

# Roka Plast

For Plastic Industries



**WR**  
white roka

**ROKA**  
PLAST

# Catalogue

Drainage Solutions

# R ROKA PLAST



## Introduction

**ROKAPLAST** for Plastic Industries Corporate was established at 2015 to produce all types of Supply water, sanitary products and related accessories.

By constantly Improving our products to the needs of the market, and developing the relevant know-how, **ROKAPLAST** has covered Egypt region by distributing our products in 19 governances.

Becoming a leading developer of benchmark quality in PP-R and UPVC products, we manufacture an economically innovative product range of PP-R and UPVC Pipes and Fittings for Supply water and drainage.

Applied raw material technologies optimizes the material characteristics for the protection of the environment, hygiene, health and well-being packing for the most precious commodity.

Our promise is to over estimation for all customers and Distributors by offering them the highest quality products & a wide range of supported services with lowest price in the same category.

Our outstanding customer relations skills ensures efficient delivery, where in turn reflects in customer loyalty.

As an **Egyptian Corporate ROKAPLAST** strive to support and invest in our fellow citizens employees, the roots that flourish the success of any productive country.

At **ROKAPLAST** we believe, in team work, in progress in a better future and in honest open communication. Career opportunities are constantly open for those dedicated to build a strong infrastructure, while contributing to the economic growth and future stability of our country and the next generation.

Sincere Regards,  
**ROKAPLAST Team**

### **Vision:**

Pioneering the plastics, metals industry and modern systems.

### **Mission:**

our mission is providing the best customer service and technical support for technicians and develop products to meet international standards in the field of plastic, metal industries and modern systems using the latest technologies in all fields.

Innovation through young professional, distinct and harmonious team to build a bright future and contribute to uphold Made in Egypt in the local and regional market.

### **Values:**

- Commitment.
- Innovation.
- Integration.
- Harmony.

# uPVC Pipes & Fittings



**WR**  
white roka

## Discharge Pipes & Fittings ( UPVC )

### Basic Information

Trade Mark 

### Material

Poly Vinyl Chloride (PVC)

Test Marks

Un Plasticized Poly Vinyl Chloride

K – Value 67 for Pipe

K – Value 57 for Fitting

Quality Requirements

ES 1717 ( 2008 ) , DIN 8061 , DIN 8062 , DIN 19531 , EN 1329 and Dimension according to ISO 160 Part 1 & 2 Technical recommendation of installation

### Color

White Pipe by one black longitudinally line.

### Chemical Resistance

resistant to inorganic salts, concentrated bases and mineral as found in laboratory discharges organic solvent, will not dissolve PVC.

### Marking

Pipe bear the following permanent marks in line of color.

 UPVC DWV 110 3 mm m/c (1) S. (1) 11:45 72017/7/ ES 1717

 Made in EGYPT by Roka Plast CO. For Plastic Industries.

- 1- The brand 
- 2- Material type.
- 3- Drain, waste and vent (DWV) systems.
- 4- The nominal size.
- 5- The extrusion lines no.
- 6- The Quality control shift no.
- 7- The production shift no.
- 8- The date and the time of manufacture.
- 9- The number of the standard specification ES 1717.

Fittings show the angles degree of the branches, the number of cavity, the month and the year of production.

### Out side Diameter (OD)

25- 32 – 48 – 60 – 75 – 90 – 110 – 114 – 160 – 168 – 200mm

### Laying Length

6000mm

### Joining

### PVC VEMENT

Application Drainage inside building and factories drainage of aggressive fluids.

## The Advantages Of Upvc Pipe System

The group of materials known as un plasticized PVC is one of the most important developments of the last few decades the cost and improves the reliability of pipeline installations. The properties can vary by addition of small modifying agents which have definite and controlled mechanical properties. They can be fabricated to close dimensional tolerances, light without being weak. Rigid without being brittle.

Furthermore, these materials can be converted into pipes and fittings by variable direct processes of extrusion or injection molding even though these processes demand heavy elaborate machinery and very precise processes.

The principal reason for the great handling of ROKAPLAST pipes is not only their cost per meter as delivered to the site but also the dramatic reduction in installation costs which can be achieved by intelligent exploitation of their light weight. Higher availability in longer lengths. Their easy jointing and their resistance to corrosion. These characteristics are of even greater importance to engineers now that the need to carry out water supply and sewerage schemes. Industrial plant installation.etc.at minimum cost and maximum reliability.

### NON – Corrosive

UPVC pipes resist corrosion caused by acid, alkalis, salts, oils, moisture and the media inside and outside the pipe.

### NON – ToXIC

UPVC pipes are entirely non-toxic. It will not affect the taste, Smell of water or liquid it doesn't react with any liquid to cause precipitation.

### LOW FLOW LOSSES

UPVC pipes have a mirror – smooth surface which minimize resistance and impede the build – up of deposits and corrosive scales.

### MECHANICAL STRENGTH

UPVC pipes have great tensile strength yet they are flexible enough to with stand displacements in the pipe line. They will not dent or flatten under pressure.

### LIGHT WEIGHT

UPVC pipes are incredibly light. Their specific weight is one fifth that of steel pipe this cuts down trans-otation costs and facilitates the installation of pipe and reduces its cost.

### EASE OF INSTALLATION

UPVC pipes are quick and easy to install, with a complete range of fittings using solvent cement or rubber joints are leak proof UPVC pipes can be cut easily for installation.

### EASY OF MAINTENANCE

UPVC pipes can be quickly repaired with minimum complication and cost.

### FIRE PROOF

UPVC pipes will not support combustion. In the event of fire, flames are unable to travel along the pipe. It is self-extinguishing.

### INSULATOR

UPVC pipes are ideal for electric conduits. Because UPVC itself is an integral insulator, it eliminates the possibility of electrolytic corrosion which so often destroys underground piping.

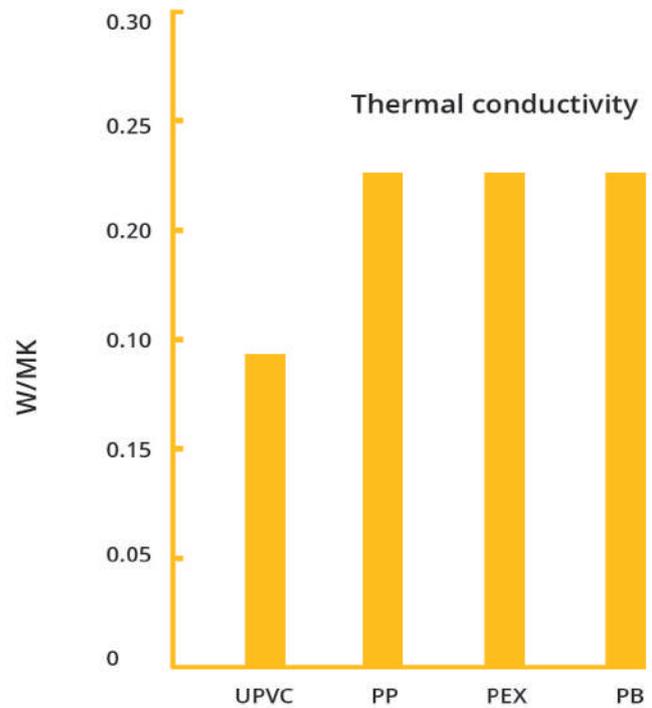
### PROVEN EXPERIENCE

UPVC pipes have been used worldwide for 45 years in all climates. The experience that many of its users have proved is its supreme quality, economy, ease of installation, and its non – corrosive qualities.

## Lower Thermal Conductivity

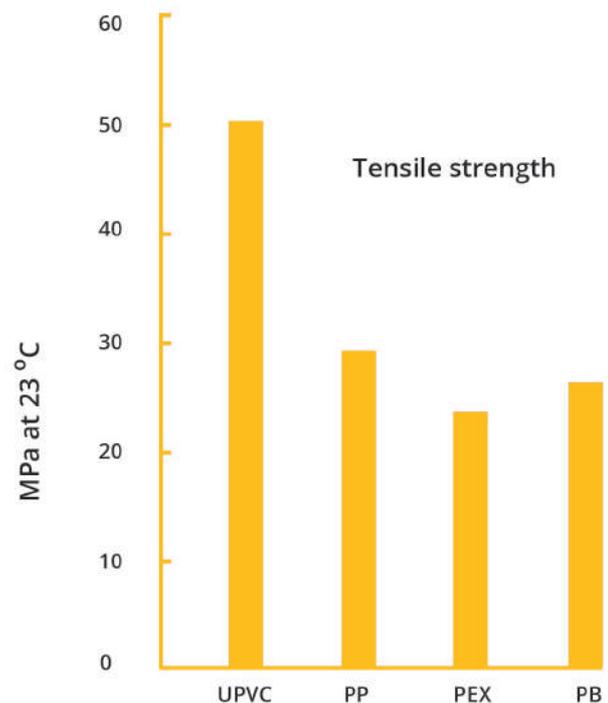
### LOWER THERMAL CONDUCTIVITY

Reduced heat losses

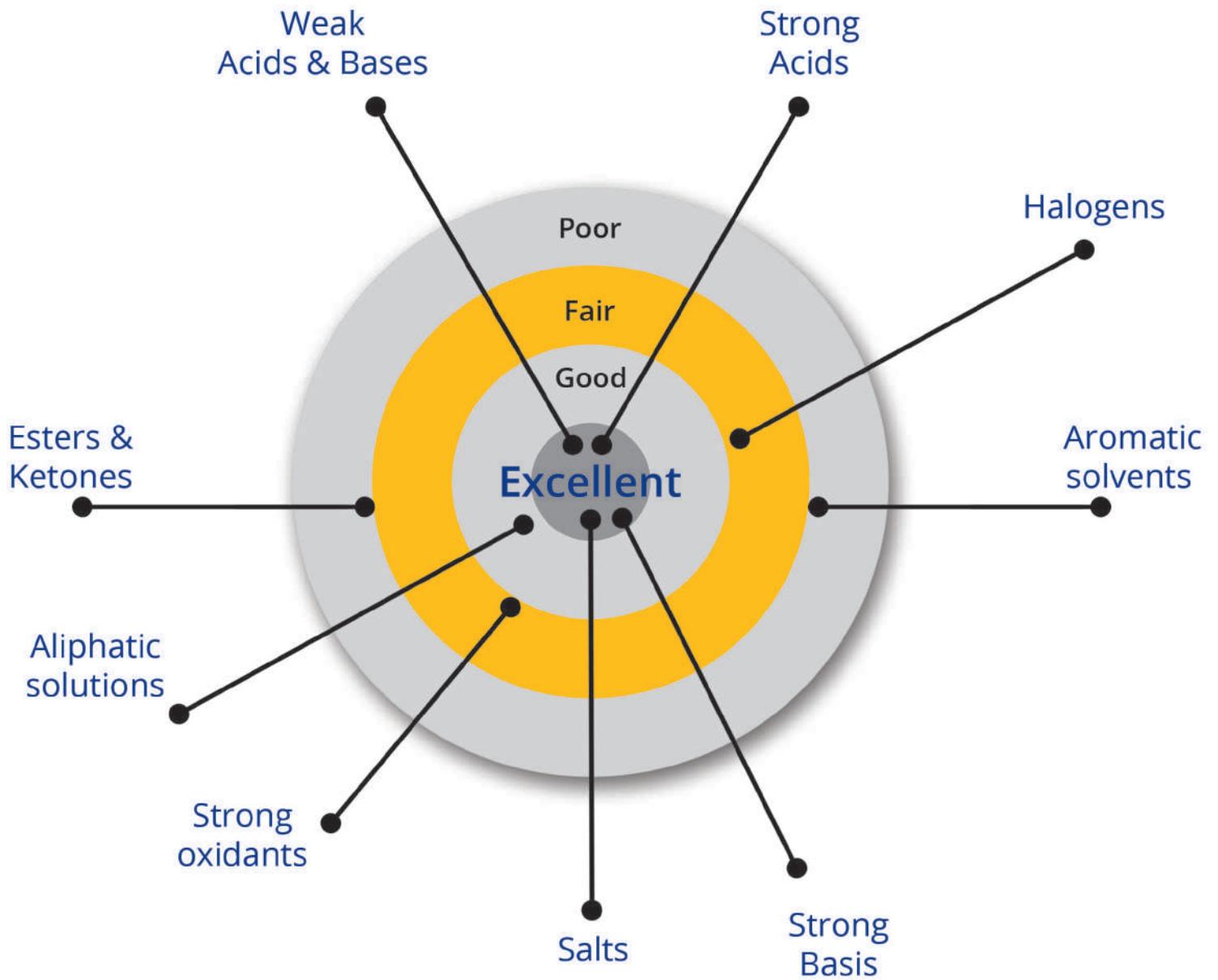


### TOUGH, RIGID MATERIAL

UPVC has a much higher strength/modulus than other thermoplastics used in plumbing applications



PVC Excellent Chemical Resistance



## Material Properties

### MATERIAL

#### Unplasticized Polyvinyl Chloride ( UPVC )

General prperties	upvc value	UNITS
Density	>	g/cm <sup>3</sup>
Water absorption	<4	mg/cm <sup>2</sup>
Flammability	self extinguishing	

#### Mechanical Properties

Ultimate Tensile Strength	492	kg/cm <sup>2</sup>
Compressive Strength	668	kg/cm <sup>2</sup>
Flexural strength	950	kg/cm <sup>2</sup>
Modulus of Elasticity	$2.7 \times 10^4$	kg/cm <sup>2</sup>
Impact Strength ( Charpy )	No Break > 10 %	
Shore Hardness ( Rockwell)	115	R

#### Thermal Properties

Softening Point		
v.s.t 5 kg	$\frac{\text{pipes}}{\geq 79^\circ}$ $\frac{\text{fittings}}{\geq 76^\circ}$	°C
Max. Operating temperature	60	°C
Coefficient of Thermal Expansion	$3 \times 10^{-5}$	In/In/°f
Specific Heat	0.25	Cal/g.°c
Thermal Conductivity	0.13	Kcal/m.h.°c

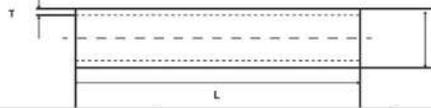
#### Electrical Properties

Volume Resistivity	$> 10^{14}$	Ohm.cm
Surface Resistance	$> 10^{12}$	Ohm
Dielectric Strength	> 40	Kv/mm
Power Factor ( at 10 cycle )	3.3	

UPVC are non-conductor of electricity and are not subjected to galvanic or electrolytic attack .

## Upvc Pipes Dimensions

UPVC pipes according to German Standards DIN 8061 / 8062 and Egyptian Standards 848 \ 1987 Applications: potable water, irrigation, and industrial uses.



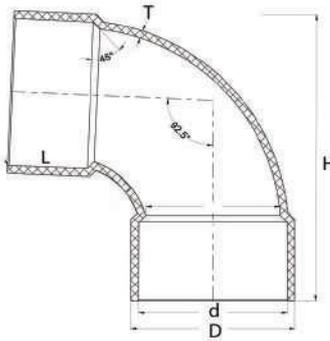
Class V 16 bar		Class IV 10 bar		Class III 6 bar		Class II 4 bar		Class I 2bar		Socket depth mm	Nominal Outside Diameter mm
NO.wt KgLm	NO.thick of Wall mm	NO.wt KgLm	NO.thick of Wall mm	NO.wt KgLm	NO.thick of Wall mm	NO.wt KgLm	NO.thick of Wall mm	NO.wt KgLm	NO.thick of Wall mm		
0.045	1.0	-	-	-	-	-	-	-	-	-	10
0.055	1	-	-	-	-	-	-	-	-	-	12
0.09	1.2	-	-	-	-	-	-	-	-	-	16
0.137	1.5	-	-	-	-	-	-	-	-	-	20
0.212	1.9	0.174	1.5	-	-	-	-	-	-	-	25
0.342	2.4	0.264	1.8	-	-	-	-	-	-	-	32
0.525	3	0.35	1.9	0.334	1.8	-	-	-	-	-	40
0.809	3.7	0.552	2.4	0.422	1.8	-	-	-	-	75	50
1.289	4.7	0.854	3	0.562	1.9	-	-	-	-	100	63
1.82	5.6	1.22	3.6	0.782	2.2	0.642	1.8	-	-	110	75
2.61	6.7	1.75	4.3	1.13	2.7	774	1.8	-	-	110	90
3.9	8.2	2.61	5.3	1.64	3.2	1.16	2.2	0.95	1.8	115	110
5.01	9.3	3.34	6	2.13	3.7	1.48	2.5	1.08	1.8	120	125
6.27	10.4	4.18	6.7	2.65	4.1	1.84	2.8	1.21	1.8	125	140
8.17	11.9	5.47	7.7	3.44	4.7	2.41	3.2	1.39	1.8	132	160
10.4	13.4	6.88	8.7	4.37	5.3	3.02	3.6	1.57	1.8	145	180
12.8	14.9	8.51	9.6	5.37	5.9	3.7	4	1.74	1.8	145	200
16.1	16.7	10.8	10.8	6.76	6.6	4.7	4.5	1.96	1.8	152	225
19.9	18.6	13.2	11.9	8.31	7.3	5.65	4.9	2.4	2	160	250
24.9	20.8	16.6	13.4	10.4	8.2	7.11	5.5	3.11	2.3	170	280
31.5	23.4	20.9	15	13.2	9.2	9.02	6.2	3.78	2.5	180	315
39.9	26.3	26.5	16.9	16.7	10.4	11.4	7	4.87	2.9	180	355
50.8	29.7	33.7	19.1	21.1	11.7	14.5	7.9	6.1	3.2	200	400
-	-	42.7	21.5	26.8	13.2	18.3	8.9	7.65	3.6	200	450
-	-	52.6	23.9	32.9	14.6	22.4	9.8	9.37	4	250	500
-	-	65.8	26.7	41.4	16.4	28.1	11	11.8	4.5	260	560
-	-	83.2	30	52.2	18.4	35.7	12.4	14.7	5	300	630
-	-	-	-	66.1	20.7	45.3	14	18.9	5.7	320	710
-	-	-	-	83.9	23.3	57.2	15.7	23.9	6.4	360	800

