by way of project-specific Inspection and Test Plan. We have a comprehensive Quality Control system that monitors every stage of production from receipt of raw materials to product delivery.

Inspection & Testing

The Product quality is continuously monitored during the manufacturing process. Once the manufacturing process starts, visual and metrological checks are carried out by our process machine operators.

Our quality control team validates these checks with random tests and also tests the material composition of the pipes & fittings. This includes taking samples from the raw materials and manufactured Pipes & fittings which are then analyzed and tested

All checks are carried out in accordance with national & international specified standards and guidelines



Working Temperature & Pressure

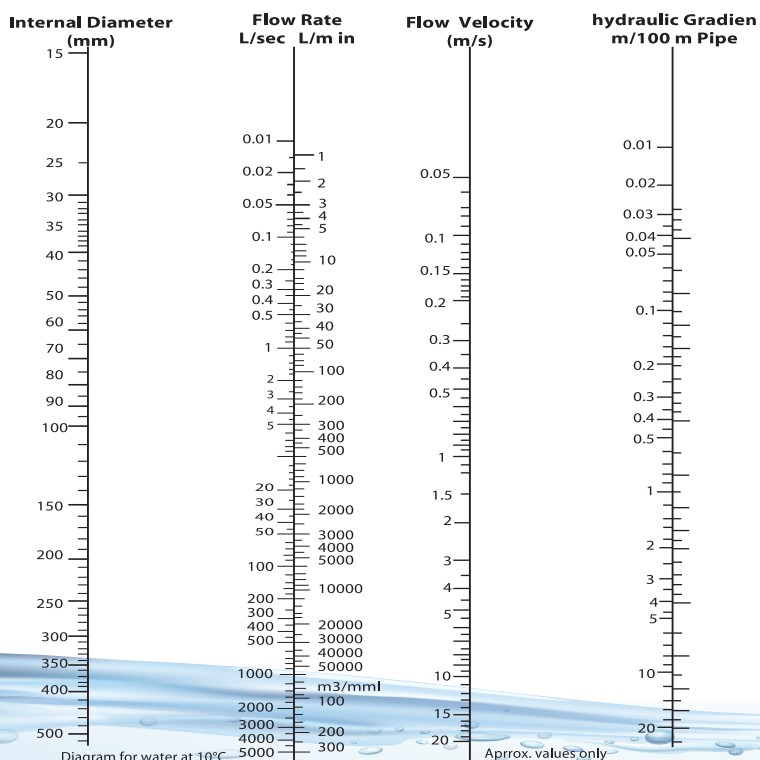
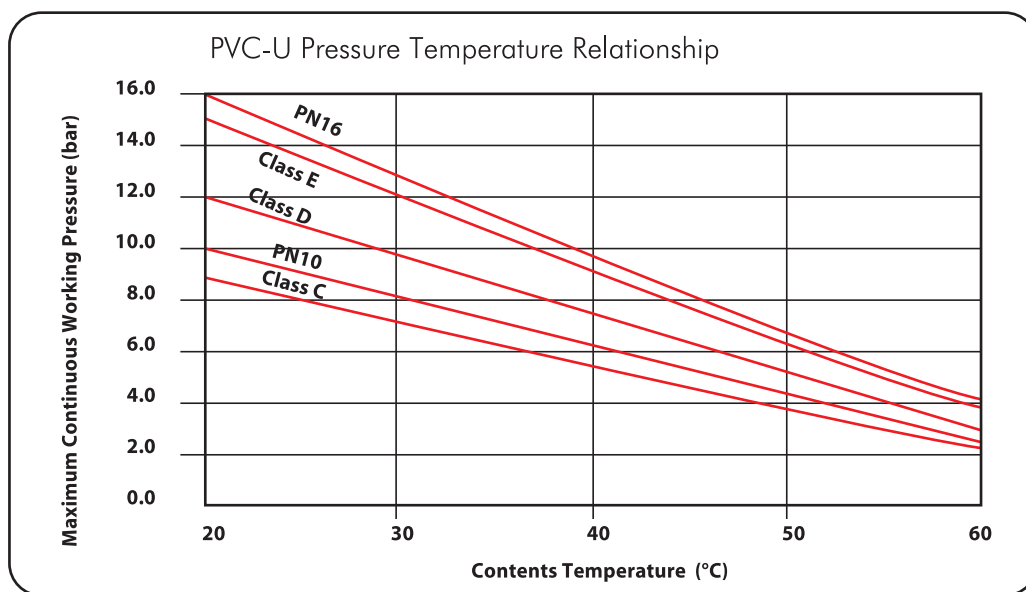
Working Temperature

Prime UPVC pipes and fittings are recommended for applications where operating temperature is in between 5 to 60°C.

Working Pressure

The working pressure of UPVC pipes and fittings is decided as per the manufacturing standard of the subjected pipe.

At temperature above 20°C the operating pressure is reduced as shown in the below graph.



Flow Calculations

Pressure Drop in pipes

Pressure drop due to friction of practical purposes can be determined using the Flow Nomogram diagram.



Pipe Support Centers

Pipe supports and clips should provide lateral restraint and allow free, unrestricted, axial pipe movement. The recommended distance between supports for UPVC pipes filled with water is given in the following table.

Pipe Size	Support Distance at 20°C (In m)	Support Distance at 50°C
20mm/1/2"	0.9	0.6
25mm/3/4"	1.0	0.7
32mm/ 1"	1.1	0.8
40mm/ 1 1/4"	1.2	0.9
50mm /1 1/2"	1.3	1.0
63mm/2"	1.4	1.1
75mm/ 2 1/2"	1.5	1.2
90mm/3"	1.6	1.3
110mm/ 4"	1.9	1.3
160mm/ 6"	2.3	1.6

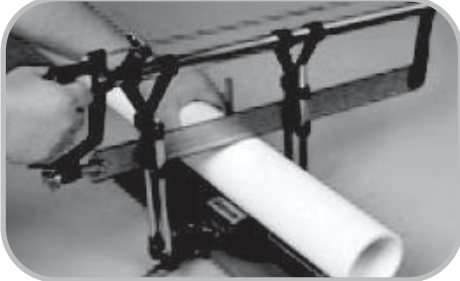
Instruction for Use

When working with the PVC Pipes manufactured by us , employee should be familiar with the appropriate installation methods used for this type of products. Applicable local and national laws and regulations must be observed. Before installation, ensure that the PVC pipes is suited to the intended application. This should include visually checking the product for defects. Do not use pipes that are unsuitable or external defects. Installation should be carried out in a manner that avoids damage, defects or permanent deformation.



Assembly Instructions for Solvent Cement Joining

1



Cut the pipe at 90° angle to the pipe axis using suitable sharp pipe cutter.

2



Remove the burrs from the outside and inside of the pipe.

3



Clean the pipe with dry cloth, in order to avoid any dust or sand that might effect the quality of the joint.

4



Do not allow the primer to run down inside of the fitting and pipe.

5



Apply even layer of solvent cement to the pipe equal to fitting socket depth and fitting upto to the socket length.

6



Do not allow the solvent cement to run down inside of the fitting and pipe.

7



Immediately while cement is still wet asseble the pipe and fitting.

8



Remove the excecuss cement from the pipe and fitting.

9

Handle newly assembled carefully untill initial set has taken place.

10

Same procedure can follow for the pipe to socket joining also.

We recommend NSF Certified Kalister Solvent Cements for Optimum Results

High Pressure Pipe Dimensions

Imperial Size Pressure Pipes : BS EN 1452-2: 2009 (Supercedes BS 3505)

Size	Outer Diameter (mm)		Wall Thickness (mm)					
	Min	Max	Class-E / PN-15		Class-D / PN-12		Class-C / PN-9	
			Min	Max	Min	Max	Min	Max
1/2"	21.20	21.50	1.70	2.10	-	-	-	-
3/4"	26.60	26.90	1.90	2.50	-	-	-	-
1"	33.40	33.70	2.20	2.80	-	-	-	-
1 1/4"	42.10	42.40	2.70	3.30	2.20	2.70	-	-
1 1/2"	48.10	48.40	3.10	3.70	2.50	3.00	-	-
2"	60.20	60.50	3.90	4.50	3.10	3.70	2.50	3.00
3"	88.70	89.10	5.70	6.60	4.60	5.40	3.50	4.10
4"	114.10	114.50	7.30	8.40	6.00	6.90	4.50	5.20
6"	168.00	168.50	10.80	12.50	8.80	10.20	6.60	7.60
8"	218.80	219.40	12.60	14.50	10.30	11.90	7.80	9.00
10"	272.60	273.40	15.70	18.10	12.80	14.80		
12"	323.40	324.40	18.70	21.60	15.20	17.50		

Metric Size Pressure Pipes : BS EN 1452-2 : 2009

Size	Outer Diameter (mm)		Wall Thickness (mm)					
	Min	Max	PN-16		PN-10		PN-6	
			Min	Max	Min	Max	Min	Max
20mm	20.00	20.20	1.50	1.90	-	-	-	-
25mm	25.00	25.20	1.90	2.30	-	-	-	-
32mm	32.00	32.20	2.40	2.90	1.60	2.00	-	-
40mm	40.00	40.20	3.00	3.50	1.90	2.30	1.50	1.90
50mm	50.00	50.20	3.70	4.30	2.40	2.90	1.60	2.00
63mm	63.00	63.20	4.70	5.40	3.00	3.50	2.30	2.80
75mm	75.00	75.30	5.60	6.40	3.60	4.20	2.30	2.80
90mm	90.00	90.30	6.70	7.60	4.30	5.00	2.80	3.30
110mm	110.00	110.30	6.60	7.50	4.20	5.00	2.70	3.30
160mm	160.00	160.40	9.50	10.70	6.20	7.10	4.00	4.60
200mm	200.00	200.40	11.90	13.30	7.70	8.70	4.90	5.60
250mm	250.00	250.50	14.80	16.50	9.60	10.80	6.20	7.10
315mm	315.00	315.60	18.70	20.80	12.10	13.60	7.70	8.70
400mm	400.00	400.70	23.70	26.30	15.30	17.10	9.80	11.00