UPVC pipes according to American Standards ASTM D 2241 (SDR) Series

Item No.	Nominal Size (inch)	Outside (D) mm	Wall Thickness				
			SDR 21 (13.8 Bar)	SDR 26 (11.0 Bar)	SDR 32.5 (8.6 Bar)	SDR 41 (6.9 Bar)	SDR 64 (4.3 Bar)
1	1/2"	21.34	-	-	-	-	-
2	3/4"	26.67	1.52	-	-	-	-
3	1"	33.40	1.60	1.52	-	-	-
4	1 1/4"	42.16	2.01	1.63	1.52	-	-
5	1 1/2"	48.26	2.29	1.85	1.52	-	-
6	2"	60.32	2.87	2.31	1.85	-	-
7	3"	88.90	4.24	3.43	2.74	2.16	-
8	4"	114.30	5.44	4.39	3.51	2.79	1.78
9	6"	168.28	8.03	6.48	5.18	4.11	2.64
10	8"	219.08	10.41	8.43	6.73	5.33	3.43

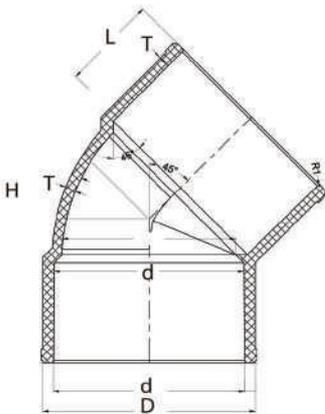
Upvc Fitting Dimensions

**Elbow87.5**



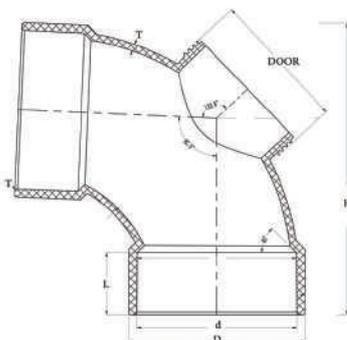
Size	d	D	H	L	T
25	26.9	33.0	51.8	20.5	3.0
32	33.5	41.0	60.0	21.0	3.5
48	48.5	56.4	100.0	31.0	3.9
60	60.5	68.5	125.0	37.0	4.0
75	75.4	84.6	150.0	41.5	4.6
110	111.0	121.5	192.0	50.0	5.3
160	159.9	172.5	303.0	70.4	6.0

**Elbow45**



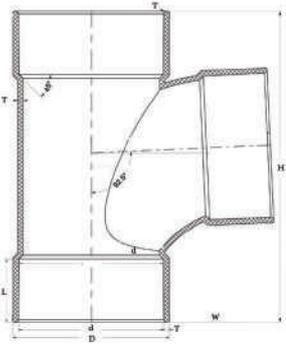
Size	d	D	H	L	T
25	26.9	33.1	59.7	19.0	3.0
32	33.0	41.5	71.0	21.0	3.2
48	48.0	56.2	94.1	31.4	4.0
60	60.8	70.6	120.4	39.0	5.0
75	75.5	83.8	150.0	41.2	40.1
110	110.7	121.3	197.0	50.0	5.3
160	161.4	172.8	282.5	67.8	5.8

**Elbow87.5 With Access Door**



Size	d	D	H	L	T	door
60	60.5	68.5	125.0	37.0	4.0	75
75	75.4	84.6	150.0	41.5	4.6	75
110	111.0	121.5	192.0	50.0	5.3	110
160	159.9	172.5	303.0	70.4	6.0	110

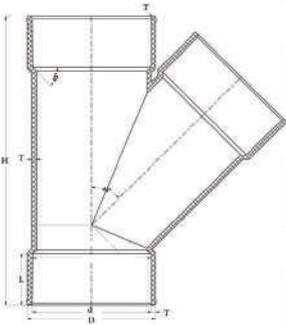
## Tee87.5



Size	d	D	H	w	L	T
25	26.7	33.3	70.4	51.2	21.5	3.1
32	33.5	40.3	78.8	58.9	22.5	3.7
48	47.8	56.2	113.3	91.8	27.2	3.7
60	60.0	68.7	153.2	119.4	37.6	4.0
75	75.4	83.8	167.2	137.8	41.4	4.2
110	111.0	122.0	245.0	198.0	45.0	6.0
160	161.5	170.0	326.0	274.0	73.0	6.5



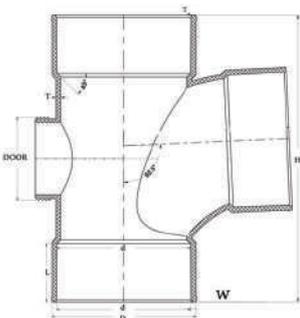
## Tee45



size	d	D	H	L	T
25	27.0	33.0	80.0	20.8	3.1
32	33.4	41.0	98.5	22.6	3.6
48	48.4	56.6	142.0	31.5	4.1
60	60.0	68.0	167.0	31.4	4.0
75	75.5	84.2	220.0	40.0	4.3
110	110.3	121.0	281.0	51.2	5.3
160	161.7	170.5	327.0	72.0	6.7



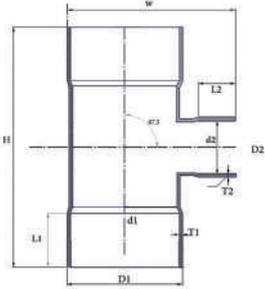
## Tee87.5 With Access Door



Size	d	D	H	w	L	T	door
60	60.0	68.7	153.2	119.4	37.6	4.0	75
75	75.4	83.8	167.2	137.8	41.4	4.2	75
110	111.0	122.0	245.0	198.0	45.0	6.0	110
160	161.5	170.0	326.0	274.0	73.0	6.5	110



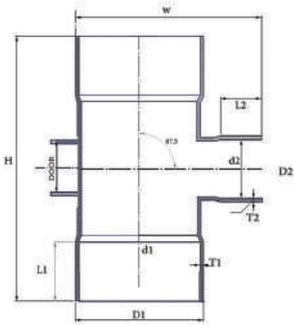
## Tee87.5 Reduser



size	d	D	d2	D2	H	C	L1	T1	L2	T2
75*60	75.5	83.7	60.2	68.8	167.2	137.8	41.4	4.2	37.0	4.0
110*60	110.4	124.0	60.0	68.7	245.5	197.4	51.2	5.4	37.6	4.0
110*75	110.5	122.0	75.0	83.8	245.0	198.0	51.3	5.5	41.1	4.2
160*110	161.5	170.0	110.3	121.0	326.0	274.0	73.0	6.5	51.2	5.3



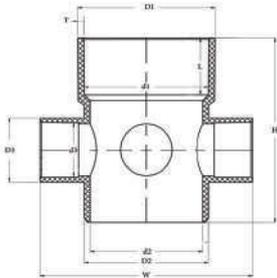
## Tee87.5 With Access Door



size	d	D	d2	D2	H	C	L1	T1	L2	T2	door
75*60	75.5	83.7	60.2	68.8	167.2	137.8	41.4	4.2	37.0	4.0	75
110*60	110.4	124.0	60.0	68.7	245.5	197.4	51.2	5.4	37.6	4.0	75
110*75	110.5	122.0	75.0	83.8	245.0	198.0	51.3	5.5	41.1	4.2	75
160*110	161.5	170.0	110.3	121.0	326.0	274.0	73.0	6.5	51.2	5.3	110



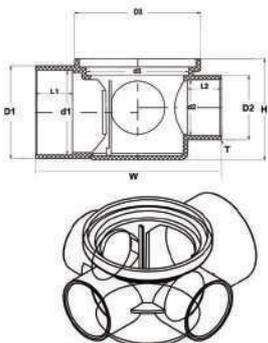
## Complex



size	d1	D1	d2	D2	d3	D3	L	H	W	T
110*48	110.2	120.5	100.5	109.5	48.8	57.2	52.0	185.0	191.0	5.2
110*50	110.4	120.3	100.5	109.6	50.8	59.0	52.2	185.2	191.0	5.1
110*60	110.2	120.6	100.5	109.5	60.5	68.2	52.3	185.2	191.5	5.2
110*75	110.3	121.2	100.4	109.7	75.0	84.6	51.8	185.2	190.0	5.3



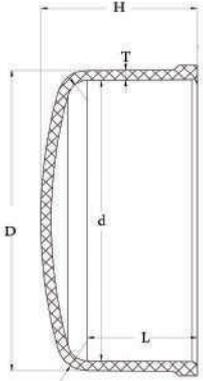
## Floor Drain



size	d1	D1	d2	D2	d3	D3	L	H	W	T
60*48	60.7	68.6	48.6	56.7	110.5	117.9	38.6	70.0	221.5	4.0
60*60	60.6	68.6	60.7	68.7	110.6	118.0	38.5	70.0	222.0	4.2
75*48	75.7	84.8	48.6	56.8	110.5	117.8	38.6	80.8	221.7	4.7
75*60	75.7	84.7	60.6	68.6	110.5	118.1	38.7	80.8	221.5	4.8
60*48	60.6	68.7	48.6	56.7	110.3	134.4	40.3	10.0	200.5	5.3
60*60	60.6	68.6	60.7	68.6	110.3	134.3	40.3	10.0	200.8	5.4
75*48	75.6	84.8	48.6	56.6	110.5	134.0	40.0	10.0	200.5	5.4
75*60	75.6	84.8	60.6	68.7	110.5	134.2	41.0	10.0	210.0	5.4



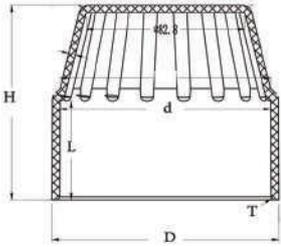
## Pipe Plug



size	d	D	H	L	T
25	26.6	33.1	25.6	19.6	2.0
32	34.2	40.9	31.2	28.2	3.7
48	48.1	55.2	29.7	29.0	4.5
60	60.7	70.4	44.5	36.8	5.0
75	75.8	85.0	54.9	43.6	4.5
110	110.5	118.0	59.0	46.0	5.5
160	161.8	170.1	77.0	66.5	7.7



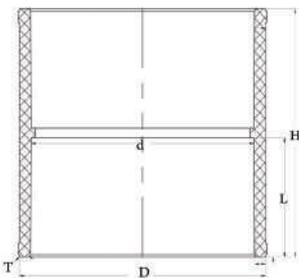
## Air Vent



size	d	D	H	L	T
60	60.6	67.4	87.0	41.0	3.4
75	75.6	81.7	101.6	50.0	3.1
110	109.8	118.0	102.5	59.0	4.0



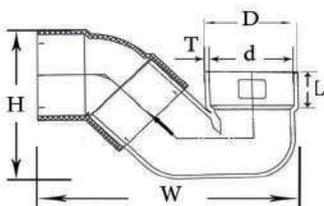
## Socket



size	d	D	H	L	T
25	26.9	33.0	42.0	20.0	3.0
32	33.6	40.8	49.0	22.5	3.5
48	48.4	55.7	65.9	32.0	3.5
60	60.5	78.1	38.9	38.1	3.7
75	75.6	84.0	94.0	45.0	4.1
110	110.4	121.0	109.2	55.0	5.2
160	161.0	171.5	144.0	78.0	6.0



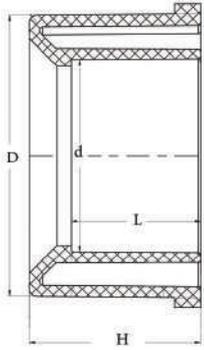
## Siphon



size	d	D	H	W	L	T
50	50.8	59.0	75.0	140.0	31.0	3.5
75	75.8	83.2	90.0	237.0	39.5	4.1
110	109.7	122.0	200.0	313.5	51.8	7.8



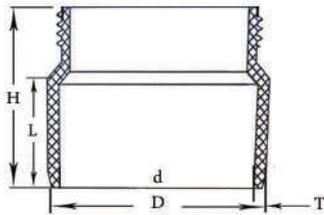
## Reducing Bush



size	d	D	H	L	T
1*25	27.0	33.4	25.0	19.0	3.2
48*1	33.0	48.0	37.8	33.0	7.4
60*48	48.0	60.0	45.4	30.6	6.0
75*60	60.0	75.0	51.2	37.4	8.5
110*60	60.0	110.0	65.7	42.0	TS
110*75	75.0	110.0	66.0	51.0	TS
160*110	111.0	159.0	76.3	55.8	TS



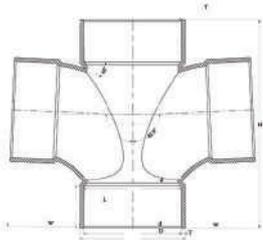
## Cleaning Insert



size	d	D	H	L	T	Door
48	49.4	60.0	63.1	34.0	5.3	48
60	51.7	60.1	67.8	45.5	4.3	75
75	66.3	75.1	73.5	48.7	4.5	75
110	97.6	109.2	79.2	50.1	5.6	110
160	147.6	160.1	118.9	76.2	5.7	110



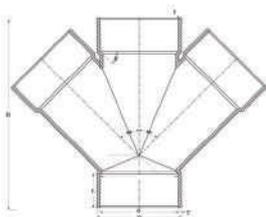
## Cross87.5



size	d	D	H	W	L	T
75	75.5	84.2	220.0	260.0	40.0	4.3
110	110.3	123.0	244.0	285.0	45.2	6.5



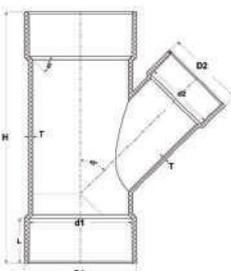
## Cross45



size	d	D	H	W	L	T
110	110.5	122.8	273.0	338.0	51.0	6.3



## Tee45 Reducer



size	d	D	d2	D2	H	W	L1	T1	L2	T2
75*60	75.7	86.5	60.6	70.5	200.0	170.0	72.0	5.2	37.8	4.8
110*60	110.8	122.5	60.5	70.3	219.0	190.0	49.7	6.7	37.9	4.9
110*75	110.7	122.7	75.6	86.2	219.5	221.2	46.6	6.2	42.2	5.3
160*110	161.0	178.5	110.7	122.4	388.6	320.0	71.4	7.2	50.9	6.6



## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP
		(%)	(°C)	-	-			(%)	(°C)	-	-
ACETALDEHYDE	CH3CHO	100	25	3	2	AMMONIA	NH3	deb	25	1	1
		-	60	3	-	- AQUEOUS SOLUTION		-	60	2	-
		-	100	-	-			-	100	-	-
- AQUEOUS SOLUTION		40	25	3	1			sat	25	1	1
		-	60	3	2			-	60	2	-
		-	100	-	-			-	100	-	-
ACETIC ACID	CH3COOH	≤25	25	1	1	- DRY GAS		100	25	1	1
		-	60	2	1			-	60	1	1
		-	100	-	1			-	100	-	-
		30	25	1	1	- LIQUID		100	25	2	1
		-	60	2	1			-	60	3	1
		-	100	-	1			-	100	-	-
		60	25	1	1	AMMONIUM	CH3COONH4	sat	25	-	1
		-	60	2	1	- ACETATE		-	60	2	1
		-	100	-	2			-	100	-	-
		80	25	1	1	- CARBONATE	(NH4)2CO3	all	25	1	1
		-	60	2	3			-	60	2	1
		-	100	-	3			-	100	-	-
- GLACIAL		100	25	2	1	- CHLORIDE	NH4Cl	sat	25	1	1
		-	60	3	2			-	60	1	1
		-	100	-	3			-	100	-	2
ACETIC ANHYDRIDE	(CH3CO)2O	100	25	3	1	- FLUORIDE	NH4F	25	25	1	1
		-	60	3	2			-	60	2	1
		-	100	-	3			-	100	-	-
ACETONE	CH3COCH3	10	25	3	1	- HYDROXIDE	NH4OH	28	25	-	1
		-	60	3	3			-	60	2	1
		-	100	-	3			-	100	-	-
		100	25	3	1	- NITRATE	NH4NO3	sat	25	1	1
		-	60	3	3			-	60	1	1
		-	100	-	3			-	100	-	1
ACETOPHENONE	CH3COC6H5	nd	25	-	1	- PHOSPHATE DIBASIC	NH4(HPO4)2	all	25	1	1
		-	60	-	3			-	60	1	1
		-	100	-	-			-	100	-	-
ACRYLONITRILE	CH2CHCN	technically pure	25	-	1	- PHOSPHATE META	(NH4)4P4O12	all	25	1	1
		-	60	3	1			-	60	1	1
		-	100	-	-			-	100	-	-
ADIPIC ACID	(CH2CH2CO2H)2	sat.	25	1	1	- PHOSPHATE TRI	(NH4)2HPO4	all	25	1	1
- AQUEOUS SOLUTION		-	60	2	1			-	60	1	1
		-	100	-	-			-	100	-	-
ALLYL ALCOHOL	CH2CHCH2OH	96	25	2	1	- PERSULPHATE	(NH4)2S2O8	all	25	1	1
		-	60	3	1			-	60	1	-
		-	100	-	1			-	100	-	-
ALUM	Al2(SO4)3.K2SO4.nH2O	dil	25	1	1	- SULPHIDE	(NH4)2S	deb	25	1	1
- AQUEOUS SOLUTION		-	60	2	1			-	60	2	1
		-	100	-	-			-	100	-	-
	Al2(SO4)3.K2SO4.nH2O	sat	25	-	1			sat	25	1	1
		-	60	2	1			-	60	1	1
		-	100	-	-			-	100	-	-
ALUMINIUM	AlCl3	all	25	1	-	- SULPHYDRATE	NH4OH.SO4	dil	25	1	1
- CHLORIDE		-	60	1	-			-	60	2	1
		-	100	-	-			-	100	-	-
- FLUORIDE	AlF3	100	25	1	-			sat	25	1	1
		-	60	1	-			-	60	1	1
		-	100	-	-			-	100	-	-
- HYDROXIDE	Al(OH)3	all	25	1	-	AMYLACETATE	CH3CO2CH2(CH2)3CH3	100	25	3	2
		-	60	1	-			-	60	3	-
		-	100	-	-			-	100	-	-
- NITRATE	Al(NO2)3	nd	25	1	-	AMYLALCOHOL	CH3(CH2)3CH2OH	nd	25	1	1
		-	60	1	-			-	60	2	1
		-	100	-	-			-	100	-	1
- SULPHATE	Al(SO4)3	deb	25	1	1	ANILINE	C6H5NH2	25	25	3	1
		-	60	1	1			-	60	-	-
		-	100	-	-			-	100	3	1
		sat	25	1	1			-	100	-	-
		-	60	1	1	- CHLORHYDRATE	C6H5NH2.HCl	25	25	2	2
		-	100	-	2			-	60	-	-
									100	3	2
									100	-	3