20 TO 90mm PN Based on design coefficient C = 2.5
110 to 400mm PN Based on design coefficient C = 2.00

High Pressure Pipe Dimensions

Metric Size Pressure Pipes : DIN 8061 / 8062

Size	Outer Diameter (mm)		Wall Thickness (mm)					
	Min	Max	PN-16		PN-10		PN-6	
			Min	Max	Min	Max	Min	Max
20mm	20.00	20.20	1.50	1.90	-	-	-	-
25mm	25.00	25.20	1.90	2.30	-	-	-	-
32mm	32.00	32.20	2.40	2.90	1.60	2.00	-	-
40mm	40.00	40.20	3.00	3.50	1.90	2.30	1.80	2.20
50mm	50.00	50.20	3.70	4.30	2.40	2.90	1.80	2.20
63mm	63.00	63.20	4.70	5.40	3.00	3.50	1.90	2.30
75mm	75.00	75.30	5.60	6.40	3.60	4.20	2.20	2.70
90mm	90.00	90.30	6.70	7.60	4.30	5.00	2.70	3.20
110mm	110.00	110.30	8.20	9.30	5.30	6.10	3.20	3.80
160mm	160.00	160.40	11.90	13.30	7.70	8.70	4.70	5.40
200mm	200.00	200.40	14.90	16.60	9.60	10.80	5.90	6.70
225mm	225.00	225.50	16.70	18.60	10.80	12.10	6.60	7.50
250mm	250.00	250.50	18.60	20.70	11.90	13.30	7.30	8.30
280mm	280.00	280.60	20.80	23.10	13.40	15.00	8.20	9.30
315mm	315.00	315.60	23.40	26.00	15.00	16.70	9.2010.40	
355mm	355.00	355.70	26.30	29.90	16.90	18.80	10.4011.70	
400mm	400.00	400.70	29.70	32.90	19.10	21.30	11.7013.10	

Metric Size Pressure Pipes : ISO-161-1

Size	Outer Diameter (mm)		Wall Thickness (mm)					
	Min	Max	PN-16		PN-10		PN-6	
			Min	Max	Min	Max	Min	Max
20mm	20.00	20.20	1.20	1.60	-	-	-	-
25mm	25.00	25.20	1.50	1.90	-	-	-	-
32mm	32.00	32.20	1.90	2.30	-	-	-	-
40mm	40.00	40.20	2.40	2.90	1.60	2.00	-	-
50mm	50.00	50.20	3.00	3.60	2.00	2.50	1.30	1.70
63mm	63.00	63.20	3.80	4.40	2.50	3.00	1.60	2.20
75mm	75.00	75.30	4.50	5.20	2.90	3.40	1.90	2.30
90mm	90.00	90.30	5.40	6.20	3.50	4.10	2.20	2.70
110mm	110.00	110.30	6.60	7.50	4.20	4.90	2.70	3.20
160mm	160.00	160.40	9.50	10.70	6.20	7.10	4.00	4.70
200mm	200.00	200.40	11.90	13.30	7.70	8.70	4.90	5.60
250mm	250.00	250.50	14.80	16.50	9.60	10.80	6.20	7.10
315mm	315.00	315.60	18.70	20.80	12.10	13.60	7.70	8.70
400mm	400.00	400.70	23.70	26.30	15.30	17.10	9.8011.00	

ASTM D 1785: SCHEDULE 40 & 80

Nominal Size	Mean Outside Diameter (mm)		Wall Thickness (mm) & Pressure Rating (PSI)					
			Schedule 40			Schedule 80		
Inch	MIN.	MAX.	MIN.	MAX.	PSI	MIN.	MAX.	PSI
1/2	21.24	21.44	2.77	3.28	600	3.73	4.24	850
3/4	26.57	26.77	2.87	3.38	480	3.91	4.42	690
1	33.27	33.53	3.36	3.89	450	4.55	5.08	630
1 1/4	42.03	42.29	3.56	4.06	370	4.85	5.44	520
1 1/2	48.11	48.41	3.68	4.19	330	5.08	5.69	470
2	60.17	60.47	3.91	4.42	280	5.54	6.20	400
3	88.70	89.10	5.49	6.15	260	7.62	8.53	370
4	114.07	114.53	6.02	6.73	220	8.56	9.58	320
6	168.00	168.56	7.11	7.98	180	10.97	12.29	280
8	218.70	219.46	8.18	9.17	160	12.70	14.22	250

Standard Length : 4, 5.8 & 6 meters
 Colour : Schedule 40 - white & schedule 80 - dark grey
 Socket Type : Solvent Weld
 Note: will be Manufactured as PVC - 1 120

ASTM D 2241 : SDR Series

Nominal Size	Mean Outside Diameter (mm)		Wall Thickness (mm) & Pressure Rating (BAR)											
			SDR 41 100 PSI		SDR 32.5 125 PSI		SDR 26 160 PSI		SDR 21 200 PSI		SDR 17 250 PSI		SDR 13.5 315 PSI	
Inch	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/2	21.24	21.44											1.57	2.08
3/4	26.57	26.77							1.52	2.03	1.57	2.08	1.98	2.49
1	33.27	33.53					1.52	2.03	1.60	2.11	1.96	2.46	2.46	2.97
1 1/4	42.03	42.29			1.52	2.03	1.63	2.13	2.01	2.52	2.49	3.00	3.12	3.63
1 1/2	48.11	48.41			1.52	2.03	1.85	2.36	2.29	2.80	2.84	3.35	3.58	4.09
2	60.17	60.47			1.85	2.36	2.31	2.82	2.87	3.38	3.56	4.06	4.47	4.98
3	88.70	89.10	2.16	2.67	2.74	3.25	3.43	3.94	4.24	4.75	5.23	5.87	6.58	7.37
4	114.07	114.53	2.80	3.30	3.51	4.01	4.39	4.90	5.44	6.10	6.73	7.54	8.46	9.47
6	168.00	168.56	4.11	4.62	5.18	5.79	6.48	7.26	8.03	9.00	9.91	11.10	12.47	13.97
8	218.70	219.46	5.33	5.97	6.73	7.54	8.43	9.45	10.41	11.66	12.90	15.45		

Standard Length : 5, 8 & 6 meters
 Colour : White
 Socket Type : Solvent Weld
 Note: will be Manufactured as PVC - 1 120

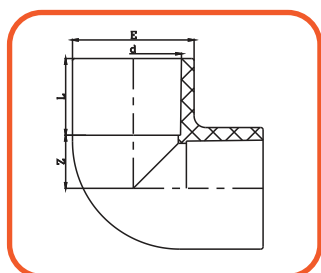
$$SDR = \frac{\text{OUTSIDE DIAMETER}}{\text{MINIMUM WALL THICKNESS}}$$

High Pressure Fittings

Imperial (Inch) Size Class-E/PN-15 As per BSEN 1452-3



Elbow 90°



SIZE	d	L	Z	E	CODE	PACKING
1/2"	21.3	17	11	26	PRHPF90E0.5IG	450
3/4"	26.7	20	14	32	PRHPF90E0.75IG	250
1"	33.5	23	17	39	PRHPF90E1IG	150
1 1/4"	42.2	27	23	50	PRHPF90E1.25IG	100
1 1/2"	48.2	32	26	58	PRHPF90E1.5IG	60
2"	60.3	39	33	73	PRHPF90E2IG	65
2 1/2"	75.1	44	39	90	PRHPF90E75MG	30
3"	88.8	51	47	106	PRHPF90E3IG	20
4"	114.2	65	57	130	PRHPF90E4IG	11
6"	168.2	90	82	198	PRHPF90E6IG	3

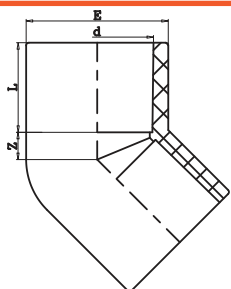
Metric Size PN-16 As per DIN 8063

SIZE	d	L	Z	E	CODE	PACKING
20mm	20.1	17	11	26	PRHPF90E20MG	650
25mm	25.1	20	14	32	PRHPF90E25MG	350
32mm	32.1	23	17	39	PRHPF90E32MG	200
40mm	40.1	27	23	50	PRHPF90E40MG	100
50mm	50.1	32	26	58	PRHPF90E50MG	50
63mm	63.1	39	33	73	PRHPF90E63MG	60
75mm	75.1	44	39	90	PRHPF90E75MG	30
90mm	90.1	51	47	106	PRHPF90E90MG	20
110mm	110.1	65	57	130	PRHPF90E110MG	11
160mm	160.2	90	82	185	PRHPF90E160MG	3

Imperial (Inch) Size Class-E/PN-15 As per BSEN 1452-3



Elbow 45°



SIZE	d	L	Z	E	CODE	PACKING
1/2"	21.3	17	5	26	PRHPF45E0.5IG	700
3/4"	26.7	20	6	32	PRHPF45E0.75IG	400
1"	33.5	23	8	39	PRHPF45E1IG	250
1 1/4"	42.2	27	10	50	PRHPF45E1.25IG	125
1 1/2"	48.2	32	12	58	PRHPF45E1.5IG	75
2"	60.3	39	14	73	PRHPF45E2IG	80
2 1/2"	75.1	44	17	90	PRHPF45E75MG	35
3"	88.8	51	20	106	PRHPF45E3IG	25
4"	114.2	65	24	130	PRHPF45E4IG	12
6"	168.2	90	35	198	PRHPF45E6IG	5

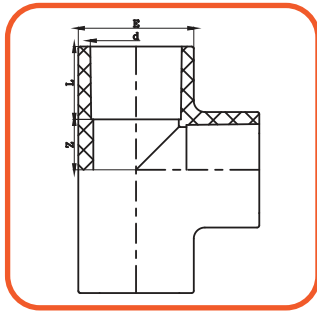
Metric Size PN-16 As per DIN 8063

SIZE	d	L	Z	E	CODE	PACKING
20mm	20.1	17	5	26	PRHPF45E20MG	700
25mm	25.1	20	6	32	PRHPF45E25MG	400
32mm	32.1	23	8	39	PRHPF45E32MG	250
40mm	40.1	27	10	50	PRHPF45E40MG	125
50mm	50.1	32	12	58	PRHPF45E50MG	60
63mm	63.1	39	14	73	PRHPF45E63MG	80
75mm	75.1	44	17	90	PRHPF45E75MG	35
90mm	90.1	51	20	106	PRHPF45E90MG	25
110mm	110.1	65	24	130	PRHPF45E110MG	12
160mm	160.2	90	35	185	PRHPF45E160MG	5

High Pressure Fittings



Tee



Imperial (Inch) Size Class-E/PN-15 As per BSEN 1452-3

SIZE	d	L	Z	E	CODE	PACKING
1/2"	21.3	17	11	26	PRHPFT0.5IG	250
3/4"	26.7	20	14	32	PRHPFT0.75IG	150
1"	33.5	23	17	39	PRHPFT1IG	100
1 1/4"	42.2	27	23	50	PRHPFT1.25IG	70
1 1/2"	48.2	32	26	58	PRHPFT1.5IG	45
2"	60.3	39	33	73	PRHPFT2IG	45
2 1/2"	75.1	44	39	90	PRHPFT2.5MG	25
3"	88.8	51	47	106	PRHPFT3IG	17
4"	114.2	65	57	130	PRHPFT4IG	7
6"	168.2	90	82	198	PRHPFT6IG	2