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP
		(%)	(°C)	-	-			(%)	(°C)	-	-
CARBON	CO2	-	-	25	1	CHLOROSULPHONIC ACID	ClHSO3	-	100	25	3
- DIOXIDE		-	-	60	1			-	-	60	3
AQUEOUS SOLUTION		-	-	100	-			-	-	100	-
- GAS		-	100	25	1	CHROME ALUM	KCr(SO4)2	-	nd	25	1
		-	-	60	1			-	-	60	1
		-	-	100	-			-	-	100	-
- DISULPHIDE	CS2	-	100	25	2	CHROMIC ACID	CrO3+H2O	-	10	25	2
		-	-	60	-			-	-	60	3
		-	-	100	-			-	-	100	-
- MONOXIDE	CO	-	100	25	1			-	30	25	2
		-	-	60	1			-	-	60	3
		-	-	100	-			-	-	100	-
- TETRACHLORIDE	CCl4	-	100	25	2			-	50	25	2
		-	-	60	3			-	-	60	3
		-	-	100	-			-	-	100	-
CARBONIC ACID	H2CO3	-	sat	25	-	CHROMIC SOLUTION	CrO3+H2O+H2SO4	-	5015/35/	25	3
- AQUEOUS SOLUTION		-	-	60	-			-	-	60	3
		-	-	100	-			-	-	100	-
- DRY		-	100	25	-	CITRIC ACID	C	H4(OH)(CO2H)	50	25	1
		-	-	60	-		3	3	-	-	-
		-	-	100	-	AQ. SOL. min			-	60	1
- WET		-	all	25	-				-	100	-
		-	-	60	-	COPPER	CuCl2	-	sat	25	1
		-	-	100	-	- CHLORIDE		-	-	60	1
CARBON OIL		-	comm	25	-			-	-	100	-
		-	-	60	-	- CYANIDE	CuCN2	-	all	25	-
		-	-	100	-			-	-	60	-
CHLORAMINE		-	dil	25	1	- FLUORIDE	CuF2	-	all	25	1
		-	-	60	-			-	-	60	1
		-	-	100	-			-	-	100	-
CHLORIC ACID	HClO3	-	20	25	1	- NITRATE	Cu(NO3)2	-	nd	25	1
		-	-	60	3			-	-	60	1
		-	-	100	-			-	-	100	-
CHLORINE	Cl2	-	sat	25	-	- SULPHATE	CuSO4	-	dil	25	1
		-	-	60	-			-	-	60	1
		-	-	100	-			-	-	100	-
- DRY GAS		-	10	25	-			-	sat	25	1
		-	-	60	-			-	-	60	1
		-	-	100	-			-	-	100	-
		-	100	25	-	COTTONSEED OIL		-	comm	25	-
		-	-	60	-			-	-	60	-
- WET GAS		-	5g/m3	25	-			-	-	100	-
		-	-	60	-	CRESOL	CH3C6H4OH	-	£90	25	1
		-	-	100	-			-	-	60	-
		-	10g/m3	25	-			-	-	100	-
		-	-	60	-			-	>90	25	-
		-	-	100	-			-	-	60	-
		-	66g/m3	25	-			-	-	100	-
		-	-	60	-	CRESYLIC ACID	CH3C6H4COOH	-	50	25	-
		-	-	100	-			-	-	60	-
- LIQUID		-	100	25	3			-	-	100	-
		-	-	60	-	CYCLOHEXANE	C6H12	-	all	25	1
		-	-	100	-			-	-	60	-
CHLOROACETIC ACID	ClCH2COH	-	85	25	2			-	-	100	-
		-	-	60	3	CYCLOHEXANONE	C6H10O	-	all	25	1
		-	-	100	-			-	-	60	-
		-	100	25	3			-	-	100	-
		-	-	60	3	DECAHYDRONAFTALENE	C10H18	-	nd	25	1
		-	-	100	-			-	-	60	2
CHLOROBENZENE	C6H5Cl	H5Cl	all	25	-			-	-	100	-
	6	-	-	-	-	DEMINERALIZED WATER		-	100	25	1
		-	-	60	-			-	-	60	1
		-	-	100	-			-	-	100	-
CHLOROFORM	CHCl3	-	all	25	2	DEXTRINE	C6H12O6	H12OCH2O	nd	25	1
		-	-	60	-		6	-	-	-	-
		-	-	100	-			-	-	60	1
		-	-	100	-			-	-	100	-

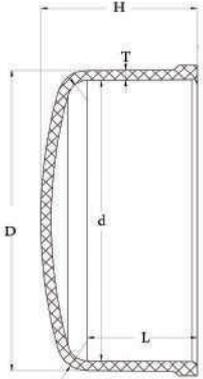
Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP
		(%)	(°C)						(°C)		
ANTIMONY - TRICHLORIDE	SbCl <sub>3</sub>	100	25 60 100	1 1 -	1 1 -	BROMINE - LIQUID	Br <sub>2</sub>	(%) 100 -	25 60 100	3 3 -	3 3 3
ANTHRAQUINONE SULPHONIC ACID		suspension	25 60 100	1 2 -	1 1 -	- VAPOURS		low	25 60 100	2 -	3 3 -
AQUA REGIA	HC+HNO <sub>3</sub>	100	25 60 100	2 2 -	3 3 -	BUTADIENE	C <sub>4</sub> H <sub>6</sub>		25 60 100	1 1 -	1 3 -
ARSENIC ACID	H <sub>3</sub> AsO <sub>4</sub>	deb	25 60 100 80 60 100	1 2 -	1 1 -	BUTANEDIOL AQUEOUS	CH <sub>3</sub> CH <sub>2</sub> CHOHCH <sub>2</sub> OH		25 60 100 concentrated	1 3 -	1 -
BARIUM - CARBONATE	BaCO <sub>3</sub>	all	25 60 100	1 1 -	1 1 -	BUTANE GAS	C	H10 4	25 10	1 -	1 -
- CHLORIDE	BaCl <sub>2</sub>	10	25 60 100	1 1 -	1 1 -	BUTYL - ACETATE	CH <sub>3</sub> CO <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>		100	25 60	3 3
- HYDROXIDE	Ba(OH) <sub>2</sub>	all	25 60 100	1 1 -	1 1 -	- ALCOHOL	C			25	1
- SULPHATE	BaSO <sub>4</sub>	nb	25 60 100	1 1 -	1 1 -	- PHENOL	C		100	25	3
- SULPHIDE	BaS	sat	25 60 100	1 1 -	1 -		4	H <sub>9</sub> COH H <sub>9</sub> COH <sub>4</sub> OH		60 -	1 3
BEER		comm	25 60 100	1 1 -	-	BUTYLENE GLYCOL	C <sub>4</sub> H <sub>6</sub> (OH) <sub>2</sub>		100	25	1
BENZALDEHYDE	C <sub>6</sub> H <sub>5</sub> CHO	nd	25 60 100	3 3 -	3 3 -	BUTYRIC ACID	C <sub>2</sub> H <sub>5</sub> CH <sub>2</sub> COOH		20	25	1
BENZENE	C <sub>6</sub> H <sub>6</sub>	100	25 60 100	3 3 -	3 3 -			concentrated	25	3	3
- LIGROIN		2080/	25 60 100	3 3 -	3 3 -	CALCIUM - BISULPHITE	Ca(HSO <sub>3</sub> ) <sub>2</sub>		nd	25	1
- MONOCHLORINE	C <sub>6</sub> H <sub>5</sub> Cl	technically pure	25 60 100	3 -	1 -	- CARBONATE	CaCO <sub>3</sub>		all	25	1
BENZOIC ACID	C <sub>6</sub> H <sub>5</sub> COOH	sat	25 60 100	1 2 -	1 1 -	- CHLORATE	CaHCl		nd	25	1
BENZYL ALCOHOL	C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> OH	100	25 60 100	1 2 -	1 2 -	- CHLORIDE	CaCl <sub>2</sub>		all	25	1
BLEACHING LYE	NaOCl+NaCl	12.50% Cl	25 60 100	1 2 -	2 -	- HYDROXIDE	Ca(OH) <sub>2</sub>		all	25	-
BORIC ACID	H <sub>3</sub> BO <sub>3</sub>	deb	25 60 100	1 2 -	1 1 -	- HYPOCHLORITE	Ca(OCl) <sub>2</sub>		sat	25	1
		sat	25 60 100	1 2 -	1 1 -	- NITRATE	Ca(NO <sub>3</sub> ) <sub>2</sub>		50	25	1
BRINE		comm	25 60 100	1 1 -	1 -	- SULPHATE	CaSO <sub>4</sub>		nd	25	1
BROMIC ACID	HBrO <sub>3</sub>	10	25 60 100	1 1 -	-	- SULPHIDE	CaS		sat	25	2
										60	2
										100	-

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

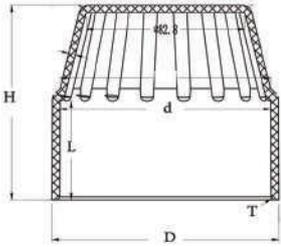
## Pipe Plug



size	d	D	H	L	T
25	26.6	33.1	25.6	19.6	2.0
32	34.2	40.9	31.2	28.2	3.7
48	48.1	55.2	29.7	29.0	4.5
60	60.7	70.4	44.5	36.8	5.0
75	75.8	85.0	54.9	43.6	4.5
110	110.5	118.0	59.0	46.0	5.5
160	161.8	170.1	77.0	66.5	7.7



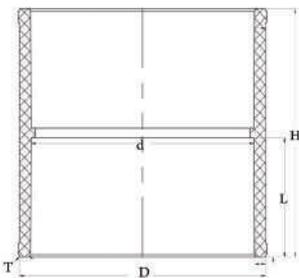
## Air Vent



size	d	D	H	L	T
60	60.6	67.4	87.0	41.0	3.4
75	75.6	81.7	101.6	50.0	3.1
110	109.8	118.0	102.5	59.0	4.0



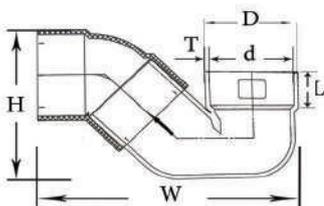
## Socket



size	d	D	H	L	T
25	26.9	33.0	42.0	20.0	3.0
32	33.6	40.8	49.0	22.5	3.5
48	48.4	55.7	65.9	32.0	3.5
60	60.5	78.1	38.9	38.1	3.7
75	75.6	84.0	94.0	45.0	4.1
110	110.4	121.0	109.2	55.0	5.2
160	161.0	171.5	144.0	78.0	6.0



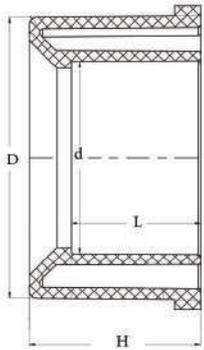
## Siphon



size	d	D	H	W	L	T
50	50.8	59.0	75.0	140.0	31.0	3.5
75	75.8	83.2	90.0	237.0	39.5	4.1
110	109.7	122.0	200.0	313.5	51.8	7.8



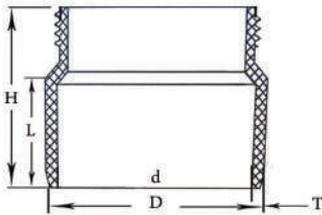
## Reducing Bush



size	d	D	H	L	T
1*25	27.0	33.4	25.0	19.0	3.2
48*1	33.0	48.0	37.8	33.0	7.4
60*48	48.0	60.0	45.4	30.6	6.0
75*60	60.0	75.0	51.2	37.4	8.5
110*60	60.0	110.0	65.7	42.0	TS
110*75	75.0	110.0	66.0	51.0	TS
160*110	111.0	159.0	76.3	55.8	TS



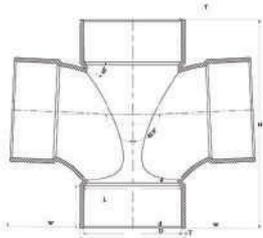
## Cleaning Insert



size	d	D	H	L	T	Door
48	49.4	60.0	63.1	34.0	5.3	48
60	51.7	60.1	67.8	45.5	4.3	75
75	66.3	75.1	73.5	48.7	4.5	75
110	97.6	109.2	79.2	50.1	5.6	110
160	147.6	160.1	118.9	76.2	5.7	110



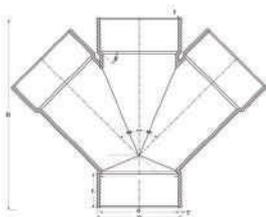
## Cross87.5



size	d	D	H	W	L	T
75	75.5	84.2	220.0	260.0	40.0	4.3
110	110.3	123.0	244.0	285.0	45.2	6.5



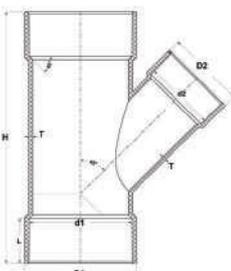
## Cross45



size	d	D	H	W	L	T
110	110.5	122.8	273.0	338.0	51.0	6.3



## Tee45 Reducer



size	d	D	d2	D2	H	W	L1	T1	L2	T2
75*60	75.7	86.5	60.6	70.5	200.0	170.0	72.0	5.2	37.8	4.8
110*60	110.8	122.5	60.5	70.3	219.0	190.0	49.7	6.7	37.9	4.9
110*75	110.7	122.7	75.6	86.2	219.5	221.2	46.6	6.2	42.2	5.3
160*110	161.0	178.5	110.7	122.4	388.6	320.0	71.4	7.2	50.9	6.6



## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP
		(%)	(°C)	-	-			(%)	(°C)	-	-
ACETALDEHYDE	CH3CHO	100	25	3	2	AMMONIA	NH3	deb	25	1	1
		-	60	3	-	- AQUEOUS SOLUTION		-	60	2	-
		-	100	-	-			-	100	-	-
- AQUEOUS SOLUTION		40	25	3	1			sat	25	1	1
		-	60	3	2			-	60	2	-
		-	100	-	-			-	100	-	-
ACETIC ACID	CH3COOH	≤25	25	1	1	- DRY GAS		100	25	1	1
		-	60	2	1			-	60	1	1
		-	100	-	1			-	100	-	-
		30	25	1	1	- LIQUID		100	25	2	1
		-	60	2	1			-	60	3	1
		-	100	-	1			-	100	-	-
		60	25	1	1	AMMONIUM	CH3COONH4	sat	25	-	1
		-	60	2	1	- ACETATE		-	60	2	1
		-	100	-	2			-	100	-	-
		80	25	1	1	- CARBONATE	(NH4)2CO3	all	25	1	1
		-	60	2	3			-	60	2	1
		-	100	-	3			-	100	-	-
- GLACIAL		100	25	2	1	- CHLORIDE	NH4Cl	sat	25	1	1
		-	60	3	2			-	60	1	1
		-	100	-	3			-	100	-	2
ACETIC ANHYDRIDE	(CH3CO)2O	100	25	3	1	- FLUORIDE	NH4F	25	25	1	1
		-	60	3	2			-	60	2	1
		-	100	-	3			-	100	-	-
ACETONE	CH3COCH3	10	25	3	1	- HYDROXIDE	NH4OH	28	25	-	1
		-	60	3	3			-	60	2	1
		-	100	-	3			-	100	-	-
		100	25	3	1	- NITRATE	NH4NO3	sat	25	1	1
		-	60	3	3			-	60	1	1
		-	100	-	3			-	100	-	1
ACETOPHENONE	CH3COC6H5	nd	25	-	1	- PHOSPHATE DIBASIC	NH4(HPO4)2	all	25	1	1
		-	60	-	3			-	60	1	1
		-	100	-	-			-	100	-	-
ACRYLONITRILE	CH2CHCN	technically pure	25	-	1	- PHOSPHATE META	(NH4)4P4O12	all	25	1	1
		-	60	3	1			-	60	1	1
		-	100	-	-			-	100	-	-
ADIPIC ACID	(CH2CH2CO2H)2	sat.	25	1	1	- PHOSPHATE TRI	(NH4)2HPO4	all	25	1	1
- AQUEOUS SOLUTION		-	60	2	1			-	60	1	1
		-	100	-	-			-	100	-	-
ALLYL ALCOHOL	CH2CHCH2OH	96	25	2	1	- PERSULPHATE	(NH4)2S2O8	all	25	1	1
		-	60	3	1			-	60	1	-
		-	100	-	1			-	100	-	-
ALUM	Al2(SO4)3.K2SO4.nH2O	dil	25	1	1	- SULPHIDE	(NH4)2S	deb	25	1	1
- AQUEOUS SOLUTION		-	60	2	1			-	60	2	1
		-	100	-	-			-	100	-	-
	Al2(SO4)3.K2SO4.nH2O	sat	25	-	1			sat	25	1	1
		-	60	2	1			-	60	1	1
		-	100	-	-			-	100	-	-
ALUMINIUM	AlCl3	all	25	1	-	- SULPHYDRATE	NH4OH.SO4	dil	25	1	1
- CHLORIDE		-	60	1	-			-	60	2	1
		-	100	-	-			-	100	-	-
- FLUORIDE	AlF3	100	25	1	-			sat	25	1	1
		-	60	1	-			-	60	1	1
		-	100	-	-			-	100	-	-
- HYDROXIDE	Al(OH)3	all	25	1	-	AMYLACETATE	CH3CO2CH2(CH2)3CH3	100	25	3	2
		-	60	1	-			-	60	3	-
		-	100	-	-			-	100	-	-
- NITRATE	Al(NO2)3	nd	25	1	-	AMYLALCOHOL	CH3(CH2)3CH2OH	nd	25	1	1
		-	60	1	-			-	60	2	1
		-	100	-	-			-	100	-	1
- SULPHATE	Al(SO4)3	deb	25	1	1	ANILINE	C6H5NH2	25	25	3	1
		-	60	1	1			-	60	-	-
		-	100	-	-			-	100	-	-
		sat	25	1	1			-	100	-	-
		-	60	1	1	- CHLORHYDRATE	C6H5NH2.HCl	25	25	2	2
		-	100	-	2			-	60	-	-
									100	-	3

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP
		(%)	(°C)	-	-			(%)	(°C)	-	-
CARBON	CO2	-	-	25	1	CHLOROSULPHONIC	ClHSO3	-	100	25	3
- DIOXIDE		-	-	60	1	ACID		-	-	60	3
AQUEOUS SOLUTION		-	-	100	-			-	-	100	-
- GAS		-	100	25	1	CHROME ALUM	KCr(SO4)2	-	nd	25	1
		-	-	60	1			-	-	60	1
		-	-	100	-			-	-	100	-
- DISULPHIDE	CS2	-	100	25	2	CHROMIC ACID	CrO3+H2O	-	10	25	2
		-	-	60	-			-	-	60	3
		-	-	100	-			-	-	100	-
- MONOXIDE	CO	-	100	25	1			-	30	25	2
		-	-	60	1			-	-	60	3
		-	-	100	-			-	-	100	-
- TETRACHLORIDE	CCl4	-	100	25	2			-	50	25	2
		-	-	60	3			-	-	60	3
		-	-	100	-			-	-	100	-
CARBONIC ACID	H2CO3	-	sat	25	-	CHROMIC SOLUTION	CrO3+H2O+H2SO4	-	5015/35/	25	3
- AQUEOUS SOLUTION		-	-	60	-			-	-	60	3
		-	-	100	-			-	-	100	-
- DRY		-	100	25	-	CITRIC ACID	C	H4(OH)(CO2H)	50	25	1
		-	-	60	-		3	3	-	-	-
		-	-	100	-	AQ. SOL. min			-	60	1
- WET		-	all	25	-				-	100	-
		-	-	60	-	COPPER	CuCl2	-	sat	25	1
		-	-	100	-	- CHLORIDE		-	-	60	1
CARBON OIL		-	comm	25	-			-	-	100	-
		-	-	60	-	- CYANIDE	CuCN2	-	all	25	-
		-	-	100	-			-	-	60	-
CHLORAMINE		-	dil	25	1	- FLUORIDE	CuF2	-	all	25	1
		-	-	60	-			-	-	60	1
		-	-	100	-			-	-	100	-
CHLORIC ACID	HClO3	-	20	25	1	- NITRATE	Cu(NO3)2	-	nd	25	1
		-	-	60	3			-	-	60	1
		-	-	100	-			-	-	100	-
CHLORINE	Cl2	-	sat	25	-	- SULPHATE	CuSO4	-	dil	25	1
		-	-	60	-			-	-	60	1
		-	-	100	-			-	-	100	-
- DRY GAS		-	10	25	-			-	sat	25	1
		-	-	60	-			-	-	60	1
		-	-	100	-			-	-	100	-
		-	100	25	-	COTTONSEED OIL		-	comm	25	-
		-	-	60	-			-	-	60	-
- WET GAS		-	5g/m3	25	-			-	-	100	-
		-	-	60	-	CRESOL	CH3C6H4OH	-	£90	25	1
		-	-	100	-			-	-	60	-
		-	10g/m3	25	-			-	-	100	-
		-	-	60	-			-	>90	25	-
		-	-	100	-			-	-	60	-
		-	66g/m3	25	-			-	-	100	-
		-	-	60	-	CRESYLIC ACID	CH3C6H4COOH	-	50	25	-
		-	-	100	-			-	-	60	-
- LIQUID		-	100	25	3			-	-	100	-
		-	-	60	-	CYCLOHEXANE	C6H12	-	all	25	1
		-	-	100	-			-	-	60	-
CHLOROACETIC ACID	ClCH2COH	-	85	25	2			-	-	100	-
		-	-	60	3	CYCLOHEXANONE	C6H10O	-	all	25	1
		-	-	100	-			-	-	60	-
		-	100	25	3			-	-	100	-
		-	-	60	3	DECAHYDRONAFTALENE	C10H18	-	nd	25	1
		-	-	100	-			-	-	60	2
CHLOROBENZENE	C	H5Cl	all	25	-			-	-	100	-
	6	-	-	-	-	DEMINERALIZED WATER		-	100	25	1
		-	-	60	-			-	-	60	1
		-	-	100	-			-	-	100	-
CHLOROFORM	CHCl3	-	all	25	2	DEXTRINE	C	H12OCH2O	nd	25	1
		-	-	60	-		6	-	-	-	-
		-	-	100	-			-	-	60	1
		-	-	100	-			-	-	100	-

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP			
		(%)	(°C)						(°C)					
ANTIMONY - TRICHLORIDE	SbCl <sub>3</sub>	100	25	1	1	BROMINE - LIQUID	Br <sub>2</sub>	100	25	3	3			
			60	1	1				60	3	3			
			100	-	-				100	-	3			
ANTHRAQUINONE		suspension	25	1	1	- VAPOURS			25	2	3			
SULPHONIC ACID			60	2	1			low	60	-	3			
			100	-	-				100	-	-			
AQUA REGIA	HC+HNO <sub>3</sub>	100	25	2	3	BUTADIENE	C <sub>4</sub> H <sub>6</sub>		25	1	1			
			60	2	3			100	60	1	3			
			100	-	3				100	-	-			
ARSENIC ACID	H <sub>3</sub> AsO <sub>4</sub>	deb	25	1	1	BUTANEDIOL - AQUEOUS	CH <sub>3</sub> CH <sub>2</sub> CHOHCH <sub>2</sub> OH		25	1	1			
			60	2	1			10	60	3	-			
			100	-	-				100	-	-			
		80	25	1	1			concentrated	25	2	2			
			60	2	1				60	3	2			
			100	-	2				100	-	-			
BARIUM - CARBONATE	BaCO <sub>3</sub>	all	25	1	1	BUTANE - GAS	C	H <sub>10</sub>	25	1	1			
			60	1	1			4	10	-	-			
			100	-	-						60	1		
- CHLORIDE	BaCl <sub>2</sub>	10	25	1	1						100	-		
			60	1	1	BUTYL - ACETATE	CH <sub>3</sub> CO <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>		100	25	3			
			100	-	-						60	3		
- HYDROXIDE	Ba(OH) <sub>2</sub>	all	25	1	1	- ALCOHOL	C				100	-		
			60	1	1			4	H <sub>9</sub> OH		25	1		
			100	-	-							60	1	
- SULPHATE	BaSO <sub>4</sub>	nb	25	1	1	- PHENOL	C			100	25	3		
			60	1	1			4	H <sub>9</sub> C <sub>6</sub> H <sub>4</sub> OH				60	3
			100	-	-							100	-	
- SULPHIDE	BaS	sat	25	1	1							60	3	
			60	1	-							100	-	
			100	-	-	BUTYLENE GLYCOL	C <sub>4</sub> H <sub>6</sub> (OH) <sub>2</sub>		100	25	1			
BEER		comm	25	1	-						60	1		
			60	1	-						100	-		
			100	-	-	BUTYRIC ACID	C <sub>2</sub> H <sub>5</sub> CH <sub>2</sub> COOH		20	25	1			
BENZALDEHYDE	C <sub>6</sub> H <sub>5</sub> CHO	nd	25	3	3						60	2		
			60	3	3						100	-		
			100	-	-					concentrated	25	3		
BENZENE	C <sub>6</sub> H <sub>6</sub>	100	25	3	3						60	3		
			60	3	3						100	-		
			100	-	3	CALCIUM - BISULPHITE	Ca(HSO <sub>3</sub> ) <sub>2</sub>		nd	25	1			
- LIGROIN		2080/	25	3	3						60	1		
			60	3	3						100	-		
			100	-	-	- CARBONATE	CaCO <sub>3</sub>		all	25	1			
- MONOCHLORINE	C <sub>6</sub> H <sub>5</sub> Cl	technically pure	25	3	1						60	1		
			60	-	-						100	-		
			100	-	-	- CHLORATE	CaHCl		nd	25	1			
BENZOIC ACID	C <sub>6</sub> H <sub>5</sub> COOH	sat	25	1	1						60	1		
			60	2	1						100	-		
			100	-	3	- CHLORIDE	CaCl <sub>2</sub>		all	25	1			
BENZYL ALCOHOL	C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> OH	100	25	1	1						60	1		
			60	2	2						100	-		
			100	-	-	- HYDROXIDE	Ca(OH) <sub>2</sub>		all	25	-			
BLEACHING LYE	NaOCl+NaCl	12.50% Cl	25	1	2						60	-		
			60	2	-						100	-		
			100	-	-	- HYPOCHLORITE	Ca(OCl) <sub>2</sub>		sat	25	1			
BORIC ACID	H <sub>3</sub> BO <sub>3</sub>	deb	25	1	1						60	1		
			60	2	1						100	-		
			100	-	1	- NITRATE	Ca(NO <sub>3</sub> ) <sub>2</sub>		50	25	1			
		sat	25	1	1						60	-		
			60	2	1						100	-		
			100	-	1	- SULPHATE	CaSO <sub>4</sub>		nd	25	1			
BRINE		comm	25	1	1						60	1		
			60	1	-						100	-		
			100	-	-	- SULPHIDE	CaS		sat	25	2			
BROMIC ACID	HBrO <sub>3</sub>	10	25	1	-						60	2		
			60	1	-						100	-		
			100	1	-						100	-		

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

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Chemical	Formula	Conc.	Temp.	uPVC		PP		Chemical	Formula	Conc.	Temp.	uPVC		PP	
				(%)	(°C)							(%)	(°C)		
HEXANE	C6H14	100	25	1	1			LACTIC ACID	CH3CHOHCOOH	≤28	25	1	1		
			60	2	2						60	2	1		
			100								100		1		
HYDROBROMIC ACID	HBr	≤10	25	1	1			LANOLINE		nd	25		1		
			60	2	1						60	2	2		
			100		3						100				
		48	25	1	1			LEAD ACETATE	Pb(CH3COO)2	sat	25	1	1		
			60	2	1						60	1	2		
			100		3						100		2		
HYDROCHLORIC ACID	HCl	≤25	25	1	1			LINSEED OIL		comm	25	1	1		
			60	2	1						60	2	1		
			100		1						100				
		≤37	25	1	1			LUBRICATING OILS		comm	25	1	1		
			60	1	1						60	1	2		
			100		2						100				
HYDROCYANIC ACID	HCN	deb	25	1	1			MAGNESIUM - CARBONATE	MgCO3	all	25	1	1		
			60	1	1						60	1	1		
			100								100				
HYDROFLUORIC ACID	HF	10	25	1	1			- CHLORIDE	MgCl2	sat	25	1	1		
			60	2	1						60	1	1		
			100		3						100		2		
		60	25	2	1			- HYDROXIDE	Mg(OH)2	all	25	1	1		
			60	3	3						60	1	1		
			100		3						100				
HYDROGEN	H2	all	25					- NITRATE	MgNO3	nd	25	1	1		
			60								60	1	1		
			100								100				
HYDROGEN - PEROXIDE	H2O2	30	25	1	1			- SULPHATE	MgSO4	dil	25	1	1		
			60	1	1						60	1	1		
			100								100				
		50	25	1	1					sat	25	1	1		
			60	1	2						60	1	1		
			100								100				
		90	25	1	1			MALEIC ACID	COOHCHCHCOOH	nd	25	1	1		
			60	1	2						60	1	1		
			100								100		1		
- SULPHIDE DRY		sat	25	1	1			MALIC ACID	CH2CHOH(COOH)2	nd	25	1	1		
			60	2	1						60	1	1		
			100								100				
- SULPHIDE WET		sat	25	1	1			MERCURIC - CHLORIDE	HgCl2	sat	25	1	1		
			60	2	1						60	1	1		
			100								100				
HYDROSULPHITE		≤10	25	1	1			- CYANIDE	HgCN2	all	25	1	1		
			60	2	1						60	1	1		
			100								100				
HYDROXYLAMINE SULPHATE	(H2NOH)2H2SO4	12	25	1	1			MERCUROUS NITRATE	HgNO3	nd	25	1	1		
			60	1	1						60	1	1		
			100								100				
ILLUMINATING GAS		100	25	1	1			MERCURY	Hg	100	25	1	1		
			60								60	2	1		
			100								100				
IODINE - DRY AND WET	I2	3	25	2	1			METHYL - ACETATE	CH3COOCH3	100	25		1		
			60	3							60		1		
			100								100				
- TINCTURE		>3	25	2	1			- ALCOHOL	CH3OH	nd	25	1	1		
			60	3	3						60	1	2		
			100								100		2		
ISOCTANE	C8H18	100	25	1	2			- BROMIDE	CH3Br	100	25	3	3		
			60		3						60		3		
			100								100				
ISOPROPYL - ETHER	(CH3)2CHOCH(CH3)2	100	25	2	2			- CHLORIDE	CH3Cl	100	25	3	3		
			60	3	3						60	3	3		
			100								100		3		
- ALCOHOL	(CH3)2CHOH	100	25		1			- ETHYLKETONE	CH3COCH2CH3	all	25	3	1		
			60	2	1						60	3	2		
			100								100				

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

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Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP
		(%)	(°C)					(%)	(°C)		
METHYLAMINE	CH3NH2	32	25	2	1	OLEUM		nd	25	3	3
			60	3					60	3	3
			100						100		
METHYLENE CHLORIDE	CH2Cl2	100	25	3	3	- VAPOURS		low	25	3	3
			60	3	3				60	3	3
			100						100		
METHYL SULPHURIC ACID	CH3COOSO4	50	25	1	2			high	25	3	3
			60	2	2				60	3	3
			100						100		
		100	25	1	3	OLIVE OIL		comm	25		1
			60	2	3				60	2	1
			100						100		
MILK		100	25	1	1	OXALIC ACID	HO2CCO2H	10	25	1	1
			60	1	1				60	2	2
			100						100		2
MINERAL ACIDULOUS WATER		nd	25	1	1			sat	25	1	1
			60	1	1				60	1	2
			100						100		3
MOLASSES		comm	25	1	1	OXYGEN	O2	all	25	1	3
			60	2	1				60	1	3
			100						100		
NAPHTA		100	25	2	1	OZONE	O3	nd	25	1	3
			60	3	3				60	2	3
			100						100		
NAPHTALINE		100	25	1	3	PALMITIC ACID	CH3(CH2)14COOH	10	25	1	
			60		3				60	1	3
			100						100		
NICKEL - CHLORIDE	NiCl3	all	25	1	1			70	25	1	
			60	1	1				60	1	3
			100						100		
- NITRATE	Ni(NO3)2	nd	25	1	1	PARAFFIN		nd	25		
			60	1	1				60	2	1
			100						100		
- SULPHATE	NiSO4	dil	25	1	1	- EMULSION		comm	25	1	3
			60	1	1				60	1	3
			100						100		
		sat	25	1	1	- OIL		nd	25	1	1
			60	1	1				60	1	3
			100						100		
NITRIC ACID	HNO3	anhydrous	25	3	3	PERCHLORIC ACID	HClO4	100	25	1	1
			60	3	3				60	2	1
			100						100		
		20	25	1	1			70	25	1	1
			60	2	2				60	2	
			100						100		
		40	25	1	2	PETROL		100	25	1	1
			60	1	3	- REFINED			60		3
			100						100		
		60	25	1	2	- UNREFINED		100	25	1	1
			60	2	3				60	1	3
			100						100		
		98	25	3	3	PHENOL	C6H5OH	1	25	1	1
			60	3	3	- AQUEOUS SOLUTION			60		1
			100						100		3
NITROBENZENE	C6H5NO2	all	25	3	1			≤90	25	2	1
			60	3	2				60	3	3
			100						100		3
OLEIC ACID	C18H17CH=CH(CH2)7CO2H	comm	25	1	1	PHENYL HYDRAZINE	C6H5NHNH2	all	25	3	2
			60	1	2				60	3	2
			100						100		
						- CHLORHYDRATE	C6H5NHNH3Cl	sat	25	1	1
										60	3
										100	

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP	
		(%)	(°C)					(%)	(°C)			
PHOSPHORIC - ACID	H3PO4	≤25	25	1	1	- PERBORATE	KBO3	-	all	25	1	1
			60	2	1				60	1		
			100		1				100			
		≤50	25	1	1	- PERMANGANATE	KMnO4	-	10	25	1	1
			60	1	1				60	1	2	
			100		1				100			
		≤85	25	1	1	- PERSULPHATE	K S2O8	nd	25	1	1	
			60	1	1		2	-	60	2	1	
			100		1				100			
- ANHYDRIDE	P2O5	nd	25	1	1	- SULPHATE	K SO4	sat	25		1	
			60	2	1		2	-	60		1	
			100		1				100			
PHOSPHORUS TRICHLORIDE	PCl3	100	25	3	1	PROPANE	C H8	100	25	1	1	
			60	3			3	-	60			
			100						100			
PHOTOGRAPHIC - DEVELOPER		comm	25	1		- GAS		-	60			
			60	1					100			
			100			- LIQUID		-	100	25	1	2
- EMULSION		comm	25	1					60			
			60	1					100			
			100			PROPYL ALCOHOL	C H7OH	100	25	1	1	
PHTHALIC ACID	C H4(CO2H)2	50	25		1		3	-	60	2	1	1
	6		60	3	1				100			
			100			PYRIDINE	CH(CHCH)2N	nd	25	3	1	1
PICRIC ACID	HOC6H2(NO2)3	1	25	1	1			-	60	3	2	3
			60	1				-	100			
			100			RAIN WATER		100	25	1	1	1
		>1	25	3	3			-	60	1	1	1
			60	3	3			-	100			
			100			SEA WATER		100	25	1	1	1
POTASSIUM - BICHROMATE	K2CrO7	40	25	1	1			-	60	1	1	1
			60	1				-	100			
			100			SILICIC ACID	H2SiO3	all	25	1	1	1
- BORATE	K3BO3	sat	25	1	1			-	60	1	1	1
			60	2	1			-	100			
			100			SILICONE OIL		nd	25	1	1	
- BROMATE	KBrO3	nd	25	1	1			-	60	3	2	
			60	2	1			-	100			
			100		2	SILVER - CYANIDE	AgCN	all	25	1		1
- BROMIDE	KBr	sat	25	1	1			-	60	1		1
			60	1	1			-	100			
			100			- NITRATE	AgNO9	nd	25	1	1	1
- CARBONATE	K2CO3	sat	25	1	1			-	60	2	1	1
			60	1				-	100			
			100			- PLATING SOLUTION		comm	25	1		1
- CHLORIDE	KCl	sat	25	1	1			-	60	1		
			60	1	1			-	100			
			100		2	SOAP - AQUEOUS SOLUTION		high	25	1		1
- CHROMATE	KCrO4	40	25	1	1			-	60	2		1
			60	1	1			-	100			
			100			SODIC LYE	£60	25	1			
- CYANIDE	KCN	sat	25	1	1			-	60	1		
			60	1	1			-	100			
			100			SODIUM - ACETATE	CH3COONa	100	25	1	1	1
- FERROCYANIDE	K4Fe(CN)6.3H2O	100	25	1	1			-	60	1	1	1
			60	1	1			-	100			
			100		2	- BICARBONATE	NaHCO3	nd	25	1	1	1
- FLUORIDE	KF	sat	25	1	1			-	60	1	1	1
			60	1	1			-	100			
			100			- BISULPHITE	NaHSO3	100	25	1	1	1
- HYDROXIDE	KOH	≤60	25	1	1			-	60	1	1	1
			60	2	1			-	100			
			100		1	- BROMIDE	NaBr	sat	25	1		1
- NITRATE	KNO3	sat	25	1	1			-	60	1		1
			60	1	1			-	100			
			100			- CARBONATE	Na2CO3	sat	25	1	1	1
			60	1	1			-	60	1	1	2
			100					-	100			2