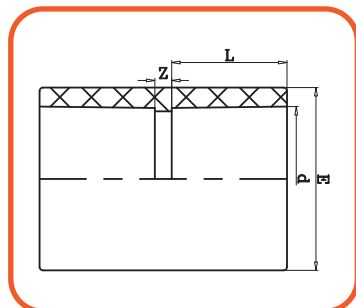
Metric Size PN-16 As per DIN 8063

SIZE	d	L	Z	E	CODE	PACKING
20mm	20.1	17	11	26	PRHPFT20MG	400
25mm	25.1	20	14	32	PRHPFT25MG	250
32mm	32.1	23	17	39	PRHPFT32MG	125
40mm	40.1	27	23	50	PRHPFT40MG	70
50mm	50.1	32	26	58	PRHPFT50MG	35
63mm	63.1	39	33	73	PRHPFT63MG	40
75mm	75.1	44	39	90	PRHPFT75MG	25
90mm	90.1	51	47	106	PRHPFT90MG	17
110mm	110.1	65	57	130	PRHPFT 110MG	7
160mm	160.2	90	82	185	PRHPFT160MG	2

Imperial (Inch) Size Class-E/PN-15 As per BSEN 1452-3



Socket



SIZE	d	L	Z	E	CODE	PACKING
1/2"	21.3	17	3	26	PRHPFS0.5IG	600
3/4"	26.7	20	3	32	PRHPFS0.75IG	300
1"	33.5	23	3	39	PRHPFS1IG	250
1 1/4"	42.2	27	3	50	PRHPFS1.25IG	180
1 1/2"	48.2	32	3	58	PRHPFS1.5IG	120
2"	60.3	39	3	73	PRHPFS2IG	60
2 1/2"	75.1	44	4	90	PRHPFS75MG	70
3"	88.8	51	5	106	PRHPFS3IG	42
4"	114.2	65	6	130	PRHPFS4IG	15
6"	168.2	90	8	198	PRHPFS6IG	7

Metric Size PN-16 As per DIN 8063

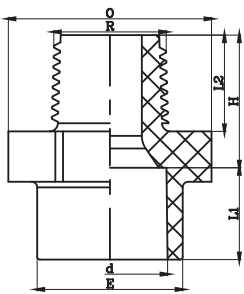
SIZE	d	L	Z	E	CODE	PACKING
20mm	20.1	17	3	26	PRHPFS20MG	600
25mm	25.1	20	3	32	PRHPFS25MG	450
32mm	32.1	23	3	39	PRHPFS32MG	250
40mm	40.1	27	3	50	PRHPFS40MG	180
50mm	50.1	32	3	58	PRHPFS50MG	100
63mm	63.1	39	3	73	PRHPFS63MG	50
75mm	75.1	44	4	90	PRHPFS75MG	70
90mm	90.1	51	5	106	PRHPFS90MG	42
110mm	110.1	65	6	130	PRHPFS110MG	15
160mm	160.2	90	8	185	PRHPFS160MG	7

High Pressure Fittings

Imperial (Inch) Size Class-E/PN-15 As per BSEN 1452-3



Male Adaptor



SIZE	d	L1	R	L2	O	CODE	PACKING
1/2"	21.3	17	1/2"	17	37	PRHPFMA0.5IG	750
3/4"	26.7	20	3/4"	19	41	PRHPFMA0.75IG	500
1"	33.5	23	1"	22	46	PRHPFMA1IG	250
1 1/4"	42.2	27	1 1/4"	24	55	PRHPFMA1.25IG	150
1 1/2"	48.2	32	1 1/2"	25	65	PRHPFMA1.5IG	120
2"	60.3	39	2"	29	80	PRHPFMA2IG	120
2 1/2"	75.1	44	2 1/2"	31	90	PRHPFMA75X2.5MG	80
3"	88.8	51	3"	34	105	PRHPFMA3IG	50
4"	114.2	65	4"	40	130	PRHPFMA4IG	20

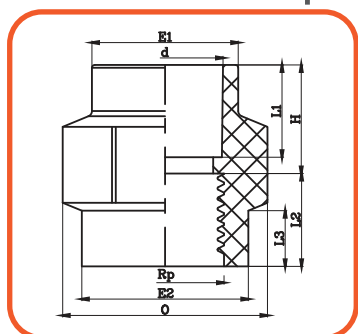
Metric Size PN-16 As per DIN 8063

SIZE	d	L1	R	L2	O	CODE	PACKING
25/20mm	20.1	17	1/2"	17	37	PRHPFMA20X0.5MG	750
32/25mm	25.1	20	3/4"	19	41	PRHPFMA25X0.75MG	500
40/32mm	32.1	23	1"	22	46	PRHPFMA32X1MG	250
50/40mm	40.1	27	1 1/4"	24	55	PRHPFMA40X1.25MG	150
63/50mm	50.1	32	1 1/2"	25	65	PRHPFMA50X1.5MG	120
75/63mm	63.1	39	2"	29	80	PRHPFMA63X2MG	120
90/75mm	75.1	44	2 1/2"	31	90	PRHPFMA75X2.5MG	80
110/90mm	90.1	51	3"	34	105	PRHPFMA90X3MG	50
110mm	110.1	65	4"	40	130	PRHPFMA110X4MG	20

Imperial (Inch) Size Class-E/PN-15 As per BSEN 1452-3



Female Socket Adaptor

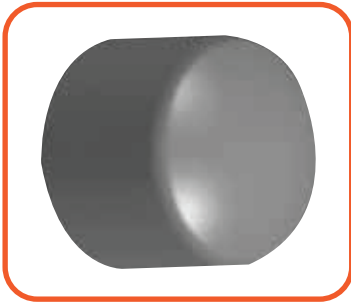


SIZE	d	L1	RP	L2	O	CODE	PACKING
1/2"	213	17	1/2"	17	36	PRHPFFS0.5IG	600
3/4"	267	20	3/4"	18	40	PRHPFFS0.75IG	350
1"	335	23	1"	20	50	PRHPFFS1IG	250
1 1/4"	422	27	1 1/4"	22	59	PRHPFFS1.25IG	125
1 1/2"	482	32	1 1/2"	25	70	PRHPFFS1.5IG	90
2"	603	39	2"	28	85	PRHPFFS2IG	100
2 1/2"	75.1	44	2 1/2"	31	90	PRHPFFS75X2.5MG	75
3"	88.8	51	3"	34	104	PRHPFFS3IG	50
4"	114.2	65	4"	40	130	PRHPFFS4IG	20

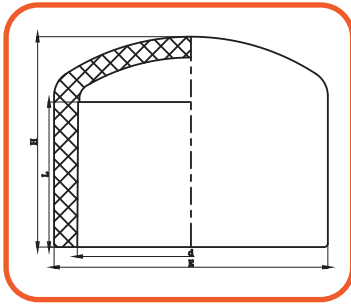
Metric Size PN-16 As per DIN 8063

SIZE	d	L1	RP	L2	O	CODE	PACKING
25/20mm	20.1	17	1/2"	17	36	PRHPFFS20X0.5MG	600
32/25mm	25.1	20	3/4"	18	40	PRHPFFS25X0.75MG	350
40/32mm	32.1	23	1"	20	50	PRHPFFS32X1MG	250
50/40mm	40.1	27	1 1/4"	22	59	PRHPFFS40X1.25MG	125
63/50mm	50.1	32	1 1/2"	25	70	PRHPFFS50X1.5MG	90
75/63mm	63.1	39	2"	28	85	PRHPFFS63X2MG	100
90/75mm	75.1	44	2 1/2"	31	90	PRHPFFS75X2.5MG	75
110/90mm	90.1	51	3"	34	104	PRHPFFS90X3MG	50
110mm	110.1	65	4"	40	130	PRHPFFS110X4MG	20

High Pressure Fittings



Plain Cap



Imperial (Inch) Size G1/2 PN-15 As per BSEN 1452-3

SIZE	d	L	E	H	CODE	PACKING
1/2"	21.3	17	26	22.5	PRHPFPC0.5IG	1600
3/4"	26.7	20	32	28	PRHPFPC0.75IG	1000
1"	33.5	23	39	32	PRHPFPC1IG	500
1 1/4"	42.2	27	50	39	PRHPFPC1.25IG	300
1 1/2"	48.2	32	58	44	PRHPFPC1.5IG	180
2"	60.3	39	73	56	PRHPFPC2IG	80
2 1/2"	75.1	44	90	65	PRHPFPC75MG	45
3"	88.8	51	106	73	PRHPFPC3IG	50
4"	114.2	65	130	88	PRHPFPC4IG	30
6"	168.2	90	190	123	PRHPFPC6IG	10

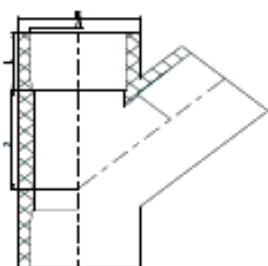
Metric Size PN-16 As per DIN 8063

SIZE	d	L	E	H	CODE	PACKING
20mm	20.1	17	26	22.5	PRHPFPC20MG	1600
25mm	25.1	20	32	28	PRHPFPC25MG	1000
32mm	32.1	23	39	32	PRHPFPC32MG	500
40mm	40.1	27	50	39	PRHPFPC40MG	300
50mm	50.1	32	58	44	PRHPFPC50MG	180
63mm	63.1	39	73	56	PRHPFPC63MG	80
75mm	75.1	44	90	65	PRHPFPC75MG	45
90mm	90.1	51	106	73	PRHPFPC90MG	50
110mm	110.1	65	130	88	PRHPFPC110MG	30
160mm	160.2	90	190	123	PRHPFPC160MG	10

Imperial (Inch) Size Class-E/PN-15 As per BSEN 1452-3



Y 45°



SIZE	d	Z	L	E	CODE	PACKING
1/2"	21.3	17	11	27	PRHPFY0.5IG	400
3/4"	26.7	20	14	33	PRHPFY0.75IG	200
1"	33.5	23	17	42	PRHPFY1IG	100
1 1/4"	42.2	27	23	51	PRHPFY1.25IG	75
1 1/2"	48.2	32	26	63	PRHPFY1.5IG	60
2"	60.3	39	33	79	PRHPFY2IG	30