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP	
		(%)	(°C)						(%)	(°C)		
- CHLORATE	NaClO3	nd	25	1	1	SULPHUR	S	100	25	1	1	
			60	2					60	2	1	
			100						100			
- CHLORIDE	NaCl	dil	25	1	1	- DIOXIDE AQUEOUS	SO2	sat	25	1	1	
			60	2	1				60	2		
			100						100			
		sat	25	1	1	- DIOXIDE DRY		all	25	1	1	
			60	1	1				60	1	1	
			100		3				100		3	
- CYANIDE	NaCN	all	25	1	1	- DIOXIDE LIQUID		100	25	2		
			60	1	1				60	3		
			100						100			
- FERROCYANIDE	Na4Fe(CN)6	sat	25	1		- TRIOXIDE	SO3	100	25	2	3	
			60	1					60	2	3	
			100						100			
- FLUORIDE	NaF	all	25	1		SULPHURIC ACID	H2SO4	≤10	25	1	1	
			60	1					60	1	1	
			100						100		1	
- HYDROXIDE	NaOH	60	25	1	1			≤75	25	1	1	
			60	1	1				60	2	2	
			100		1				100		2	
- HYPOCHLORITE	NaOCl	deb	25	1	1			≤90	25	1	1	
			60	2	2				60	2	2	
			100						100		3	
- HYPOSULPHITE	Na2S3O3	nd	25	1	1			≤96	25	2	3	
			60	1					60	3	3	
			100						100		3	
- NITRATE	NaNO3	nd	25	1	1	- FUMING		H2SO4/HNO3	25	2	3	
			60	1	1				60	3	3	
			100						100		3	
- PERBORATE	NaBO3H2O	all	25	1	1	- NITRIC AQUEOUS SOLUTION	H2SO4+HNO3+H2O	483/49/	25	1	3	
			60	1					60	2	3	
			100						100		3	
- PHOSPHATE di	Na2HPO4	all	25	1	1			500/50/	25	2	3	
			60	1	1				60	3	3	
			100		1				100		3	
- PHOSPHATE tri	Na3PO4	all	25	1	1			1070/20/	25	1	2	
			60	1	1				60	1	2	
			100		1				100			
- SULPHATE	Na2SO4	dil	25	1	1	TALLOW EMULSION		comm	25	1	1	
			60	1	1				60	1	2	
			100						100			
		sat	25	1	1	TANNIC ACID	C14H10O9	10	25	1		
			60	1	1				60	1		
			100						100			
- SULPHIDE	Na2S	dil	25	1	1	TARTARIC ACID	HOOC(CHOH)2COOH	all	25	1	1	
			60	2	1				60	2	1	
			100						100			
		sat	25	1	1	TETRACHLORO - ETHANE	CHCl2CHCl2	nd	25	3	2	
			60	1	1				60	3	3	
			100						100			
- SULPHITE	NaSO3	sat	25	1	1	- ETHYLENE	CCl2CCl2	nd	25	3	2	
			60	1	1				60	3	3	
			100						100			
STANNIC CHLORIDE	SnCl4	sat	25	1	1	TETRAETHYLLEAD	Pb(C2H5)4	100	25	1	1	
			60	1	1				60	2		
			100						100			
STANNOUS CHLORIDE	SnCl2	dil	25	1	1	TETRAHYDROFURAN	C4H8O	all	25	3	2	
			60	1	1				60	3	3	
			100						100		3	
STEARIC ACID	CH3(CH2)16CO2H	100	25	1	2	THIONYL CHLORIDE	SOCl2		25	3	3	
			60	1	2				60			
			100						100			
SUGAR SYRUP		high	25	1	1	THIOPHENE	C	H4S	100	25	3	2
			60	2			4					
			100						60	3	3	
									100			

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.		Temp.		uPVC	PP	Chemical	Formula	Conc.		Temp.		uPVC	PP
		(%)	(°C)	(%)	(°C)					(%)	(°C)				
DIBUTYLPHTHALATE	C <sub>6</sub> H <sub>4</sub> (CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> ) <sub>2</sub>	100	25	3	3	3	3	FERROUS - CHLORIDE	FeCl <sub>2</sub>	sat	25	1	1	1	1
			60	3	3						60	1			
			100								100				
DICHLOOROACETIC ACID	Cl <sub>2</sub> CHCOOH	100	25	1	1	1	1	- SULPHATE	FeSO <sub>4</sub>	nd	25	1	1	1	1
			60	2	2						60	1			
			100								100				
DICHLOOROETHANE	CH <sub>2</sub> ClCH <sub>2</sub> Cl	100	25	3	1	3	1	FERTILIZER		≤10	25	1	1	1	1
			60	3							60	1	1		
			100								100				
DICHLOOROETHYLENE	ClCH <sub>2</sub> Cl	100	25	3	2	3	2			sat	25	1	1	1	1
			60	3							60	1	1		
			100								100				
DIETHYL ETHER	C <sub>2</sub> H <sub>5</sub> O <sub>2</sub> C <sub>2</sub> H <sub>5</sub>	100	25	3	1	3	1	FLUORINE GAS - DRY F <sub>2</sub>		100	25	2	3	3	3
			60	3	1						60	3	3		
			100								100				
DIGLYCOLIC ACID	(CH <sub>2</sub> ) <sub>2</sub> O(CO <sub>2</sub> H) <sub>2</sub>	18	25	1	1	1	1	FLUROSILICIC ACID	H <sub>2</sub> SiF <sub>6</sub>	32	25	1	1	1	1
			60	2	1						60	1	1		
			100								100				
DIMETHYLAMINE	(CH <sub>3</sub> ) <sub>2</sub> NH	100	25	2	1	2	1	FORMALDEHYDE	HCOH		25	1	1	1	1
			60	3	2						60	2	1		
			100								100				
DIOCTYLPHTHALATE		all	25	3	2	3	2	FORMIC ACID	HCOOH	50	25	1	1	1	1
			60	3	2						60	2	1		
			100								100				
DISTILLED WATER		100	25	1	1	1	1				25	1	1	1	1
			60	1	1						60	3	1		
			100								100				
DRINKING WATER		100	25	1	1	1	1	FRUIT PULP AND JUICE		comm	25	1	1	1	1
			60	1	1						60	1	1		
			100								100				
ETHERS		all	25	3	3	3	3	FUEL OIL		100	25	1	1	1	2
			60	3	3						60	1	2		
			100								100				
ETHYL - ACETATE	CH <sub>3</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>	100	25	3	2	3	2				25	1	1	1	2
			60	3	3						60	1	2		
			100								100				
- ALCOHOL	CH <sub>3</sub> CH <sub>2</sub> OH	nd	25	1	1	1	1	FURFUROLE ALCOHOL C <sub>5</sub> H <sub>3</sub> OCH <sub>2</sub> OH		nd	25	3	2	2	2
			60	2	1						60	3	2		
			100								100				
- CHLORIDE	CH <sub>3</sub> CH <sub>2</sub> Cl	all	25	3	3	3	3	GAS EXHAUST - ACID		all	25	1		1	
			60	3	3						60	1			
			100								100				
- ETHER	CH <sub>3</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>3</sub>	all	25	3	3	3	3	- WITH NITROUS VAPOURS		traces	25	1	1	1	1
			60	3	3						60	1	1		
			100								100				
ETHYLENE - CHLOROHYDRIN	ClCH <sub>2</sub> CH <sub>2</sub> OH	100	25	3		3		GAS PHOSGENE	ClCOCl	100	25	1	2	2	2
			60	3							60	2	2		
			100								100				
- GLYCOL	HOCH <sub>2</sub> CH <sub>2</sub> OH	comm	25	1	1	1	1	GELATINE		100	25	1	1	1	1
			60	2	1						60	1	1		
			100								100				
FATTY ACIDS		nd	25	1		1	1	GLUCOSE	C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	all	25	1	1	1	1
			60	1							60	2	1		
			100								100				
FERRIC - CHLORIDE	FeCl <sub>3</sub>	10	25	1	1	1	1	GLYCERINE AQ.SOL	HOCH <sub>2</sub> CHOHCH <sub>2</sub> OH	all	25	1	1	1	1
			60	2	1						60	1	1		
			100								100				
- NITRATE	Fe(NO <sub>3</sub> ) <sub>3</sub>	nd	25	1		1	1	GLYCOGLUE AQUEOUS		10	25	1	1	1	1
			60	1							60	1	1		
			100								100				
- SULPHATE	Fe(SO <sub>4</sub> ) <sub>3</sub>	nd	25	1	1	1	1	GLYCOLIC ACID	HOCH <sub>2</sub> COOH	37	25	1	1	1	1
			60	1							60	1			
			100								100				
HEPTANE	C <sub>7</sub> H <sub>16</sub>	100	25	1	3	3	3				25	1	3	3	3
			60	2	3						60	2	3		
			100								100				

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP
TOLUENE	C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>	100	25	3	2
			60	3	3
			100		3
TRANSFORMER OIL		nd	25	1	1
			60	2	2
			100		
TRICHLOROACETIC ACID	CCl <sub>3</sub> COOH	≤50	25	1	1
			60	3	1
			100		
TRICHLOROETHYLENE	Cl <sub>2</sub> CCHCl	100	25	3	3
			60	3	3
			100		
TRIETHANOLAMINE	N(CH <sub>2</sub> CH <sub>2</sub> OH) <sub>2</sub>	100	25	2	1
			60	3	
			100		
TURPENTINE		100	25	2	3
			60	2	3
			100		
UREA AQUEOUS SOLUTION	CO(NH <sub>2</sub> ) <sub>2</sub>	2-10	25	1	1
			60	2	1
			100		
		33	25	1	1
			60	2	1
			100		
URINE		nd	25	1	1
			60	2	1
			100		
URIC ACID	C <sub>5</sub> H <sub>4</sub> N <sub>4</sub> O <sub>3</sub>	10	25	1	
			60	2	
			100		
VASELINE OIL		100	25	1	1
			60	3	2
			100		
VINYL ACETATE	CH <sub>3</sub> CO <sub>2</sub> CHCH <sub>2</sub>	100	25	3	
			60	3	
			100		
WHISKY		comm	25	1	1
			60	1	
			100		
WINES		comm	25	1	1
			60	1	1
			100	1	
WINE VINEGAR		comm	25	1	1
			60	2	1
			100		
ZINC - CHLORIDE	ZnCl <sub>2</sub>	dil	25	1	1
			60	1	1
			100		
		sat	25	1	1
			60	1	1
			100		2
- CHROMATE	ZnCrO <sub>4</sub>	nd	25	1	1
			60	1	1
			100		
- CYANIDE	Zn(CN) <sub>2</sub>	all	25	1	
			60	1	
			100		
- NITRATE	Zn(NO <sub>3</sub> ) <sub>2</sub>	nd	25	1	1
			60	1	1
			100		
- SULPHATE	ZnSO <sub>4</sub>	dil	25	1	1
			60	1	1
			100		
		sat	25	1	1
			60	1	1
			100		

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.		Temp.		uPVC	PP	Chemical	Formula	Conc.		Temp.		uPVC	PP
		(%)	(°C)	(°C)	(°C)					(%)	(°C)	(°C)	(°C)		
DIBUTYLPHTHALATE	C6H4(CO2C4H9)2	100	25	3	3			FERROUS - CHLORIDE	FeCl2	sat	25	1	1		
			60	3	3					60	1				
			100							100					
DICHLOROACETIC ACID	Cl2CHCOOH	100	25	1	1			- SULPHATE	FeSO4	nd	25	1	1		
			60	2	2					60	1				
			100							100					
DICHLOROETHANE	CH2ClCH2Cl	100	25	3	1			FERTILIZER		≤10	25	1	1		
			60	3						60	1	1			
			100							100					
DICHLOROETHYLENE	ClCH2Cl	100	25	3	2					sat	25	1	1		
			60	3						60	1	1			
			100							100					
DIETHYL ETHER	C2H5OC2H5	100	25	3	1			FLUORINE GAS - DRY F2		100	25	2	3		
			60	3	1					60	3	3			
			100							100					
DIGLYCOLIC ACID	(CH2)2O(CO2H)2	18	25	1	1			FLUROSILICIC ACID	H2SiF6	32	25	1	1		
			60	2	1					60	1	1			
			100							100					
DIMETHYLAMINE	(CH3)2NH	100	25	2	1			FORMALDEHYDE	HCOH		25	1	1		
			60	3	2					60	2	1			
			100							100					
DIOCTYLPHTHALATE	all	25	3	2				FORMIC ACID	HCOOH	50	25	1	1		
			60	3	2					60	2	1			
			100							100					
DISTILLED WATER	100	25	1	1						100	25	1	1		
			60	1	1					60	3	1			
			100							100					
DRINKING WATER	100	25	1	1				FRUIT PULP AND JUICE	comm	25	1	1			
			60	1	1					60	1	1			
			100							100					
ETHERS	all	25	3	3				FUEL OIL	100	25	1	1			
			60	3	3					60	1	2			
			100							100					
ETHYL - ACETATE	CH3CO2C2H5	100	25	3	2					comm	25	1	1		
			60	3	3					60	1	2			
			100							100					
- ALCOHOL	CH3CH2OH	nd	25	1	1			FURFUROLE ALCOHOL C5H3OCH2OH	nd	25	3	2			
			60	2	1					60	3	2			
			100							100					
- CHLORIDE	CH3CH2Cl	all	25	3	3			GAS EXHAUST - ACID	all	25	1				
			60	3	3					60	1				
			100							100					
- ETHER	CH3CH2OCH2CH3	all	25	3	3			- WITH NITROUS VAPOURS	traces	25	1	1			
			60	3	3					60	1	1			
			100							100					
ETHYLENE - CHLOROHYDRIN	ClCH2CH2OH	100	25	3				GAS PHOSGENE	ClCOCl	100	25	1	2		
			60	3						60	2	2			
			100							100					
- GLYCOL	HOCH2CH2OH	comm	25	1	1			GELATINE	100	25	1	1			
			60	2	1					60	1	1			
			100							100					
FATTY ACIDS	nd	25	1					GLUCOSE	C6H12O6	all	25	1	1		
			60	1						60	2	1			
			100							100					
FERRIC - CHLORIDE	FeCl3	10	25	1	1			GLYCERINE AQ.SOL	HOCH2CHOHCH2OH	all	25	1	1		
			60	2	1					60	1	1			
			100							100					
- NITRATE	Fe(NO3)3	nd	25	1				GLYCOGLUE AQUEOUS	10	25	1	1			
			60	1						60	1	1			
			100							100					
- SULPHATE	Fe(SO4)3	nd	25	1	1			GLYCOLIC ACID	HOCH2COOH	37	25	1	1		
			60	1						60	1				
			100							100					
HEPTANE	C7H16	100	25	1	3					100	25	1	3		
			60	2	3					60	2	3			
			100							100					

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

# PP Pipes & Fittings



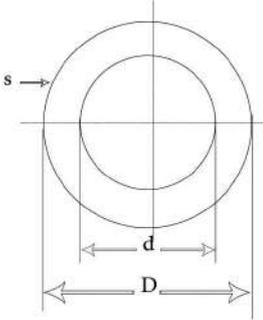
**2**  
**ROKA**  
PLAST

Product List ( Drainage )



## Plain ended Pipe

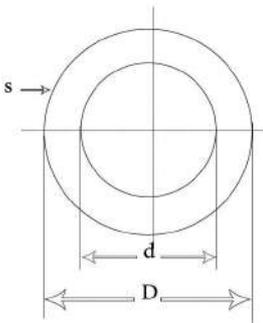
Pipe 3 meter  
 ROKAPLAST PP Pipe  
 Acc. To DIN EN 1451, color White with gray line



Item No	d	d1	s	Length(m)
50006	32	28.4	1.8	3
50006	50	46.4	1.8	3
50006	75	71.2	1.9	3
50006	110	104.6	2.7	3
50006	160	152.2	3.9	3



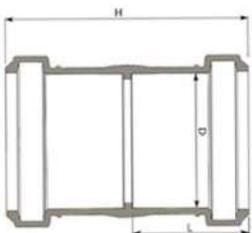
Pipe 3 meter  
 ROKAPLAST PP Pipe  
 Acc. To DIN EN 1451, color White with gray line



Item No	d	d1	s	Length(m)
50006	32	28.4	1.8	6
50006	50	45.6	2.2	6
50006	75	70.0	2.5	6
50006	110	102.6	3.7	6
50006	160	151.4	4.3	6



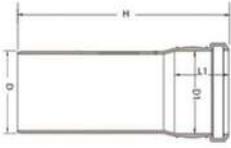
## Double Socket



Item No	D	L	H	Stq/c
5001	32	37.5	77.0	200
50001	50	44.0	91.0	90
50001	75	49.0	101.0	48
50001	110	56.0	115.0	18
50001	160	67.0	139.0	24



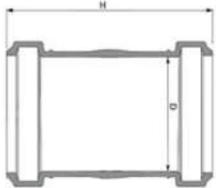
## Single Socket Pipe



Item No	D	D1	L1	H	Stq/c
40159	110	110.0	56.0	250.0	22



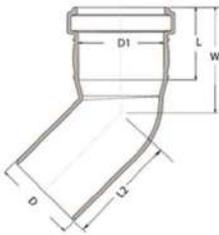
## Repair Socket



Item No	D	H	Stq/c
50014	75	101.0	48
50015	110	115.0	18



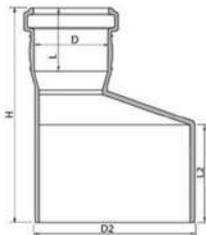
## Elbow 45°



Item No	D	D2	L	L2	W	Stq/c
51001	32	32	37.0	50.0	54.0	180
51002	50	50	44	65.0	65.5	75
51004	75	75	49	67.0	67.0	30
51005	110	110	56	95.0	95.0	33
51006	160	160	67	120.0	120.0	12



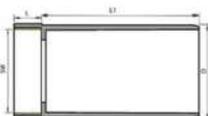
## Reducer Eccentric



Item No	D	D2	L	L2	H	Stq/c
50201	32	50	37.5	55.0	114.0	120
50205	50	75	44	60.0	144.0	45
50206	75	110	44	70.0	149.0	75
50208	110	110	49	70.0	155.0	75
50209	160	160	56	90.0	205.0	32



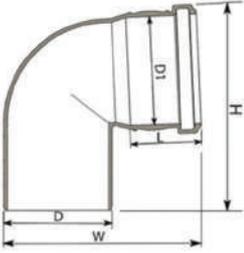
## Adaptor with Thread



Item No	D	SW	L1	H	Stq/c
50302	50	1 $\frac{1}{2}$	15.0	84.0	100



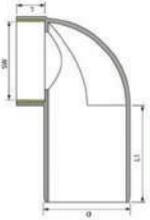
### Elbow 87.5°



Item No	D	D1	W	H	L	Stq/c
51101	32	32	80.0	81.5	37.0	160
51102	50	50	103.0	113.0	44.0	70
51104	75	75	135.7	139.8	49.0	25
51105	110	110	183.9	183.4	56.0	24
51106	160	160	241.9	262.1	67.0	10



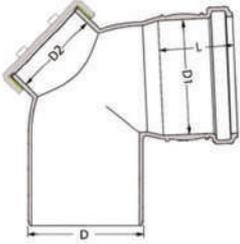
### Elbow 90° with Thread



Item No	D	SW	L1	H	Stq/c
51202	50	1 1/2	16.8	56.0	100



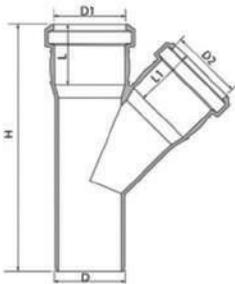
### Elbow 87.5° with inspection door



Item No	D	D1	D2	L	Stq/c
51202	75	75	57.0	49.0	25.0
51205	110	110	95.0	56.0	24.0
51206	160	160	93.0	67.0	10.0



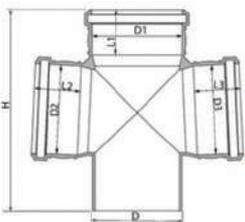
### Branch 45°



Item No	D	D1,D2	H	L1	L2	Stq/c
52001	32	32	132.0	37.0	37.0	90
52002	50	50	180.0	44.0	44.0	40
52004	75	75	225.0	49.0	49.0	36
52005	110	110	295.0	56.0	56.0	12
52006	160	160	404.0	67.0	67.0	6



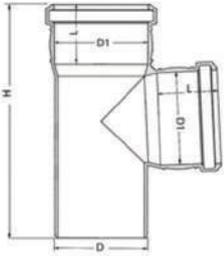
### Double Branch 87.5°



Item No	D,D1	D2,D3	H	L1,L2	L3	Stq/c
52504	75	75	192.0	56.0	56.0	30
52505	110	110	250.0	67.0	67.0	12



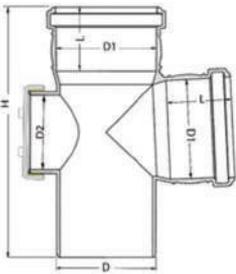
### Branch 87.5°



Item No	D	D1	H	L1	Stq/c
52301	32	32	123.0	37.0	100
52302	50	50	160.0	44.0	40
52304	75	75	192.0	49.0	15
52305	110	110	250.0	56.0	18
52306	160	160	345.0	67.0	6



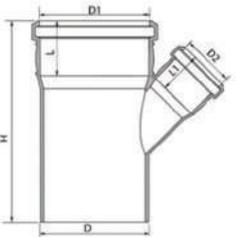
### Branch 87.5° with Inspection door



Item No	D	D1	D2	H	L1	Stq/c
52404	75	75	57.0	192.0	49.0	36
52405	110	110	95.0	250.0	56.0	15
52406	160	160	93.0	345.0	67.0	



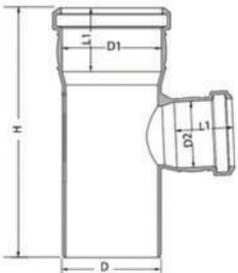
### Reducer Branch 45°



Item No	D,D1	D2	H	L1	L2	Stq/c
52204	75	50	187.0	49.0	44.0	20
52206	110	50	207.0	56.0	44.0	24
52208	110	75	243.0	56.0	49.0	18
52209	160	110	330.0	67.0	56.0	7



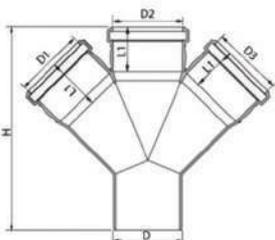
### Reducer Branch 87.5°



Item No	D,D1	D2	H	L1	L2	Stq/c
52604	75	50	192.0	49.0	44.0	20
52606	110	50	250.0	56.0	44.0	24
52608	110	75	250.0	56.0	49.0	22
52609	160	110	290.0	67.0	56.0	10



### Double Branch 45°



Item No	D,D1	D2	H	L1	L2,L3	Stq/c
52104	75	75	225.0	56.0	56.0	26
52105	110	110	295.0	67.0	67.0	8



## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC		PP		Chemical	Formula	Conc.	Temp.	uPVC		PP	
				(%)	(°C)							(%)	(°C)		
HEXANE	C6H14	100	25	1	1			LACTIC ACID	CH3CHOHCOOH	≤28	25	1	1		
			60	2	2						60	2	1		
			100								100		1		
HYDROBROMIC ACID	HBr	≤10	25	1	1			LANOLINE		nd	25		1		
			60	2	1						60	2	2		
			100		3						100				
		48	25	1	1			LEAD ACETATE	Pb(CH3COO)2	sat	25	1	1		
			60	2	1						60	1	2		
			100		3						100		2		
HYDROCHLORIC ACID	HCl	≤25	25	1	1			LINSEED OIL		comm	25	1	1		
			60	2	1						60	2	1		
			100		1						100				
		≤37	25	1	1			LUBRICATING OILS		comm	25	1	1		
			60	1	1						60	1	2		
			100		2						100				
HYDROCYANIC ACID	HCN	deb	25	1	1			MAGNESIUM - CARBONATE	MgCO3	all	25	1	1		
			60	1	1						60	1	1		
			100								100				
HYDROFLUORIC ACID	HF	10	25	1	1			- CHLORIDE	MgCl2	sat	25	1	1		
			60	2	1						60	1	1		
			100		3						100		2		
		60	25	2	1			- HYDROXIDE	Mg(OH)2	all	25	1	1		
			60	3	3						60	1	1		
			100		3						100				
HYDROGEN	H2	all	25					- NITRATE	MgNO3	nd	25	1	1		
			60								60	1	1		
			100								100				
HYDROGEN - PEROXIDE	H2O2	30	25	1	1			- SULPHATE	MgSO4	dil	25	1	1		
			60	1	1						60	1	1		
			100								100				
		50	25	1	1					sat	25	1	1		
			60	1	2						60	1	1		
			100								100				
		90	25	1	1			MALEIC ACID	COOHCHCHCOOH	nd	25	1	1		
			60	1	2						60	1	1		
			100								100		1		
- SULPHIDE DRY		sat	25	1	1			MALIC ACID	CH2CHOH(COOH)2	nd	25	1	1		
			60	2	1						60	1	1		
			100								100				
- SULPHIDE WET		sat	25	1	1			MERCURIC - CHLORIDE	HgCl2	sat	25	1	1		
			60	2	1						60	1	1		
			100								100				
HYDROSULPHITE		≤10	25	1	1			- CYANIDE	HgCN2	all	25	1	1		
			60	2	1						60	1	1		
			100								100				
HYDROXYLAMINE SULPHATE	(H2NOH)2H2SO4	12	25	1	1			MERCUROUS NITRATE	HgNO3	nd	25	1	1		
			60	1	1						60	1	1		
			100								100				
ILLUMINATING GAS		100	25	1	1			MERCURY	Hg	100	25	1	1		
			60								60	2	1		
			100								100				
IODINE - DRY AND WET	I2	3	25	2	1			METHYL - ACETATE	CH3COOCH3	100	25		1		
			60	3							60		1		
			100								100				
- TINCTURE		>3	25	2	1			- ALCOHOL	CH3OH	nd	25	1	1		
			60	3	3						60	1	2		
			100								100		2		
ISOCTANE	C8H18	100	25	1	2			- BROMIDE	CH3Br	100	25	3	3		
			60		3						60		3		
			100								100				
ISOPROPYL - ETHER	(CH3)2CHOCH(CH3)2	100	25	2	2			- CHLORIDE	CH3Cl	100	25	3	3		
			60	3	3						60	3	3		
			100								100		3		
- ALCOHOL	(CH3)2CHOH	100	25		1			- ETHYLKETONE	CH3COCH2CH3	all	25	3	1		
			60	2	1						60	3	2		
			100								100				

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP
		(%)	(°C)					(%)	(°C)		
METHYLAMINE	CH3NH2	32	25	2	1	OLEUM		nd	25	3	3
			60	3					60	3	3
			100						100		
METHYLENE CHLORIDE	CH2Cl2	100	25	3	3	- VAPOURS		low	25	3	3
			60	3	3				60	3	3
			100						100		
METHYL SULPHURIC ACID	CH3COOSO4	50	25	1	2			high	25	3	3
			60	2	2				60	3	3
			100						100		
		100	25	1	3	OLIVE OIL		comm	25		1
			60	2	3				60	2	1
			100						100		
MILK		100	25	1	1	OXALIC ACID	HO2CCO2H	10	25	1	1
			60	1	1				60	2	2
			100						100		2
MINERAL ACIDULOUS WATER		nd	25	1	1			sat	25	1	1
			60	1	1				60	1	2
			100						100		3
MOLASSES		comm	25	1	1	OXYGEN	O2	all	25	1	3
			60	2	1				60	1	3
			100						100		
NAPHTA		100	25	2	1	OZONE	O3	nd	25	1	3
			60	3	3				60	2	3
			100						100		
NAPHTALINE		100	25	1	3	PALMITIC ACID	CH3(CH2)14COOH	10	25	1	
			60		3				60	1	3
			100						100		
NICKEL - CHLORIDE	NiCl3	all	25	1	1			70	25	1	
			60	1	1				60	1	3
			100						100		
- NITRATE	Ni(NO3)2	nd	25	1	1	PARAFFIN		nd	25		
			60	1	1				60	2	1
			100						100		
- SULPHATE	NiSO4	dil	25	1	1	- EMULSION		comm	25	1	3
			60	1	1				60	1	3
			100						100		
		sat	25	1	1	- OIL		nd	25	1	1
			60	1	1				60	1	3
			100						100		
NITRIC ACID	HNO3	anhydrous	25	3	3	PERCHLORIC ACID	HClO4	100	25	1	1
			60	3	3				60	2	1
			100						100		
		20	25	1	1			70	25	1	1
			60	2	2				60	2	
			100						100		
		40	25	1	2	PETROL		100	25	1	1
			60	1	3	- REFINED			60		3
			100						100		
		60	25	1	2	- UNREFINED		100	25	1	1
			60	2	3				60	1	3
			100						100		
		98	25	3	3	PHENOL	C6H5OH	1	25	1	1
			60	3	3	- AQUEOUS SOLUTION			60		1
			100						100		3
NITROBENZENE	C6H5NO2	all	25	3	1			≤90	25	2	1
			60	3	2				60	3	3
			100						100		3
OLEIC ACID	C18H17CH=CH(CH2)7CO2H	comm	25	1	1	PHENYL HYDRAZINE	C6H5NHNH2	all	25	3	2
			60	1	2				60	3	2
			100						100		
						- CHLORHYDRATE	C6H5NHNH3Cl	sat	25	1	1
										60	3
										100	

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP	
		(%)	(°C)					(%)	(°C)			
PHOSPHORIC - ACID	H3PO4	≤25	25	1	1	- PERBORATE	KBO3	-	all	25	1	1
			60	2	1				60	1		
			100		1				100			
		≤50	25	1	1	- PERMANGANATE	KMnO4	-	10	25	1	1
			60	1	1				60	1	2	
			100		1				100			
		≤85	25	1	1	- PERSULPHATE	K S2O8	nd	25	1	1	
			60	1	1		2	-	60	2	1	
			100		1				100			
- ANHYDRIDE	P2O5	nd	25	1	1	- SULPHATE	K SO4	sat	25		1	
			60	2	1		2	-	60			
			100						100			
PHOSPHORUS TRICHLORIDE	PCl3	100	25	3	1	PROPANE	C H8	100	25	1	1	
			60	3			3	-	60			
			100			- GAS		-	100			
PHOTOGRAPHIC - DEVELOPER		comm	25	1		- LIQUID		-	100	25	1	2
			60	1					60			
			100						100			
- EMULSION		comm	25	1		PROPYL ALCOHOL	C H7OH	100	25	1	1	
			60	1			3	-	60	2	1	1
			100						100			
PHTHALIC ACID	C H4(CO2H)2	50	25		1	PYRIDINE	CH(CHCH)2N	nd	25	3	1	1
	6		60	3	1			-	60	3	2	3
			100					-	100			
PICRIC ACID	HOC6H2(NO2)3	1	25	1	1	RAIN WATER		100	25	1	1	1
			60	1				-	60	1	1	1
			100					-	100			
		>1	25	3	3	SEA WATER		100	25	1	1	1
			60	3	3			-	60	1	1	1
			100					-	100			
POTASSIUM - BICHROMATE	K2CrO7	40	25	1	1	SILICIC ACID	H2SiO3	all	25	1	1	1
			60	1				-	60	1	1	1
			100					-	100			
- BORATE	K3BO3	sat	25	1	1	SILICONE OIL		nd	25	1	1	
			60	2	1			-	60	3	2	
			100					-	100			
- BROMATE	KBrO3	nd	25	1	1	SILVER - CYANIDE	AgCN	all	25	1		1
			60	2	1			-	60	1		1
			100		2			-	100			
- BROMIDE	KBr	sat	25	1	1	- NITRATE	AgNO9	nd	25	1	1	1
			60	1	1			-	60	2	1	1
			100					-	100			
- CARBONATE	K2CO3	sat	25	1	1	- PLATING SOLUTION		comm	25	1		1
			60	1				-	60	1		
			100		2			-	100			
- CHLORIDE	KCl	sat	25	1	1	SOAP - AQUEOUS SOLUTION		high	25	1		1
			60	1	1			-	60	2		1
			100					-	100			
- CHROMATE	KCrO4	40	25	1	1	SODIC LYE	£60	25	1			
			60	1	1			-	60	1		
			100					-	100			
- CYANIDE	KCN	sat	25	1	1	SODIUM - ACETATE	CH3COONa	100	25	1	1	1
			60	1	1			-	60	1	1	1
			100		2			-	100			
- FERROCYANIDE	K4Fe(CN)6.3H2O	100	25	1	1	- BICARBONATE	NaHCO3	nd	25	1	1	1
			60	1	1			-	60	1	1	1
			100					-	100			
- FLUORIDE	KF	sat	25	1	1	- BISULPHITE	NaHSO3	100	25	1	1	1
			60	1	1			-	60	1	1	1
			100					-	100			
- HYDROXIDE	KOH	≤60	25	1	1	- BROMIDE	NaBr	sat	25	1		1
			60	2	1			-	60	1		1
			100		1			-	100			
- NITRATE	KNO3	sat	25	1	1	- CARBONATE	Na2CO3	sat	25	1	1	1
			60	1	1			-	60	1	1	2
			100					-	100			

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP	Chemical	Formula	Conc.	Temp.	uPVC	PP	
		(%)	(°C)						(%)	(°C)		
- CHLORATE	NaClO3	nd	25	1	1	SULPHUR	S	100	25	1	1	
			60	2					60	2	1	
			100						100			
- CHLORIDE	NaCl	dil	25	1	1	- DIOXIDE AQUEOUS	SO2	sat	25	1	1	
			60	2	1				60	2		
			100						100			
		sat	25	1	1	- DIOXIDE DRY		all	25	1	1	
			60	1	1				60	1	1	
			100		3				100		3	
- CYANIDE	NaCN	all	25	1	1	- DIOXIDE LIQUID		100	25	2		
			60	1	1				60	3		
			100						100			
- FERROCYANIDE	Na4Fe(CN)6	sat	25	1		- TRIOXIDE	SO3	100	25	2	3	
			60	1					60	2	3	
			100						100			
- FLUORIDE	NaF	all	25	1		SULPHURIC ACID	H2SO4	≤10	25	1	1	
			60	1					60	1	1	
			100						100		1	
- HYDROXIDE	NaOH	60	25	1	1			≤75	25	1	1	
			60	1	1				60	2	2	
			100		1				100		2	
- HYPOCHLORITE	NaOCl	deb	25	1	1			≤90	25	1	1	
			60	2	2				60	2	2	
			100						100		3	
- HYPOSULPHITE	Na2S3O3	nd	25	1	1			≤96	25	2	3	
			60	1					60	3	3	
			100						100		3	
- NITRATE	NaNO3	nd	25	1	1	- FUMING		H2SO4/HNO3	25	2	3	
			60	1	1				60	3	3	
			100						100		3	
- PERBORATE	NaBO3H2O	all	25	1	1	- NITRIC AQUEOUS SOLUTION	H2SO4+HNO3+H2O	483/49/	25	1	3	
			60	1					60	2	3	
			100						100		3	
- PHOSPHATE di	Na2HPO4	all	25	1	1			500/50/	25	2	3	
			60	1	1				60	3	3	
			100		1				100		3	
- PHOSPHATE tri	Na3PO4	all	25	1	1			1070/20/	25	1	2	
			60	1	1				60	1	2	
			100		1				100			
- SULPHATE	Na2SO4	dil	25	1	1	TALLOW EMULSION		comm	25	1	1	
			60	1	1				60	1	2	
			100						100			
		sat	25	1	1	TANNIC ACID	C14H10O9	10	25	1		
			60	1	1				60	1		
			100						100			
- SULPHIDE	Na2S	dil	25	1	1	TARTARIC ACID	HOOC(CHOH)2COOH	all	25	1	1	
			60	2	1				60	2	1	
			100						100			
		sat	25	1	1	TETRACHLORO - ETHANE	CHCl2CHCl2	nd	25	3	2	
			60	1	1				60	3	3	
			100						100			
- SULPHITE	NaSO3	sat	25	1	1	- ETHYLENE	CCl2CCl2	nd	25	3	2	
			60	1	1				60	3	3	
			100						100			
STANNIC CHLORIDE	SnCl4	sat	25	1	1	TETRAETHYLLEAD	Pb(C2H5)4	100	25	1	1	
			60	1	1				60	2		
			100						100			
STANNOUS CHLORIDE	SnCl2	dil	25	1	1	TETRAHYDROFURAN	C4H8O	all	25	3	2	
			60	1	1				60	3	3	
			100						100		3	
STEARIC ACID	CH3(CH2)16CO2H	100	25	1	2	THIONYL CHLORIDE	SOCl2		25	3	3	
			60	1	2				60			
			100						100			
SUGAR SYRUP		high	25	1	1	THIOPHENE	C	H4S	100	25	3	2
			60	2			4					
			100						60	3	3	
									100			