Metric Size PN-16 As per DIN 8063

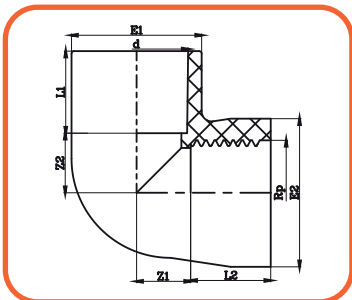
SIZE	d	L	Z	E	CODE	PACKING
20mm	20.1	17	11	27	PRHPFY20MG	400
25mm	25.1	20	14	33	PRHPFY25MG	200
32mm	32.1	23	17	42	PRHPFY32MG	100
40mm	40.1	27	23	51	PRHPFY40MG	75
50mm	50.1	32	26	63	PRHPFY50MG	60
63mm	63.1	39	33	79	PRHPFY63MG	30

High Pressure Fittings

Imperial (Inch) Size Class-E/PN-15 As per BSEN 1452-3



Female Elbow 90°



SIZE	d	L1	RP	E1	E2	CODE	PACKING
1/2"	21.3	17	1/2"	26	30	PRHPFFE0.5IG	500
3/4"	26.7	20	3/4"	32	35	PRHPFFE0.75IG	300
1"	33.5	23	1"	39	45	PRHPFFE1IG	180
1 1/4"	42.2	27	1 1/4"	50	55	PRHPFFE1.25IG	80
1 1/2"	48.2	32	1 1/2"	58	62	PRHPFFE1.5IG	50
2"	60.3	39	2"	73	75	PRHPFFE2IG	25
2 1/2"	75.1	44	2 1/2"	90	95	PRHPFFE2.5MG	45
3"	88.8	51	3"	106	110	PRHPFFE3IG	20

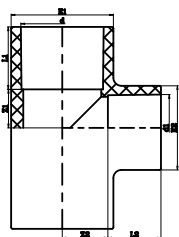
Metric Size PN-16 As per DIN 8063

SIZE	d	L1	RP	E1	E2	CODE	PACKING
20mm	20.1	17	1/2"	26	30	PRHPFFE20X0.5MG	500
25mm	25.1	20	3/4"	32	35	PRHPFFE25X0.75MG	300
32mm	32.1	23	1"	39	45	PRHPFFE32X1MG	180
40mm	40.1	27	1 1/4"	50	55	PRHPFFE40X1.25MG	60
50mm	50.1	32	1 1/2"	58	62	PRHPFFE50X1.5MG	50
63mm	63.1	39	2"	73	75	PRHPFFE63X2MG	25
75mm	75.1	44	2 1/2"	90	95	PRHPFFE75X2.5MG	45
90mm	90.1	51	3"	106	110	PRHPFFE90X3MG	20

Imperial (Inch) Size Class-E/PN-15 As per BSEN 1452-3



Reducing Tee



SIZE	d	d1	L1	L2	CODE	PACKING
3/4x1/2"	26.7	21.3	20	17	PRHPFRT0.75X0.5IG	250
1x1/2"	33.5	21.3	23	17	PRHPFRT1X0.5IG	160
1x3/4"	33.5	26.7	23	20	PRHPFRT1X0.75IG	160
1 1/4x1/2"	42.2	21.3	27	17	PRHPFRT1.25X0.5IG	80
1 1/4x3/4"	42.2	26.7	27	20	PRHPFRT1.25X0.75IG	80
1 1/4x1"	42.2	33.5	27	23	PRHPFRT1.25X1IG	80
1 1/2x1/2"	48.2	21.3	32	17	PRHPFRT1.5X0.5IG	60
1 1/2x3/4"	48.2	26.7	32	20	PRHPFRT1.5X0.75IG	60
1 1/2x1"	48.2	33.5	32	23	PRHPFRT1.5X1IG	50
1 1/2x1 1/4"	48.2	42.2	32	27	PRHPFRT1.5X1.25IG	50
2x1/2"	60.3	21.3	39	17	PRHPFRT2X0.5IG	70
2x3/4"	60.3	26.7	39	20	PRHPFRT2X0.75IG	70
2x1"	60.3	33.5	39	23	PRHPFRT2X1IG	70
2x1 1/2"	60.3	48.2	39	32	PRHPFRT2X1.5IG	60

Metric Size PN-16 As per DIN 8063

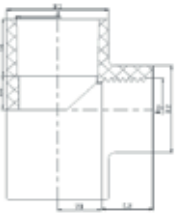
SIZE	d	d1	L1	L2	CODE	PACKING
25 X 20	25.1	20.1	20	17	PRHPFRT25X20MG	250
32 X 20	32.1	20.1	23	17	PRHPFRT32X20MG	160
32 X25	32.1	25.1	23	20	PRHPFRT32X25MG	160
40x20	40.1	20.1	27	17	PRHPFRT40X20MG	80
40x25	40.1	25.1	27	20	PRHPFRT40X25MG	80
40x32	40.1	32.1	27	23	PRHPFRT40X32MG	80
50x20	50.1	20.1	32	17	PRHPFRT50X20MG	50
50x25	50.1	25.1	32	20	PRHPFRT50X25MG	50
50x32	50.1	32.1	32	23	PRHPFRT50X32MG	50
50x40	50.1	40.1	32	27	PRHPFRT50X40MG	50
63x20	63.1	20.1	39	17	PRHPFRT63X20MG	70
63x25	63.1	25.1	39	20	PRHPFRT63X25MG	70
63x32	63.1	32.1	39	23	PRHPFRT63X32MG	70
63x50	63.1	50.1	39	32	PRHPFRT63X50MG	70

High Pressure Fittings

Class-E/PN-15 As per BSEN 1452-3



Reducing Female Tee



SIZE	d	L1	RP	E1	E2	CODE	PACKING
3/4x1/2"	26.7	20	1/2"	32	29	PRHPFRFT0.75X0.5IG	250
1x1/2"	33.5	23	1/2"	39	29	PRHPFRFT1X0.5IG	160
1x3/4"	33.5	23	3/4"	39	34	PRHPFRFT1X0.75IG	160
1 1/4x1/2"	42.2	27	1/2"	50	29	PRHPFRFT1.25X0.5IG	90
1 1/4x3/4"	42.2	27	3/4"	50	34	PRHPFRFT1.5X0.5IG	90
1 1/2x1/2"	48.2	32	1/2"	58	29	PRHPFRFT1.25X0.75IG	60
1 1/2x3/4"	48.2	32	3/4"	58	34	PRHPFRFT1.5X0.75IG	60
1 1/2x1"	48.2	32	1"	58	41	PRHPFRFT1.5X1IG	50
2x1/2"	60.3	39	1/2"	73	29	PRHPFRFT2X0.5IG	70
2x3/4"	60.3	39	3/4"	73	34	PRHPFRFT2X0.75IG	70
2x1"	60.3	39	1"	73	41	PRHPFRFT2X1IG	70

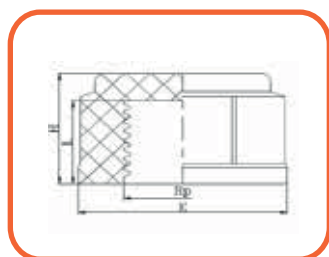
PN-16 As per DIN 8063

SIZE	d	L1	RP	E1	E2	CODE	PACKING
25x1/2"	25.1	20	1/2"	32	29	PRHPFRFT25X0.5MG	250
32x1/2"	32.1	23	1/2"	39	29	PRHPFRFT32X0.5MG	160
32x3/4"	32.1	23	3/4"	39	34	PRHPFRFT32X0.75MG	160
40x1/2"	40.1	27	1/2"	50	29	PRHPFRFT40X0.5MG	90
40x3/4"	40.1	27	3/4"	50	34	PRHPFRFT40X0.75MG	90
50x1/2"	50.1	32	1/2"	58	34	PRHPFRFT40X0.5MG	60
50x3/4"	50.1	32	3/4"	58	34	PRHPFRFT50X0.75MG	60
50x1"	50.1	32	1"	58	41	PRHPFRFT50X1MG	50
63x1/2"	63.1	39	1/2"	73	29	PRHPFRFT63X0.5MG	70
63x3/4"	63.1	39	3/4"	73	34	PRHPFRFT63X0.75MG	70
63x1"	63.1	39	1"	73	41	PRHPFRFT63X1MG	70

Class-E/PN-15 As per BSEN 1452-3



Female Threaded Cap

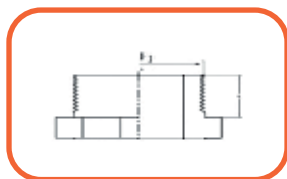


SIZE	L	Rp	H	E	CODE	PACKING
1/2"	17	1/2"	37	37	PRHPFTC0.5IG	850
3/4"	18	3/4"	42	42	PRHPFTC0.75IG	600
1"	20	1"	50	50	PRHPFTC1IG	350
1 1/4"	22	1 1/4"	59	59	PRHPFTC1.25IG	250
1 1/2"	25	1 1/2"	65	65	PRHPFTC1.5IG	180
2"	28	2"	77	77	PRHPFTC2IG	110
2 1/2"	31	2 1/2"	90	90	PRHPFTC2.5IG	100
3"	34	3"	105	105	PRHPFTC3IG	50
4"	40	4"	130	130	PRHPFTC4IG	20

Class-E/PN-15 As per BSEN 1452-3



Male Threaded Plug



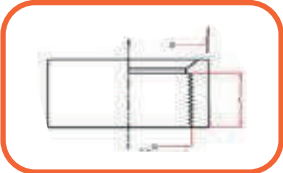
SIZE	L	Rp	CODE	PACKING
1/2"	17	1/2"	PRHPFMT0.5IG	1500
3/4"	19	3/4"	PRHPFMT0.75IG	1000
1"	22	1"	PRHPFMT1IG	500
1 1/4"	24	1 1/4"	PRHPFMT1.25IG	400
1 1/2"	25	1 1/2"	PRHPFMT1.5IG	250
2"	29	2"	PRHPFMT2IG	150

High Pressure Fittings

Class-E/PN-15 As per BSEN 1452-3



Female Reducer Bush



SIZE	L	D	Rp	CODE	PACKING
3/4x1/2"	20	26.6	1/2'	PRHPFFRB0.75X0.5IG	1200
1x1/2"	23	33.5	1/2'	PRHPFFRB1X0.5IG	700
1x3/4"	23	33.5	3/4'	PRHPFFRB1X0.75IG	700
1 1/2x1/2"	32	48.2	1/2'	PRHPFFRB1.5X0.5IG	200
1 1/2X3/4"	32	48.2	3/4"	PRHPFFRB1.5X0.75IG	200
2x1/2"	39	60.3	1/2'	PRHPFFRB2X0.5IG	150
2X3/4"	39	60.3	3/4"	PRHPFFRB2X0.75IG	150