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.		Temp.		uPVC	PP	Chemical	Formula	Conc.		Temp.		uPVC	PP
		(%)	(°C)	(%)	(°C)					(%)	(°C)				
DIBUTYLPHTHALATE	C <sub>6</sub> H <sub>4</sub> (CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> ) <sub>2</sub>	100	25	3	3	3	3	FERROUS - CHLORIDE	FeCl <sub>2</sub>	sat	25	1	1	1	1
			60	3	3						60	1			
			100								100				
DICHLOROACETIC ACID	Cl <sub>2</sub> CHCOOH	100	25	1	1	1	1	- SULPHATE	FeSO <sub>4</sub>	nd	25	1	1	1	1
			60	2	2						60	1			
			100								100				
DICHLOROETHANE	CH <sub>2</sub> ClCH <sub>2</sub> Cl	100	25	3	1	3	1	FERTILIZER		≤10	25	1	1	1	1
			60	3							60	1			
			100								100				
DICHLOROETHYLENE	ClCH <sub>2</sub> Cl	100	25	3	2	3	2			sat	25	1	1	1	1
			60	3							60	1			
			100								100				
DIETHYL ETHER	C <sub>2</sub> H <sub>5</sub> O <sub>2</sub> C <sub>2</sub> H <sub>5</sub>	100	25	3	1	3	1	FLUORINE GAS - DRY F <sub>2</sub>		100	25	2	3	3	3
			60	3	1						60	3			
			100								100				
DIGLYCOLIC ACID	(CH <sub>2</sub> ) <sub>2</sub> O(CO <sub>2</sub> H) <sub>2</sub>	18	25	1	1	1	1	FLUROSILICIC ACID	H <sub>2</sub> SiF <sub>6</sub>	32	25	1	1	1	1
			60	2	1						60	1			
			100								100				
DIMETHYLAMINE	(CH <sub>3</sub> ) <sub>2</sub> NH	100	25	2	1	2	1	FORMALDEHYDE	HCOH		25	1	1	1	1
			60	3	2						60	2			
			100								100				
DIOCTYLPHTHALATE	all	all	25	3	2	3	2	FORMIC ACID	HCOOH	50	25	1	1	1	1
			60	3	2						60	2			
			100								100				
DISTILLED WATER	100	25	1	1	1	1	FRUIT PULP AND JUICE	comm	25	1	1	1	1		
			60	1						1	60			1	
			100								100				
DRINKING WATER	100	25	1	1	1	1	FUEL OIL	100	25	1	1	1	1		
			60	1						1	60			1	
			100								100				
ETHERS	all	all	25	3	3	3	3			100	25	1	1	1	1
			60	3	3						60	1			
			100								100				
ETHYL - ACETATE	CH <sub>3</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>	100	25	3	2	3	2	FURFUROLE ALCOHOL C <sub>5</sub> H <sub>3</sub> OCH <sub>2</sub> OH	nd	25	3	2	2	2	
			60	3	3						60	3			
			100								100				
- ALCOHOL	CH <sub>3</sub> CH <sub>2</sub> OH	nd	25	1	1	1	1	GAS EXHAUST - ACID	all	25	1	1	1	1	
			60	2	1						60	1			
			100								100				
- CHLORIDE	CH <sub>3</sub> CH <sub>2</sub> Cl	all	25	3	3	3	3	- WITH NITROUS VAPOURS	traces	25	1	1	1	1	
			60	3	3						60	1			
			100								100				
- ETHER	CH <sub>3</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>3</sub>	all	25	3	3	3	3	GAS PHOSGENE	ClCOCl	100	25	1	2	2	2
			60	3	3						60	2			
			100								100				
ETHYLENE - CHLOROHYDRIN	ClCH <sub>2</sub> CH <sub>2</sub> OH	100	25	3		3		GELATINE	100	25	1	1	1	1	
			60	3							60	1			
			100								100				
- GLYCOL	HOCH <sub>2</sub> CH <sub>2</sub> OH	comm	25	1	1	1	1	GLUCOSE	C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	all	25	1	1	1	1
			60	2	1						60	2			
			100								100				
FATTY ACIDS	nd	25	1		1		GLYCERINE AQ.SOL	HOCH <sub>2</sub> CHOHCH <sub>2</sub> OH	all	25	1	1	1	1	
			60	1								60			1
			100									100			
FERRIC - CHLORIDE	FeCl <sub>3</sub>	10	25	1	1	1	1	GLYCOGLUE AQUEOUS	10	25	1	1	1	1	
			60	2	1						60	1			
			100								100				
- NITRATE	Fe(NO <sub>3</sub> ) <sub>3</sub>	nd	25	1		1		GLYCOLIC ACID	HOCH <sub>2</sub> COOH	37	25	1	1	1	1
			60	1							60	1			
			100								100				
- SULPHATE	Fe(SO <sub>4</sub> ) <sub>3</sub>	nd	25	1	1	1	1	HEPTANE	C <sub>7</sub> H <sub>16</sub>	100	25	1	3	3	3
			60	1							60	2			
			100								100				

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.	Temp.	uPVC	PP
TOLUENE	C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>	100	(%)		
			(°C)		
			25	3	2
TRANSFORMER OIL		nd	60	3	3
			100		3
			25	1	1
TRICHLOROACETIC ACID	CCl <sub>3</sub> COOH	≤50	60	2	2
			100		
			25	1	1
TRICHLOROETHYLENE	Cl <sub>2</sub> CCHCl	100	60	3	1
			100		
			25	3	3
TRIETHANOLAMINE	N(CH <sub>2</sub> CH <sub>2</sub> OH) <sub>2</sub>	100	60	3	3
			100		
			25	2	1
TURPENTINE		100	60	3	1
			100		
			25	2	3
UREA AQUEOUS SOLUTION	CO(NH <sub>2</sub> ) <sub>2</sub>	2-10	60	2	3
			100		
			25	1	1
URINE		nd	60	2	1
			100		
			25	1	1
URIC ACID	C <sub>5</sub> H <sub>4</sub> N <sub>4</sub> O <sub>3</sub>	10	60	2	1
			100		
			25	1	1
VASELINE OIL		100	60	3	2
			100		
			25	1	1
VINYL ACETATE	CH <sub>3</sub> CO <sub>2</sub> CHCH <sub>2</sub>	100	60	3	
			100		
			25	3	
WHISKY		comm	60	1	1
			100		
			25	1	1
WINES		comm	60	1	1
			100		
			25	1	1
WINE VINEGAR		comm	60	2	1
			100		
			25	1	1
ZINC - CHLORIDE	ZnCl <sub>2</sub>	dil	60	1	1
			100		
			25	1	1
- CHROMATE	ZnCrO <sub>4</sub>	nd	60	1	1
			100		
			25	1	1
- CYANIDE	Zn(CN) <sub>2</sub>	all	60	1	
			100		
			25	1	
- NITRATE	Zn(NO <sub>3</sub> ) <sub>2</sub>	nd	60	1	1
			100		
			25	1	1
- SULPHATE	ZnSO <sub>4</sub>	dil	60	1	1
			100		
			25	1	1
		sat	60	1	1
			100		
			25	1	1
			60	1	1
			100		
			25	1	1

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

## Chemical Resistance Guide

Chemical	Formula	Conc.		Temp.		uPVC	PP	Chemical	Formula	Conc.		Temp.		uPVC	PP
		(%)	(°C)	(°C)	(°C)					(%)	(°C)	(°C)	(°C)		
DIBUTYLPHTHALATE	C6H4(CO2C4H9)2	100	25	3	3			FERROUS - CHLORIDE	FeCl2	sat	25	1	1		
			60	3	3						60	1			
			100								100				
DICHLOROACETIC ACID	Cl2CHCOOH	100	25	1	1			- SULPHATE	FeSO4	nd	25	1	1		
			60	2	2						60	1			
			100								100				
DICHLOROETHANE	CH2ClCH2Cl	100	25	3	1			FERTILIZER		≤10	25	1	1		
			60	3							60	1	1		
			100								100				
DICHLOROETHYLENE	ClCH2Cl	100	25	3	2					sat	25	1	1		
			60	3							60	1	1		
			100								100				
DIETHYL ETHER	C2H5OC2H5	100	25	3	1			FLUORINE GAS - DRY F2		100	25	2	3		
			60	3	1						60	3	3		
			100								100				
DIGLYCOLIC ACID	(CH2)2O(CO2H)2	18	25	1	1			FLUROSILICIC ACID	H2SiF6	32	25	1	1		
			60	2	1						60	1	1		
			100								100				
DIMETHYLAMINE	(CH3)2NH	100	25	2	1			FORMALDEHYDE	HCOH		25	1	1		
			60	3	2						60	2	1		
			100								100				
DIOCTYLPHTHALATE	all	25	3	2				FORMIC ACID	HCOOH	50	25	1	1		
			60	3	2						60	2	1		
			100								100				
DISTILLED WATER	100	25	1	1						100	25	1	1		
			60	1	1						60	3	1		
			100								100				
DRINKING WATER	100	25	1	1				FRUIT PULP AND JUICE	comm	25	1	1			
			60	1	1						60	1	1		
			100								100				
ETHERS	all	25	3	3				FUEL OIL	100	25	1	1			
			60	3	3						60	1	2		
			100								100				
ETHYL - ACETATE	CH3CO2C2H5	100	25	3	2					comm	25	1	1		
			60	3	3						60	1	2		
			100								100				
- ALCOHOL	CH3CH2OH	nd	25	1	1			FURFUROLE ALCOHOL C5H3OCH2OH	nd	25	3	2			
			60	2	1						60	3	2		
			100								100				
- CHLORIDE	CH3CH2Cl	all	25	3	3			GAS EXHAUST - ACID	all	25	1				
			60	3	3						60	1			
			100								100				
- ETHER	CH3CH2OCH2CH3	all	25	3	3			- WITH NITROUS VAPOURS	traces	25	1	1			
			60	3	3						60	1	1		
			100								100				
ETHYLENE - CHLOROHYDRIN	ClCH2CH2OH	100	25	3				GAS PHOSGENE	ClCOCl	100	25	1	2		
			60	3							60	2	2		
			100								100				
- GLYCOL	HOCH2CH2OH	comm	25	1	1			GELATINE	100	25	1	1			
			60	2	1						60	1	1		
			100								100				
FATTY ACIDS	nd	25	1					GLUCOSE	C6H12O6	all	25	1	1		
			60	1							60	2	1		
			100								100				
FERRIC - CHLORIDE	FeCl3	10	25	1	1			GLYCERINE AQ.SOL	HOCH2CHOHCH2OH	all	25	1	1		
			60	2	1						60	1	1		
			100								100				
- NITRATE	Fe(NO3)3	nd	25	1				GLYCOGLUE AQUEOUS	10	25	1	1			
			60	1							60	1	1		
			100								100				
- SULPHATE	Fe(SO4)3	nd	25	1	1			GLYCOLIC ACID	HOCH2COOH	37	25	1	1		
			60	1							60	1			
			100								100				
HEPTANE	C7H16	100	25	1	3					100	25	1	3		
			60	2	3						60	2	3		
			100								100				

Class 1: High Resistance Class 2: Limited Resistance Class 3: No Resistance.

# PP Pipes & Fittings



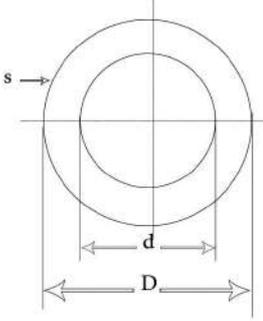
**2**  
**ROKA**  
PLAST

Product List ( Drainage )



## Plain ended Pipe

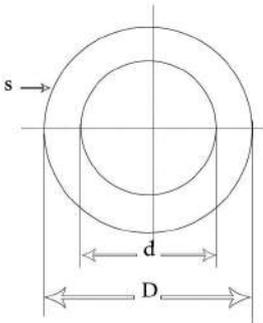
Pipe 3 meter  
ROKAPLAST PP Pipe  
Acc. To DIN EN 1451, color White with gray line



Item No	d	d1	s	Length(m)
50006	32	28.4	1.8	3
50006	50	46.4	1.8	3
50006	75	71.2	1.9	3
50006	110	104.6	2.7	3
50006	160	152.2	3.9	3



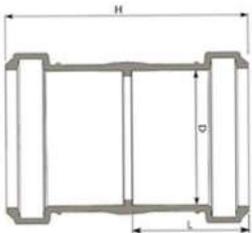
Pipe 3 meter  
ROKAPLAST PP Pipe  
Acc. To DIN EN 1451, color White with gray line



Item No	d	d1	s	Length(m)
50006	32	28.4	1.8	6
50006	50	45.6	2.2	6
50006	75	70.0	2.5	6
50006	110	102.6	3.7	6
50006	160	151.4	4.3	6



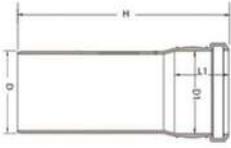
## Double Socket



Item No	D	L	H	Stq/c
5001	32	37.5	77.0	200
50001	50	44.0	91.0	90
50001	75	49.0	101.0	48
50001	110	56.0	115.0	18
50001	160	67.0	139.0	24



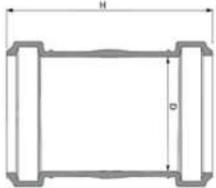
## Single Socket Pipe



Item No	D	D1	L1	H	Stq/c
40159	110	110.0	56.0	250.0	22



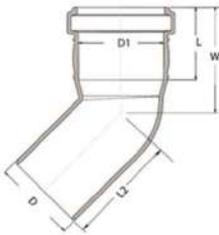
## Repair Socket



Item No	D	H	Stq/c
50014	75	101.0	48
50015	110	115.0	18



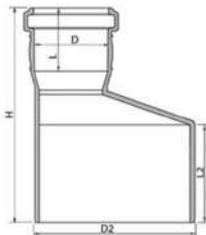
## Elbow 45°



Item No	D	D2	L	L2	W	Stq/c
51001	32	32	37.0	50.0	54.0	180
51002	50	50	44	65.0	65.5	75
51004	75	75	49	67.0	67.0	30
51005	110	110	56	95.0	95.0	33
51006	160	160	67	120.0	120.0	12



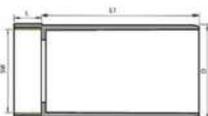
## Reducer Eccentric



Item No	D	D2	L	L2	H	Stq/c
50201	32	50	37.5	55.0	114.0	120
50205	50	75	44	60.0	144.0	45
50206	75	110	44	70.0	149.0	75
50208	110	110	49	70.0	155.0	75
50209	160	160	56	90.0	205.0	32



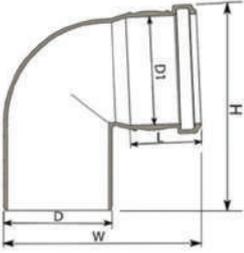
## Adaptor with Thread



Item No	D	SW	L1	H	Stq/c
50302	50	1 $\frac{1}{2}$	15.0	84.0	100



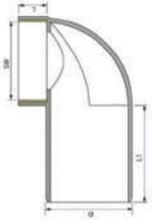
### Elbow 87.5°



Item No	D	D1	W	H	L	Stq/c
51101	32	32	80.0	81.5	37.0	160
51102	50	50	103.0	113.0	44.0	70
51104	75	75	135.7	139.8	49.0	25
51105	110	110	183.9	183.4	56.0	24
51106	160	160	241.9	262.1	67.0	10



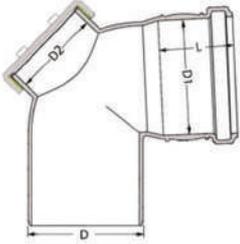
### Elbow 90° with Thread



Item No	D	SW	L1	H	Stq/c
51202	50	1 1/2	16.8	56.0	100



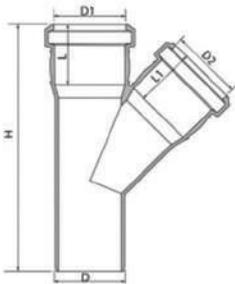
### Elbow 87.5° with inspection door



Item No	D	D1	D2	L	Stq/c
51202	75	75	57.0	49.0	25.0
51205	110	110	95.0	56.0	24.0
51206	160	160	93.0	67.0	10.0



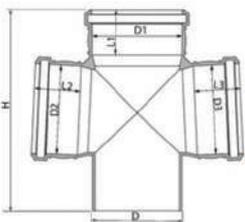
### Branch 45°



Item No	D	D1,D2	H	L1	L2	Stq/c
52001	32	32	132.0	37.0	37.0	90
52002	50	50	180.0	44.0	44.0	40
52004	75	75	225.0	49.0	49.0	36
52005	110	110	295.0	56.0	56.0	12
52006	160	160	404.0	67.0	67.0	6



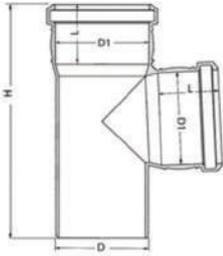
### Double Branch 87.5°



Item No	D,D1	D2,D3	H	L1,L2	L3	Stq/c
52504	75	75	192.0	56.0	56.0	30
52505	110	110	250.0	67.0	67.0	12



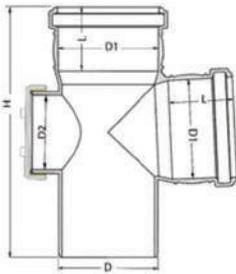
**Branch 87.5°**



Item No	D	D1	H	L1	Stq/c
52301	32	32	123.0	37.0	100
52302	50	50	160.0	44.0	40
52304	75	75	192.0	49.0	15
52305	110	110	250.0	56.0	18
52306	160	160	345.0	67.0	6



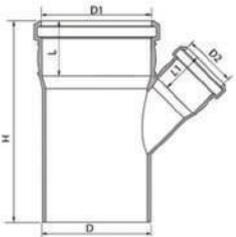
**Branch 87.5° with Inspection door**



Item No	D	D1	D2	H	L1	Stq/c
52404	75	75	57.0	192.0	49.0	36
52405	110	110	95.0	250.0	56.0	15
52406	160	160	93.0	345.0	67.0	