PN-16 As per DIN 8063

SIZE	L	D	Rp	CODE	PACKING
25x1/2"	20	25	1/2'	PRHPFFRB25X0.5MG	1200
32x1/2"	23	32	1/2'	PRHPFFRB32X0.5MG	700
32x3/4"	23	32	3/4'	PRHPFFRB32X0.75MG	700
50X 1/2"	32	50	1/2"	PRHPFFRB50X0.5MG	200
50X 3/4"	32	50	1/2"	PRHPFFRB50X0.75MG	200
63X 1/2"	39	63	1/2"	PRHPFFRB63X0.5MG	150
63X 3/4"	39	63	3/4"	PRHPFFRB63X0.75MG	150

PN-16 As per DIN 8063

SIZE	L	Rp	CODE	PACKING
1/2"	17	1/2"	PRPFHN0.5IG	1000
3/4"	19	3/4"	PRHPFHN0.75IG	700
1"	22	1"	PRHPFHN1IG	400
1 1/4"	24	1 1/4"	PRHPFHN1.25IG	250
1 1/2"	25	1 1/2"	PRHPFHN1.5IG	150
2"	29	2"	PRHPFHN2IG	100



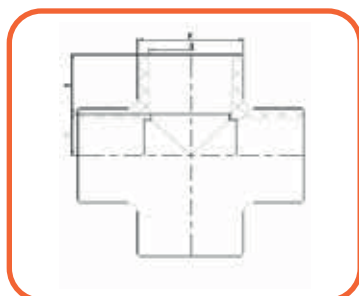
Hex Nipple



Imperial (Inch) Size Class-E/PN-15 As per BSEN 1452-3



Cross Tee



SIZE	d	Z	L	D	CODE	PACKING
1/2"	21.3	17	11	26	PRHPFCT0.5IG	300
3/4"	26.7	20	14	32	PRHPFCT0.75IG	200
1"	33.5	23	17	39	PRHPFCT1IG	150
1 1/4"	42.2	27	23	50	PRHPFCT1.25IG	100
1 1/2"	48.2	32	26	58	PRHPFCT1.5IG	75
2"	60.3	39	33	73	PRHPFCT2IG	30
3"	88.8	51	47	106	PRHPFCT3IG	10
4"	114.2	65	57	130	PRHPFCT4IG	5
6"	168.2	90	82	198	PRHPFCT6IG	2

Metric Size PN-16 As per DIN 8063

SIZE	d	L	Z	D	CODE	PACKING
20mm	20.1	17	11	26	PRHPFCT20MG	300
25mm	25.1	20	14	32	PRHPFCT25MG	200
32mm	32.1	23	17	39	PRHPFCT32MG	150
40mm	40.1	27	23	50	PRHPFCT40MG	100
50mm	50.1	32	26	58	PRHPFCT50MG	75
63mm	63.1	39	33	73	PRHPFCT63MG	30
75mm	75.1	44	39	90	PRHPFCT75MG	20
90mm	90.1	51	47	106	PRHPFCT90MG	10
110mm	110.1	65	57	130	PRHPFCT110MG	5
160mm	160.2	90	82	185	PRHPFCT160MG	2

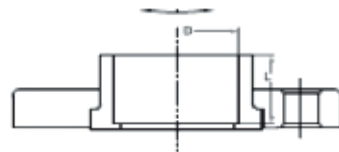
High Pressure Fittings

Class-E/PN-15 As per BSEN 1452-3

SIZE	d	L	CODE	PACKING
1 1/2"	48.2	32	PRHPFFL1.5IG	50
2"	60.3	39	PRHPFFL2IG	30
2 1/2"	75.1	44	PRHPFFL75MG	25
3"	88.8	51	PRHPFFL3IG	20
4"	114.2	64	PRHPFFL4IG	10
6"	168.2	90	PRHPFFL6IG	5



**Flanges
with
Stub**



PN-16 As per DIN 8063

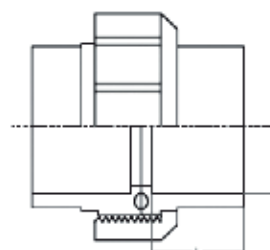
SIZE	d	L	CODE	PACKING
50mm	50.1	32	PRHPFFL50MG	50
63mm	63.1	39	PRHPFFL63MG	30
75mm	75.1	44	PRHPFFL75MG	25
90mm	90.1	51	PRHPFFL90MG	20
110mm	110.1	65	PRHPFFL 110MG	10
160mm	160.2	90	PRHPFFL160MG	5

Class-E/PN-15 As per BSEN 1452-3

SIZE	d	L	CODE	PACKING
1/2"	21.3	17	PRHPFUN0.5IG	800
3/4"	26.7	20	PRHPFUN0.75IG	500
1"	33.5	23	PRHPFUN1IG	300
1 1/4"	42.2	27	PRHPFUN1.25IG	200
1 1/2"	48.2	32	PRHPFUN1.5IG	100
2"	60.3	39	PRHPFUN2IG	50
2 1/2"	75.1	44	PRHPFUN75MG	30
3"	88.8	51	PRHPFUN3IG	20
4"	114.2	64	PRHPFUN4IG	10



**Union
Solvent
Socketed**



PN-16 As per DIN 8063

SIZE	d	L	CODE	PACKING
20mm	20.1	17	PRHPFUN20MG	800
25mm	25.1	20	PRHPFUN25MG	500
32mm	32.1	23	PRHPFUN32MG	300
40mm	40.1	27	PRHPFUN40MG	200
50mm	50.1	32	PRHPFUN50MG	100
63mm	63.1	39	PRHPFUN63MG	50
75mm	75.1	44	PRHPFUN75MG	30
90mm	90.1	51	PRHPFUN90MG	20
110mm	110.1	65	PRHPFUN110MG	10

High Pressure Fittings

PN-16 As per DIN 8063

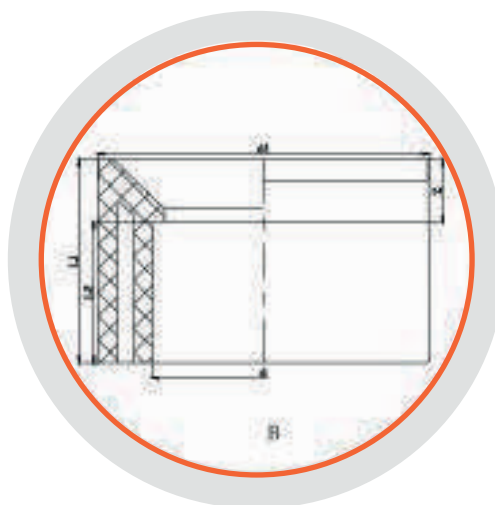
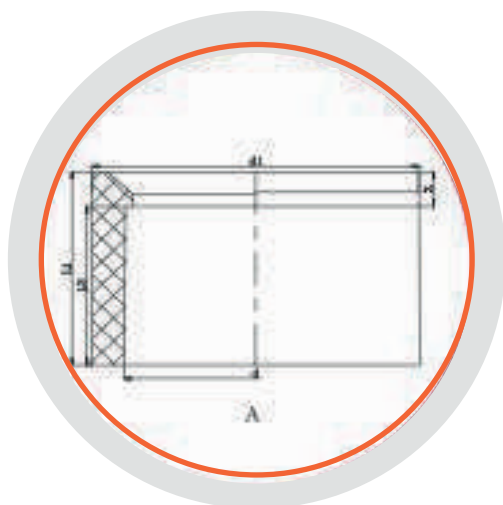
SIZE	d	d1	L1	L2	Z	CODE	PACKING
25 X 20	20.1	25	20	17	3	PRHPFRB25X20MG	2000
32 X 20	20.1	32	23	17	6	PRHPFRB32X20MG	900
32 X 25	25.1	32	23	20	3	PRHPFRB32X25MG	900
40 X 20	20.1	40	27	17	10	PRHPFRB40X20MG	500
40 X 25	25.1	40	27	20	7	PRHPFRB40X25MG	500
40 X 32	32.1	40	27	23	4	PRHPFRB40X32MG	500
50 X 20	20.1	50	32	17	15	PRHPFRB50X20MG	330
50 X 25	25.1	50	32	20	12	PRHPFRB50X25MG	330
50 X 32	32.1	50	32	23	9	PRHPFRB50X32MG	330
50 x 40	40.1	50	32	27	5	PRHPFRB50X40MG	330
63 X 20	20.1	63	39	17	22	PRHPFRB63X20MG	160
63 X 25	25.1	63	39	20	19	PRHPFRB63X25MG	160
63 X 32	32.1	63	39	23	16	PRHPFRB63X32MG	160
63x40	40.1	63	39	27	12	PRHPFRB63X40MG	160
63 x 50	50.1	63	39	32	7	PRHPFRB63X50MG	160
75X50	50.1	75	44	32	12	PRHPFRB75X50MG	90
75X63	63.1	75	44	39	5	PRHPFRB75X63MG	90
90X50	63.1	90	51	39	12	PRHPFRB90X63MG	60
90x63	63.1	90	51	39	12	PRHPFRB90X63MG	60
90X75	75.1	90	51	44	7	PRHPFRB90X75MG	60
110X50	50.1	110	65	32	33	PRHPFRB110X50MG	30
110x63	63.1	110	65	39	26	PRHPFRB110X63MG	30
110x75	75.1	110	65	45	20	PRHPFRB110X75MG	30
110x90	90.1	110	65	51	14	PRHPFRB110X90MG	30
160x90	90.1	160	90	51	39	PRHPFRB160X90MG	20
160x110	110.1	160	90	65	25	PRHPFRB160X110MG	20