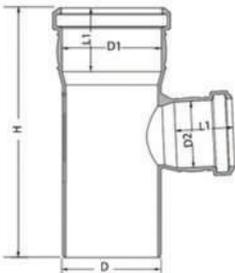
**Reducer Branch 45°**



Item No	D,D1	D2	H	L1	L2	Stq/c
52204	75	50	187.0	49.0	44.0	20
52206	110	50	207.0	56.0	44.0	24
52208	110	75	243.0	56.0	49.0	18
52209	160	110	330.0	67.0	56.0	7



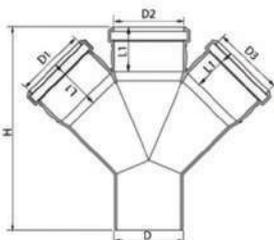
**Reducer Branch 87.5°**



Item No	D,D1	D2	H	L1	L2	Stq/c
52604	75	50	192.0	49.0	44.0	20
52606	110	50	250.0	56.0	44.0	24
52608	110	75	250.0	56.0	49.0	22
52609	160	110	290.0	67.0	56.0	10



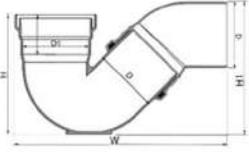
**Double Branch 45°**



Item No	D,D1	D2	H	L1	L2,L3	Stq/c
52104	75	75	225.0	56.0	56.0	26
52105	110	110	295.0	67.0	67.0	8



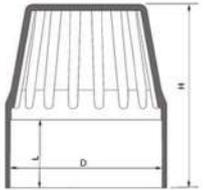
### Siphon



Item No	D	D1	H	H1	W	Stq/c
53105	110	110	203.0	217.0	345.0	11



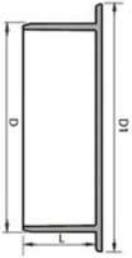
### Air Vent



Item No	D	L	H	Stq/c
54004	75	20.7	68.5	75
54005	110	20.7	68.5	28



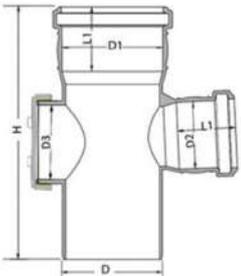
### End Cap



Item No	D	D1	L	Stq/c
55001	32	50.0	32.5	120
55002	50	70.0	37.5	240
55004	75	95.0	42.0	140
55005	110	130.0	51.5	55
55006	160	190.0	55.5	22



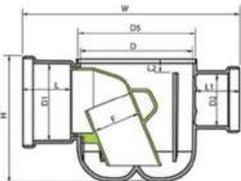
### Reducer Branch 87.5° with Inspection door



Item No	D,D1	D2	H	L1	L2	D3	Stq/c
52704	75	50	192.0	49.0	44.0	57.0	15
52706	110	50	250.0	56.0	44.0	95.0	18
52708	110	75	250.0	56.0	49.0	95.0	18
52709	160	110	290.0	67.0	56.0	95.0	8



### Floor Drain (ABS)



Item No	D,D1	D1	D2,3,4	D5	W	H	L	L1	F	Stq/c
58001	110	75	50.0	114.0	220.0	120.0	53.0	47.0	45.5	22



## Chemical Resistance

### • Product features .

resistance values have been determined through internal pressure tests, at various temperature intervals: 20, 40, 60, 80, 95, 120 °C. A logarithmic graphic representation shows the comparative tensions, the lifetime (in years), and the regression curves at various temperatures according to the DIN 8078 standard. See (fig. A)

### • Advantages of Rokaplast Piping System.

Rokaplast provides all the necessary parts, for a complete and easy installation, from the beginning to the end, saying goodbye to the conventional problems of the past. It is guaranteed to feel and see the difference with the Rokaplast piping system.

**Rokaplast.** is manufactured with Superior German quality. Rokaplast is made of corrosion resistant material, putting an end to old corrosion complications. Enjoy some serenity and peacefulness with Rokaplast because it is not as noisy as metal pipes. Unlike the alternatives, Rokaplast is made of opaque polypropylene, which is a nonpolluting material, preventing algae from growing.

### Selected Chemical-Resistance Classification Data for PP According to ISO/TR 10358

Concentration and / or purity of the fluid	Dil Sol. Dilute aqueous solution at a concentration equal to or less than 10%
	Sol. Aqueous solution at a concentration higher than 10% but not saturated
	Sat Sol. Saturated aqueous solution, prepared at 20°C
	tg At least technical grade purity
	tg-s Technical grade, solid tg-l Technical grade, liquid
	tg-g Technical grade, gas
	Work Sol. Working solution of the concentration usually used in the industry concerned.
	Susp. Suspension of solid in a saturated solution at 20°C
Chemical resistance	<b>S Satisfactory resistance</b> The pipes can be used for applications in which they are not subjected to pressure or other stresses; for applications in which they are exposed to pressure, the final assessment shall be on the basis of subsequent test under pressure.
	<b>L Limited resistance</b> The pipes can be used for applications in which they are not subjected to pressure or other stresses, but in which a certain amount of corrosion can be accepted; for applications in which they are exposed to pressure, the final assessment shall be on the basis of subsequent test under pressure.
	<b>NS Resistance not satisfactory</b> The pipes are seriously attacked: they shall not be used for either pressure or non-pressure applications. There is no point in conducting tests under pressure as the pipes would be certain to fail these tests.

• Keys for chemical resistance table

## Chemical Resistance

### Chemical Resistance of PP (R.M)

- Detailed information on chemical resistance of polypropylene pipes and pipelines is available at the flowing table.

- The Polypropylene family of polyolefin polymer that features. A high molecular weight. Therefore, it is more resistant to chemicals such as (acid, lime or cement )

Temperature °C			Concentration	Chemical or Product
100	60	20		
-	S	S	Up to 40 %	Acetic acid
L	S	S	50%	Acetic acid
NS	L	S	> 96 %	Acetic acid, glacial
-	-	S	100%	Acetic anhydride
-	S	S	100%	Acetone
-	L	S	100%	Acetophenone
-	-	S	100%	Acrylonitrile
S	S	S	----	Air
-	S	S	100%	Ally alcohol
-	-	S	----	Almond oil
-	S	S	Sol	Alum
-	S	S	Sat.sol	Ammonia, aqueous
-	-	S	100%	Ammonia, dry gas
-	-	S	100%	Ammonia, liquid
-	S	S	Sat. sol	Ammonium acetate
-	S	S	Sat.sol	Ammonium chloride
-	S	S	Up to 20 %	Ammonium fluoride
-	S	S	Sat.sol	Ammonium hydrogen carbonate
S	S	S	Sat.sol	Ammonium met phosphate
S	S	S	Sat.sol	Ammonium nitrate
-	S	S	Sat.sol	Ammonium persulphate
-	-	S	Sat.sol	Ammonium phosphate
S	S	S	Sat.sol	Ammonium sulphate
-	S	S	Sat.sol	Ammonium sulphide
-	-	L	100%	Amyl acetate
S	S	S	100%	Amyl alcohol
-	S	S	100%	Aniline
-	-	S	----	Apple juice
NS	NS	NS	HCl/HNO <sub>3</sub> =3/1	Aqua regia
S	S	S	Sat.sol	Barium bromide
S	S	S	Sat.sol	Barium carbonate
S	S	S	Sat.sol	Barium chloride
S	S	S	Sat.sol	Barium hydroxide
S	S	S	Sat.sol	Barium sulphide
-	S	S	----	Beer
NS	NS	L	100%	Benzene
-	S	S	Sat.sol	Benzoic acid
-	L	S	100%	Benzyl alcohol
-	S	S	Sol	Borax
-	-	S	Sat.sol	Boric acid
-	-	S	Sat.sol	Boron trifluoride
NS	NS	NS	----	Bormine, gas
NS	NS	NS	100%	Bromine, liquid
-	-	S	100%	Butane, gas
-	L	S	100%	Butanol
NS	NS	L	100%	Butyl acetate
-	-	S	100%	Butyl glycol
-	-	S	Sat.sol	Butyl phenols

Temperature °C			Concentration	Chemical or Product
100	60	20		
L	L	S	100%	Butyl phthalate
S	S	S	Sat.sol	Calcium carbonate
-	S	S	Sat.sol	Calcium chlorate
S	S	S	Sat.sol	Calcium chloride
S	S	S	Sat.sol	Calcium hydroxide
-	-	S	Sol	Calcium hypochlorite
-	S	S	Sat.sol	Calcium nitrate
NS	NS	NS	----	Camphor oil
-	S	S	----	Carbon dioxide, dry gas
-	S	S	----	Carbon dioxide, wet gas
NS	NS	S	100%	Carbon disulphide
-	S	S	----	Carbon monoxide, gas
NS	NS	NS	100%	Carbon tetrachloride
-	S	S	100%	Castor oil
L	L	S	Up to 50 %	Caustic soda
-	L	S	Sat.sol	Chlorine, aqueous
NS	NS	NS	100%	Chlorine, dry gas
NS	NS	NS	100%	Chlorine, liquid
-	-	S	Sol	Chloroacetic acid
-	-	S	100%	Chloroethanol
NS	NS	L	100%	Chloroform
NS	NS	NS	100%	Chlorosulphonic acid
-	S	S	Sol	Chrome alum
NS	L	S	Up to 40 %	Chromic acid
S	S	S	Sat.sol	Citric acid
-	-	S	----	Coconut oil
-	S	S	Sat.sol	Copper (I) chloride
S	S	S	Sat.sol	Copper (II) nitrate
-	S	S	Sat.sol	Copper (II)
-	L	S	----	Corn oil
-	S	S	----	Cottonseed oil
-	-	S	Greater than 90 %	Cresol
-	-	S	100%	Cyclohexane
-	L	S	100%	Cyclohexanol
NS	NS	L	100%	Cyclohexanone
NS	NS	NS	100%	Decalin (decahydronaphthalene)
-	S	S	Sol	Dextrin
S	S	S	Sol	Dextrose
NS	L	S	100%	Dibutyl phthalate
-	-	L	100%	Dichloroacetic acid
-	-	L	100%	Dichloroethylene (A and B)
-	-	S	100%	Diethanolamine
-	L	S	100%	Diethyl ether
-	S	S	100%	Diethylene glycol
-	-	S	Sat.sol	Diglycolic acid
-	L	S	100%	Diisocetyl
-	-	S	----	Dimethyl amine, gas
-	S	S	100%	Dimethyl formamide
-	L	L	100%	Diethyl phthalate
-	L	L	100%	Dioxane
S	S	S	100%	Distilled water
-	-	S	100%	Ethanolamine
NS	NS	L	100%	Ethyl acetate
S	S	S	Up to 95 %	Ethyl alcohol
NS	NS	NS	----	Ethyl chloride, gas
-	L	L	----	Ethylene chloride (mono and di)
-	L	S	100%	Ethyl ether
S	S	S	100%	Ethylene glycol
S	S	S	Sat.sol	Ferric chloride
-	-	S	40%	Formaldehyde
L	S	S	10%	Formic acid

## Chemical Resistance

NS	NS	S	85%	Formic acid
L	L	S	100%	Formic acid, anhydrous
S	S	S	Sol	Fructose
S	S	S	---	Fruit juice
NS	NS	NS	---	Gasoline, petrol
-	S	S	---	(aliphatic hydrocarbons)
S	S	S	---	Gelatine
S	S	S	20%	Glucose
S	S	S	100%	Glycerine
-	-	S	30%	Glycolic acid
NS	NS	L	100%	Heptane
-	L	S	100%	Hexane
NS	L	S	Up to 48 %	Hydrobromic acid
S	S	S	Up to 20 %	Hydrochloric acid
L	L	S	30%	Hydrochloric acid
-	-	S	From 35 to 36 %	Hydrochloric acid
-	-	S	DI.sol	Hydrofluoric acid
-	-	S	40%	Hydrofluoric acid
-	-	S	100%	Hydrogen
-	S	S	100%	Hydrogen chloride, dry gas
-	-	S	Up to 10 %	Hydrogen peroxide
-	L	S	Up to 30 %	Hydrogen peroxide
-	S	S	100%	Hydrogen sulphide, dry gas
-	-	S	---	Iodine, in alcohol
NS	NS	L	100%	Isoctane
S	S	S	100%	Isopropyl alcohol
-	-	L	100%	Isopropyl ether
-	S	S	Up to 90 %	Lactic acid
-	L	S	---	Lanoline
S	S	S	---	Linseed oil
S	S	S	Sat.sol	Magnesium carbonate
-	S	S	Sat.sol	Magnesium chloride
-	S	S	Sat.sol	Magnesium hydroxide
-	S	S	Sat.sol	Magnesium sulphate
-	S	S	Sat.sol	Maleic acid
-	S	S	Sat.sol	Mercury (II) chloride
-	S	S	Sat.sol	Mercury (II) cyanide
-	S	S	Sol	Mercury (I) nitrate
-	S	S	100%	Mercury
-	S	S	100%	Methyl acetate
L	L	S	5%	Methyl alcohol
-	-	S	Up to 32 %	Methyl amine
NS	NS	NS	100%	Methyl bromide
-	-	S	100%	Methyl ethyl ketone
NS	NS	L	100%	Methylene chloride
S	S	S	---	Milk
-	S	S	>45 %	Monochloroacetic acid
NS	NS	S	---	Naphtha
-	S	S	Sat.sol	Nickel chloride
-	S	S	Sat.sol	Nickel nitrate
-	S	S	Sat.sol	Nickel sulphate
NS	NS	S	Up to 30 %	Nitric acid
NS	NS	L	From 40 to 50 %	Nitric acid
NS	NS	NS	---	Nitric acid, fuming (with nitrogen dioxide)
-	L	S	100%	Nitrobenzene
-	L	S	100%	Oleic acid
-	L	S	---	Oleum (sulphuric acid with 60 % of SO <sub>3</sub> )
L	S	S	---	Olive oil
NS	L	S	Sat.sol	Oxalic acid
-	-	S	---	Oxygen, gas

NS	L	S	---	Paraffin oil (F65)
-	S	S	---	Peanut oil
-	-	S	---	Peppermint oil
-	-	S	(2 N) 20 %	Perchloric acid
-	L	L	---	Petroleum ether (ligroine)
-	S	S	5%	Phenol
-	-	S	90%	Phenol
-	S	S	---	Phosphine, gas
S	S	S	Up to 85 %	Phosphoric acid
-	-	L	100%	Phosphorus oxychloride
-	-	S	Sat.sol	Picric acid
S	S	S	Sat.sol	Potassium bicarbonate
-	S	S	Sat.sol	Potassium borate
-	S	S	Up to 10 %	Potassium bromate
S	S	Sat.sol	---	Potassium bromide
S	S	Sat.sol	---	Potassium carbonate
S	S	Sat.sol	---	Potassium chlorate
S	S	Sat.sol	---	Potassium chlorite
S	S	Sat.sol	---	Potassium chromate
-	S	Sol	---	Potassium cyanide
S	S	S	Sat.sol	Potassium dichromate
-	S	S	Sat.sol	Potassium ferricyanide
-	S	S	Sat.sol	Potassium fluoride
S	S	S	Up to 50 %	Potassium hydroxide
-	-	S	Sat.sol	Potassium iodide
-	S	S	Sat.sol	Potassium nitrate
-	S	S	10%	Potassium perchlorate
-	-	S	(2 N) 30 %	Potassium permanganate
-	S	S	Sat.sol	Potassium persulphate
-	S	S	Sat.sol	Potassium sulphate
-	-	S	100%	Propane, gas
-	-	S	>50 %	Propionic acid
-	-	L	100%	Pyridine
S	S	S	---	Seawater
S	S	S	---	Silicon oil
L	S	S	Sat.sol	Silver nitrate
S	S	S	Sat.sol	Sodium acetate
-	L	S	35%	Sodium benzoate
S	S	S	Sat.sol	Sodium bicarbonate
L	S	S	Up to 50 %	Sodium carbonate
-	S	S	Sat.sol	Sodium chlorate
-	S	S	Sat.sol	Sodium chloride
NS	L	S	2%	Sodium chlorite
NS	L	S	20%	Sodium chlorite
S	S	S	Sat.sol	Sodium dichromate
S	S	S	Sat.sol	Sodium hydrogen carbonate
-	S	S	Sat.sol	Sodium hydrogen sulphate
-	-	S	Sat.sol	Sodium hydrogen sulphite
S	S	S	1%	Sodium hydroxide
S	S	S	From 10 to 60 %	Sodium hydroxide
-	S	S	5%	Sodium hypochlorite
-	-	S	10 % - 15 %	Sodium hypochlorite
-	L	S	20%	Sodium hypochlorite
-	-	S	Sol	Sodium metaphosphate
-	S	S	Sat.sol	Sodium nitrate
-	S	S	Sat.sol	Sodium perborate
S	S	S	---	Sodium phosphate (neutral)
-	S	S	Sol	Sodium silicate
-	S	S	Sat.sol	Sodium sulphate
-	-	S	Sat.sol	Sodium sulphite

## Chemical Resistance

S	S	S	40%	Sodium sulphite
-	-	S	Sat.sol	Sodium thiosulphate (hypo)
-	L	S	----	Soybean oil
-	S	S	Sat.sol	Succinic acid
S	S	S	Up to 10 %	Sulphuric acid
-	S	S	100%	Sulphuric dioxide, dry or wet
-	S	S	From 10 to 30 %	Sulphur acid
L	L	S	50%	Sulphuric acid
NS	L	S	96%	Sulphuric acid
NS	NS	L	98%	Sulphuric acid
-	-	S	Up to 30 %	Sulphurous acid
-	S	S	Sat.sol	Tartaric acid
NS	NS	L	100%	Tetrahydrofuran
NS	NS	NS	100%	Tetralin
-	L	S	100%	Thiophene
-	S	S	Sol	Tin (IV) chloride
-	S	S	Sat.sol	Tin (II) chloride
NS	NS	L	100%	Toluene
-	S	S	Up to 50 %	Trichloroacetic acid
NS	NS	NS	100%	Trichloroethylene
-	-	S	Sol	Triethanolamine
NS	NS	NS	----	Turpentine
-	S	S	Sat.sol	Urea
-	S	S	----	Vinegar
S	S	S	----	Water brackish, mineral, potable
-	S	S	----	Whiskey
-	S	S	----	Wines
NS	NS	NS	100%	Xylene
S	S	S	Sol	Yeast
-	S	S	Sat.sol	Zinc chloride
-	S	S	Sat.sol	Zinc sulphate

S = Satisfactory

L = Limited

NS = Not satisfactory

Sat.sol

Sol

Dil.sol

Work.sol

Saturated aqueous solution, prepared at 20oC

Aqueous solution at a concentration higher than 10 % but not saturated

Dilute aqueous solution at a concentration equal to or lower than 10 %

Aqueous solution