Reducer Bushes

CLASS-E/PN-15 As per BSEN 1452-3

SIZE	d	d1	L1	L2	Z	CODE	PACKING
3/4 X 1/2"	21.3	26.6	2	17	3	PRHPFRB0.75X0.5IG	2000
1 X 1/2"	21.3	33.4	23	17	6	PRHPFRB1X0.5IG	1000
1 X 3/4"	26.7	33.4	23	20	3	PRHPFRB1X0.75X0.5IG	1000
1 1/4 X 3/4"	21.3	42.1	27	17	10	PRHPFRB1.25X0.5IG	550
1 1/4 X 3/4"	26.7	42.1	27	20	7	PRHPFRB1.25X0.75IG	550
1 1/4 X 1"	33.5	42.1	27	23	4	PRHPFRB1.25X1IG	550
1 1/2 X 1/2"	21.3	48.1	32	17	15	PRHPFRB1.5X0.5IG	340
1 1/2 X 3/4"	26.7	48.1	32	20	12	PRHPFRB1.5X0.75IG	340
1 1/2 X 1"	33.5	48.1	32	23	9	PRHPFRB1.5X1IG	340
1 1/2 X 1 1/4"	42.2	48.1	32	27	5	PRHPFRB1.5X1.25IG	340
2 X 1/2"	21.3	60.2	39	17	22	PRHPFRB2X0.5IG	160
2 X 3/4"	26.7	60.2	39	20	19	PRHPFRB2X0.75IG	160
2 X 1"	33.5	60.2	39	23	16	PRHPFRB2X1IG	160
2 X 1 1/4"	42.2	60.2	39	27	12	PRHPFRB2X1.25IG	160
2 X 1 1/2"	48.2	60.2	39	32	7	PRHPFRB2X1.5IG	160
2 1/2 X 1 1/2"	48.2	75	4	3	12	PRHPFRB2.5X1.5IG	200
2 1/2 X 2"	60.3	75	44	39	5	PRHPFRB2.5X2IG	200
3 X 1 1/2"	48.2	88.7	51	32	19	PRHPFRB3X1.5IG	150
3 X 2"	60.3	88.7	51	39	12	PRHPFRB3X2IG	150
3 X 2 1/2"	60.3	88.7	51	39	12	PRHPFRB3X2.5IG	150
4 X 1 1/2"	48.2	114.1	65	32	33	PRHPFRB4X1.5IG	75
4 X 2"	60.3	114.1	65	39	26	PRHPFRB4X2IG	75
4 X 3"	88.8	114.1	65	51	14	PRHPFRB4X3IG	75
6 X 3"	88.8	168	65	51	39	PRHPFRB6X3IG	20
6 X 4"	114.2	168	90	65	25	PRHPFRB6X4IG	20



Reducer Bushes

UPVC Pipes Drain, Waste Soil & Ventilation

BS EN 1329

Nominal Size	Nominal out Diameter	Wall Thickness Application Area			
		B		BD	
DN/OD	d _n	e _{min.}	e _{m,max.}	e _{min.}	e _{m,max.}
32	32	3,0	3,5	-	-
40	40	3,0	3,5	-	-
50	50	3,0	3,5	-	-
63	63	3,0	3,5	-	-
75	75	3,0	3,5	3,0	3,5
80	80	3,0	3,5	3,0	3,5
82	82	3,0	3,5	3,0	3,5
90	90	3,0	3,5	3,0	3,5
100	100	3,0	3,5	3,0	3,5
110	110	3,2	3,8	3,2	3,8
125	125	3,2	3,8	3,2	3,8
140	140	3,2	3,8	3,5	4,1
160	160	3,2	3,8	4,0	4,6
180	180	3,6	4,2	4,4	5,0
200	200	3,9	4,5	4,9	5,6
250	250	4,9	5,6	6,2	7,1
315	315	6,2	7,1	7,7	8,7

BS 5255 / BSEN 1455-1

Nominal Size		Mean Outside Diameter (mm)		Wall Thickness (mm) THERMOPLASTIC WASTE PIPE	
Inch	DN	MIN.	MAX.	MIN.	MAX.
1¼	32	36.15	36.45	1.8	2.2
1½	40	42.75	43.05	1.9	2.3
2	50	55.75	56.05	2.0	2.4

Note: Can be manufactured on customer's request out of PVC-Mu.

BS 4514

Nominal Size		Mean Outside Diameter (mm)		Wall Thickness (mm) DISCHARGE SYSTEM FOR INSIDE BLDG.	
Inch	DN	MIN.	MAX.	MIN.	MAX.
3	82	82.4	82.8	3.2	3.8
4	110	110.0	110.4	3.2	3.8
6	160	160.0	160.6	3.2	3.8

ASTM D2665

Nominal Size Inch		Outside Diameter (mm)		Wall Thickness (mm) DISCHARGE SYSTEM FOR INSIDE BLDG.	
Inch	DIN	MIN.	MAX.	MIN.	MAX.
1¼	36	42.03	42.29	3.56	4.07
1½	43	48.11	48.41	3.68	4.19
2	56	60.17	60.17	3.91	4.42
3	82	88.70	88.70	5.49	6.15
4	110	114.07	114.07	6.02	6.73
6	160	160.0	160.6	3.2	3.8
8	200	200.0	200.5	3.9	4.5

Under Ground Sewerage Application

BSEN 1401

Nominal Size	Nominal outside Diameter	SN 2 SDR 512)		SN 4 SDR 41		SN 8 SDR 34	
DN/OD ¹	d _n	e _{min.}	e _{m,max.}	e _{min.}	e _{m,max.}	e _{min.}	e _{m,max.}
110	110	-	-	3,2	3,8	3,2	3,8
125	125	-	-	3,2	3,8	3,7	4,3
160	160	3,2	3,8	4,0	4,6	4,7	5,4
200	200	3,9	4,5	4,9	5,6	5,9	6,7
250	250	4,9	5,6	6,2	7,1	7,3	8,3
315	315	6,2	7,1	7,7	8,7	9,2	10,4
(355)	355	7,0	7,9	8,7	9,8	10,4	11,7
400	400	7,9	8,9	9,8	11,0	11,7	13,1
(450)	450	8,8	9,9	11,0	12,3	13,2	14,8
500	500	9,8	11,0	12,3	13,8	14,6	16,3

1. Non-preferred sized are indicated in parenthesis.
2. SDR 51 is applicable for application area code "U" only.

Note: "U" Inside the building.
"D" Inside building Buried within the building structure.

BS 4660 & 5481

Nominal Size		Mean Outside Diameter (mm)		Wall Thickness (mm)			
				BS 4660		BS 5481	
Inch	mm	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
4	110	110.0	110.4	3.2	3.8		
6	160	160.0	160.6	4.1	4.8		
8	200	200.0	200.6			4.9	5.6
10	250	250.0	250.7			6.1	7.0
12	315	315.0	315.9			7.7	8.7
14	355	355.0	356.0			8.7	9.7
16	400	400.0	401.0			9.8	11.0
18	450	450.0	451.0			11.0	12.2
20	500	500.0	501.0			12.2	13.7

Standard Length : 4, 5 8 & 6 meters
Colour : Golden brown
Socket Type : Solvent Weld and Rubber seat ring

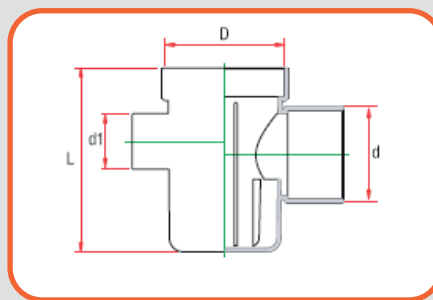
Drainage Fittings

FLOOR TRAP 70MM SEAL WITH REMOVABLE SEPERATOR

SIZE	D	d	d1	L	CODE	PACKING
110X82X43mm	110	82	43	170	PRDF110X82X43FT	18
110x82x56mm	110	82	56	170	PRDF110X82X56FT	18



**Floor Trap
with
Removable
Seperator**



P TRAP

SIZE	D	L	CODE	PACKING
110mm/4"	110	90	PRDF110PT	10



**P
Trap**

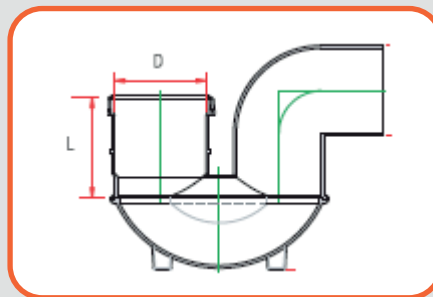


Table of Chemical Resistance uPVC

INTRODUCTION

The resistance of plastic pipes material to a wide range of chemicals is listed in the following tables (RE. CP 312:PART1: 1993).

The chemical names used in the tables are wherever possible in accordance with the recommendations contained in BS 2474; other chemicals names commonly used are frequently included as well with a cross-reference to the preferred name, the symbols used in the tables are as follows :

S-Satisfactory

U-Unsatisfactory, So rated because of decomposition, solution swelling, loss of ductility, etc. of the samples tested.

D-Some attack or absorption. The Material may be considered for use when alternative material are unsatisfactory, and where limited life is acceptable.

When plastics to be used with such chemicals, full scale trial under realistic conditions are particularly necessary.

* - Predicted results. In order to cover as wide range of named chemicals as possible, the resistance of plastics to some chemicals has been predicted from its resistance to other chemicals which have similar composition.

+ Reference should be made to Section 21 (pipes for food and drink other than water) of BS CP 312

Chemical	Concentration	Temperature	
		20 °C	60 °C
Acetaldehyde	40% (w/v) soin.	S	U*
	100%.	U	U
Acetic acid	10% (w/v) soin.	S	S
	60% (w/v)	S	D
	Glacial	U	U
Acetic anhydride		U	U
Acetone		U	U
Acetonitrile			U*
Acetophenetidine		S*	S*
Acetophenone		U*	U*
Adipic acid		S	D
Alcohols, see specific alcohols			
Aliphatic hydrocarbons		S	S
Allyl alcohol		D	U
Allyl Chloride		U	U
Alum, see , aluminium potassium sulphate			
Aluminium acetate		S*	S*
Aluminium choride		S	S
Alurninium fluoride		S*	S*
Aluminium hydroxide		S*	S*
Aluminium nitrate		S	S
Aluminium oxalate		S*	S*
Aluminium oxychloride		S	S
Alurninium potassium Sulphate (atum)			
Aluminium sulphate		S	S
Ammonia	Dry gas	S	S
	Liquid	S	S
Ammonia solution (ammonium hydroxide)	35%(m/v)soln.	U	U*
Ammonium bicarbonate See ammoniu hydrogen carbonate	(0-88 g/m)	S	S
Ammonium carbonate		S	S
Ammonium chloride		S	S
Ammonium ferrous citrate		S*	S*
Ammonium fluoride		S	S
Ammonium hydrogen Carbonate		S*	S*
Ammonium hydroxide See ammonia solution			
Arnnoniurn metaphosphate		S	S
Amrnonium nitrate		S	S
Ammonium orthophosphate		S*	S*
Ammoniurn oxalate		S*	S*
Ammonium persulphate		S	S
Ammonium sulphate		S	S
Ammonium sulphide		S	S
Ammonium thiocrylate		S	S
Ammonium zinc chloride (zinc, ammonium chloride)		S*	S*
Amyl acetate		U	U
Amyl alcuhol		U	U
Amyl chloride		U	U
Aniline		U	U
Aniline hydrochloride		U	U
Anilinc sulphate		S*	S*
Animal oil+		S	U
Antraquinone		S	U
Antraquinonesulphonic, acid		S	S*
Antinomny chloride		U	U
Aqua regia**	conc.	U	U
Aromatic hydrocarbons		S	D
Arsenic : acid (syrupy)	75%(m/m) or 2g/ml	S	U
Aryl sulphonic acid			
Barium carbonate		S*	S*
Barium chloride		S*	S*
Barium hydroxide		S	S
Barium sulphate		S*	S*
Barium sulphide		S	S
Beer+			
Benzaldehyde	Trace	U	S
	100%.	U	U
Benzene		U	U
Benzonic acid		D	U
Benzoyl chloride		U*	U
Benzyl acetate		U	U*

Chemical	Concentration	Temperature	
		20 °C	60 °C
Benzyl alcohol (phenylcarbinol)		U*	U*
Bismuth carbonate		S	U*
Borax, see disodium Tetraborate			
Boric acid		S	S
Boron trifluoride		S	S
Brine		S	S
Bromine	Trace	S	U
	100% dry gas	U*	U
	Liquid	U	U
Bromomethane (methylbromide)		U*	U*
Butadiene		S	S
Butane		S	S
Butanediols		U	U
Butanols (butyl alcohols)		S	D
Butyl acetate		U	U
Butyl chloride		U*	U*
IsoButyl methyl ketone (4-methylpen-		U*	U*
tan-2-one)		U	U
Butylphenols		U*	U*
Butyraldehyde		S	U*
Butyric acid	20% aq.soln.	U	U
	Conc.	S	S
Calcium carbonate		S	S
Calcium chlorate		S	S
Calcium chloride	aq.soln.	S*	S*
Calcium hydrogen sulphite (calcium		S	S
bisulphite)		S	S
Calcium hydroxide		S	S
Calcium hypochlorite		S*	S*
Calcium nitrate		S	S
Calcium orthophosphates		S	S
Calcium sulphate		S	S
Calcium sulphide			
Carbon dioxide (gas)	U	S	S
Carbon disulphide		D	U
Carbon monoxide		S*	S*
Carbon tetrachloride		S	S
Casien			
Castor Oil+		S	S
Cetyl alcohol, see hexadecanol		S	S**
Chloral hydrate		D	
Chloric acid		D	U
Chlorine gas	10% dry	U	U
	100%dry	D	U*
	10% moist	U*	U*
	sat. Aq. soin.	S	D
Chlorine		U	U
Chlorine trifluoride			
Chloroacetic acid			
Chlorobenzene		U	U
Chloroethane (ethyl chloride)			
2-chloroethanol (ethylene chlorohydrin)		U	U
Chloroform		U	U
Chloromethane (methyl chloride)		U	U
Chlorosulphonic acid		D	U
Chromic acid	plating soln.	S	S
Chromic potassium sulphate (chromo		S	S
alum)		S*	S
Cider-+		S	S*
Citric, acid +		S*	S*
Copper** chloride		S*	S
Copper** cyanide		S	S*
Copper** fluoride		S*	S
Copper** nitrate		S	U
Copper ** sulphate		U	U
Cresote		U	U*
Cresols		U	U
Cresylic acid		U	U
Crotonaldehyde		U	U
Cyclohexanol		U	S*
Cyclohexanone		S	S
Detergent (synthetic) diluted for use		S	S
Developers (photographic)		S	S
Dextrin		S	U*

Chemical	Concentration	Temperature	
		20 °C	60 °C
Dextrose +	sat.soln.	U*	S
Diamyl ether		S	U*
Diazo salts		U*	U*
Dibromoethane (ethylene dibromide)		U*	U*
Dibutyl phthalate		U*	U
Dichlorobenzene		S	U*
Dichlorodifluoromethane		U	U
Dichloroethane (ethylene dichloride)		U*	U
Dichloroethylene			
1, 2-dichloropropane (propylene		U	U*
dichloride)		U	U
Diethyl ether		U*	S*
Diethyl ketone		U	U
Diethyl sulphate (ethyl sulphate)		S*	S
Digol (diethylene glycol)		S	U*
Dimethylsulphate (methyl sulphate)		S	U*
Dimethylamine		U*	U
Dimethylcarbinol, see Isopropyl alcohol		U*	S
Dicotyl phthalate		U	S*
Dioxan		S	S*
Diphenyl ether			
Disodium phosphate, see disodium			
hydrogen orthophosphate dodecanoic		S*	S
acid (lauric)		S*	S*
Dodecanol (lauryl alcohol)		S	S
Emulsifiers	All	S	D
Emulsions (photographic)		S	D
Ethane	95 - 100%	S	U
Ethanedoil (ethylene glycol)	40% (w/v)		
Ethanol (ethyl alcohol) +	aq.soln.		
Ethers (see also diethyl ether)		U	U
Ethyl acetate			
Ethyl acrylate		U*	U*
Ethyl alcohol, see ethanol ethyl butyrate			
Ethyl Chloride, see chloroethane		U*	U*
Ethyl formate		U*	U*
Ethyl lactate			
Ethyl methyl ketone (methyl ethyl			
ketone)		U	U
Ethyl sulphate, see diethyl sulphate			
Ethylene chlorohydrin, see 2-chloroeth-			
anol			
Ethylene dibromide, see dichloroethane			
Ethylene dichloride, see dichloroethane			
Ethylene glycol, see ethanedoil		U	U
Ethylene oxide (oxiran)			
Fatty Acids, higher		S	S
Ferric Chloride		S	S
Ferric nitrate		S	S
Ferric sulphate			
Ferrous ammonium citrate, see		S*	S*
ammonium ferrous citrate		S*	S*
Ferrous chloride		S	S
Ferrous sulphate		U	U
Fixing soin. (photographic)		S	S
Fluorine		S	S
Fluorosilic acid			
Formaldehyde	40% aq.soln.	S	S
Formic acid	conc.	S	S
	40% (w/v) aq.soln.		
	3% aq.soln.		
	10% aq.soln.		
	25% aq.soln.		
	50% aq.soln.	S	S
	98% - 100%	S	D
Fructose+			
Fruit juices+		S	U
Fuel oil		U	U
Fufuraldehyde (fuffural)	100%.	S	S
Furfuryl alcohol		S	S

Table of Chemical Resistance UPVC

Chemical	Concentration	Temperature 20 ° 60 °C		Chemical	Concentration	Temperature 20 ° 60 °C	
Gallic acid, see 3, 4, 5 -trihydroxybenzoic acid		S	S	Methyl acetate		S	S*
Gasoline, see petrol		U	U	Methyl bromide, see bromomethane		U*	U*
Glucose+		U*	U	Methyl isobutyl ketone, see isobutyl methyl ketone			
Glycerol				Methyl chloride, see chloromethane			
Glycerol monobenzyl ether		S	S	Methyl ethyl ketone, see ethyl methyl ketone			
Glycol see ethanedioil	30% alc. soln	S	S	Methyl glycol	50%(w/v) aq. soln.	S	S
Glycollic acid		U*	U*		60%(w/v) aq. soln.	S	S
Grape sugar+					75%(w/v) aq. soln.	S	S
Heptane		S	S		90%(w/v) aq. soln.	S	S
Hexadecanol (cetyl alcohol)		S	S	Methyl hydrogen sulphate (methyl sulphuric acid)		U	U
Hexanol (hexyl alcohol)		S	U	Methyl methacrylate		S*	S*
Hydrobromic acid	50%(w/v) aq. soln	S*	S*	Methyl sulphate, see dimethyl sulphate		S	S*
	100%(w/v) aq. soln	S	S	Methylated spirits		U	U
Hydrochloric acid	10%(w/v) aq. soln	S	S	Methylcyclohexanone		S	S
	22%(w/v) aq. soln	S*	S*	Methylsulphonic acid			
	Conc.(36%)	S	S	Milk+		S	S
Hydrocyanic acid	10%(w/v) aq. soln	S	S	Mineral oils		S	S
Hydrofluoric acid	4%(w/v) aq. soln	S	S	Mixed acids**		S	S
	40%(w/v) aq. soln	S	S	Molasses+		S	S
	60%(w/v) aq. soln	S	S	Monochlorobenzene		S	S
	concentrated	S	U	Naphtha		S	S
Hydrogen		D	U*	Naphthalene		S	S
Hydrogen bromide	Anhydrous	U*	U*	Nickel chloride		S	S
Hydrogen chloride	Anhydrous	S	S	Nickel nitrate		S	S
Hydrogen fluoride	Anhydrous	S*	S*	Nickel sulphate		S	S
Hydrogen peroxide	3%(w/v) aq. soln.	S*	S*	Nicotine		S	S
	12%(w/v) aq. soln.	S*	S*	Nictonic acid		S	S
	30%(w/v) aq. soln.	S	S	Nitric acid	5% (wlv) aq. soln.		
	90%(w/v) or greater				10%(w/v) aq. soln.	U*	U*
					25%(w/v) aq. soln.		
					50%(w/v) aq. soln.	S*	S*
					70%(w/v) aq. soln.		
					98%(w/v) aq. soln.		
Hydrogen sulphate				Nitrobenzene			
Hydroquinone, see quinol hydro-xylammonium sulphate				Nitropropane		S	S
Hypochlorous acid				Nitrous fumes	moist	S	S
Iodine	soln.in potassium iodide	U	U	Nonanol (nonyl alcohol)		S	S
				Octane		S	S
Iso-octane (2,2,4-trimethylpentane)	S	U		Octanol (octyl alcohol)		S	S
Isophorone	U	U		Oils and fats+		S	S
Isopropanol, see isopropyl alcohol				Oleic acid		S	S
Lactic acid	10%(w/v) aq.soln.	S	S	Orthophosphoric acid	20% aq. soln.	S*	S*
	100%(w/v) aq.soln.	U	U		30% aq. soln.	S	S
		S*	S*		50% aq. soln.	S	S
Lanolin		S	S		95% aq. soln.	S	S
Latex				Oxalic acid		S	S
Lauric acid, see dodecanoic acid				Oxygen		S	S
Lauryl alcohol, see dodecanol				Ozone		S	S
Lead acetate		S	S	Palmitic acid	10%.	S*	S*
Lead arsenate		S*	S*		70%.	S*	S*
Lead nitrate		S*	S*	Paraffin		S	S
Lead tetraethyl, see tetraethyl lead				Paraffin wax		S	S
Linoleic acid		S	S	Pentane		S*	S*
Linseed oil		S	S	Perchloric acid	10%.	S	S
Lubricating oil		S	S	Petrol		S	S
Magnesium carbonate		S	S	Petro/benzene		S*	S*
Magnesium chloride		S	S	Mixture	80 : 20 ratio	S	S
Magnesium hydroxide		S	S	petroleum spirit (petroleum ether)		S	S
Magnesium nitrate	25%(w/v) aq.soln	S	S	Phenol		S	S
Maleic acid	50%(w/v) aq.soln	S	S	Phenylcarbinol, see benzyl alcohol		S	S
	concentrated	S	S	Phenylhydrazine		S	S
		S	S	Phenylhydrazine hydro-chloride		S*	S*
Malic acid		S	S	Phosgene	gas liquid		
Manganese sulphate		S*	S*	Phosphates(see also under ammonium, potassium, sodium etc.)			
Margarine+		S	S	Phosphine			
Mercuric chloride		S	S	Phosphoric acid, see orthophosphoric acid			
Mercuric cyanide		S	S	Phosphorus			
Mercurous nitrate		S	S	Phosphorus pentoxide			
Mercury		S	S	Phosphorus trichloride			
Mesityl oxide		U	U				
Metallic soaps (water soluble)	100% .	S*	S*				
Methanol (methyl alcohol)	60%(w/v) aq.soln.	S	D				

Chemical	Concentration	Temperature		Chemical	Concentration	Temperature	
		20 °C	60 °C			20 °C	60 °C
Potassium thiosulphate		S*	S*	Stearic acid		S	S
Propane		S	S	Sucrose +	colloidal	S*	S*
Propane-1, 2-diol (propylene glycol)		S*	S*	Sulphur		S	S
Propargyl alcohol (prop-2-yn-1-ol)		S	S		dry		
Propionic acid	50% aq.soln	S*	S*	Sulphur dioxide	moist	S	S
	100% aq.soln	S*	U*		liquid		
Iso propyl alcohol (isopropanol)		S	S				
Propylene dichloride, see 1, 2-dichloro-				Sulphur trioxide	10% (w/v) aq.	S	U
propane		U*	U*	Sulphuric acid	soin.	D	U
Propylene oxide		U	U		20% (w/v) aq.	S	S
Pyridine		S*	S*		soin.	S	S
Quinot (hydroquinone)		S*	S*		30% (w/v) aq.	S	S
Rayon coagulating bath		S*	S*		soin.	S	S
Sulphur trioxide		S	S		40% (w/v) aq.	S	S
Salicylic acid		S	S		soin.	S	S
Seawater		U	U		50% (w/v) aq.	S	S
Selenic acid		S*	S*		soin.	S	S
Shortening		S	S		55% (w/v) aq.	S	S
Silicic acid		S*	S*		soin.	D	D
Silver acetate		S	S		60% (w/v) aq.	D	U
Silver cyanide		S	S	Sulphurous acid	soin.	U	U
Silver nitrate		S	S		70% (w/v) aq.	U*	U*
Soap solutions (aqueous)		S	S	Surface active agents	soin.	S	S
Sodium acetate				Tallow	80% (w/v) aq.	S	S
Sodium acid sulphate, see sodium				Tannic acid	soin.	S*	S*
hydrogen sulphate		S*	S*	Tanning extracts	90% (w/v) aq.	S*	S*
Sodium aluminate		S	D	Tartaric acid +	soin.	S	S
Sodium antimonate				Tetrathyl lead(lead tetrathyl)	95% (w/v) aq.	S	S*
Sodium benzonate				Tetrahydrofuran	soin.	S	S
Sodium bicarbonate, see sodium				Tetrahydronaphthalene(tetralin)	98% (w/v) aq.	S	S
hydrogen carbonate				Thionyl chloride	soin.	U	U
Sodium bisulphate, see sodium				Titanium tetrachloride	Fluming	U	U
hydrogen sulphate				Toluene	10% (w/v) aq.	U	U
Sodium bisulphite, see sodium				Transformer oil	soin.	U	U
hydrogen sulphite				Tributyl phosphate	30% (w/v) aq.	U	U
Sodium borate, see disodium tetrabo-				Trichloroacetic acid	soin.	S*	S*
rate		S	S	Trichlorobenzene	All	U	U
Sodium bromide		S	S	Trichloroethane		S*	S*
Sodium carbonate		S	S	Trichloroethylene		U*	U*
Sodium chlorate		S	S	Tricresyl phosphate, see tritolyt		U*	U*
Sodium chloride	1% (w/v) aq. soin.	S*	S*	phosphate		U	U
Sodium cyanide	10% (w/v) aq.	S	S	Triethanolamine			
Sodium ferricyanide	soin.	S	S	Trigot(tryethylene glycol)		S	U
Sodium ferrocyanide	40% (w/v) aq.	S	S	3, 4, 5-Trihydroxybenzoic acid (gallic			
Sodium fluoride	soin.	S	S	acid)		S*	S*
Sodium hydrogen carbonate(sodium	Conc.	S	S	Trimethylamine		S*	S*
bicarbonate)	15% available	S*	S*	Trimethylol propane (2-ethyl-2-hydrox-			
Disodium hydrogen orthophosphate	chlorine	S	S	ymethyl Propanediol)		S	U*
Sodium hydrogen sulphate(sodium				Trisodium phosphate, see Sodium		S	U
bisulphate)		S	S	orthophosphate		U*	U*
Sodium hydrogen sulphite(sodium		S	S	Tritolyl Phosphate		S	S
bisulphate)		S	S	Turpentine			
Sodium hydroxide				Urea		S	S
Sulphur hypochlorite		S*	S*	Urine		S	S
Sodium hyposulphite, see sodium		S	S	Vanilla extract +		S*	S*
thiosulphate.		S	S	Vegetable oil +		S	S
Sodium metaphosphate		S*	S*	Vinegar +		S	S
Sodium nitrate		S*	S*	Vinyl acetate		U	U
Sodium nitrite		S*	S*	Water		S	S
Trisodium orthophosphate		S	S	Wetting agents		S*	S*
Sodium perborate				Whey +		S*	S*
Sodium peroxide				Wines and spirits		S	S
Sodium silicate				Xylene		U*	U*
Sodium sulphate		S	S	Xylenol		U*	U*
Sodium sulphide	aq.soln	S	S	Yeast +		S	S
Disodium tetraborate(borax)		S	S	Zinc ammonium chloride, see Ammoni-			
Sodium thiosulphate (sodium hyposul-				um zinc chloride		S*	S*
phite)		S*	S*	Zinc carbonate		S	S
Soft soap		S*	S*	Zinc Oxide			
Stannic chloride		S	S	Zinc sulphate			
Stannous chloride		S	S				
Starch		S	S				

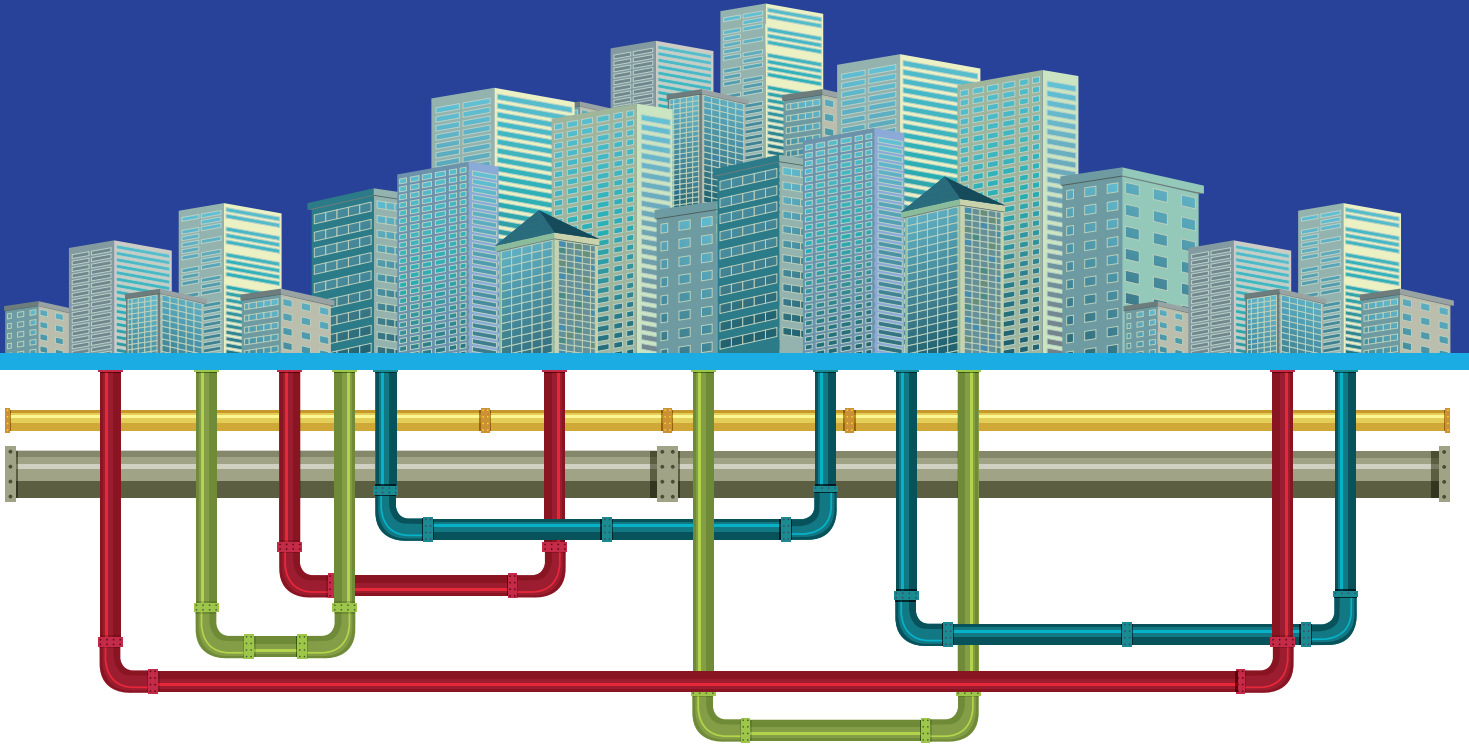


NOTES

A series of horizontal dotted lines for taking notes.



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بريم صناعة البلاستيك ذ.م.م.
Prime Plastic Industry LLC

Tel: 050-5600751, 052 600 8662
Factory Address : B2-7, New Industrial City
Umm Al Thuob, Umm Al Quwain
www.primeplasticindustry.com
Email: sales@primeplasticindustry.com