MARKED PIPES & FITTINGS

SKIPPER PIPES

INDIA'S SAFEST PIPES

PROGRESS IN THE PIPELINE

Precision in Every Joint, Excellence in Every Flow

SKIPPER

PIPES

INDIA'S SAFEST PIPES

UPVC
Lead Free Plumbing Pipes & Fittings

Ideal for Potable Water Distribution

Corrosion Resistant

Antifungal & Anti-algae

Lead Free

LEAD FREE

100% SAFE FOR DRINKING

Ultimate endurance for superflow performance

ABOUT UPVC

uPVC stands for Unplasticized Polyvinyl Chloride, a rigid, durable, long lasting and low-maintenance material widely use.

uPVC pipes have several benefits as below

Durability: Resistant to rust, rot, and wear, ensuring a long lifespan.

Low Maintenance: Smooth surface reduces bacterial growth and contamination.

Flexibility: Can withstand extreme movement and bending, making them suitable for earthquake-prone areas.

Versatility: Commonly used for:

- Cold water applications
- Plumbing
- Water supply
- Underground drainage
- Sewage lines

These properties make uPVC pipes a popular choice for various applications.

PHYSICAL PROPERTIES

Density [g/cm^3]	1.40 - 1.45
Thermal conductivity [w/(m.k)]	0.14 - 0.28
Yield strength [MPa]	31 - 60
Young's modulus [psi]	4,90,000
Flexural strength (yield) [psi]	10,500
Compression strength [psi]	9500
Coefficient of thermal expansion (linear) [mm(mm ^oC)]	5 x 10^{-5}
Vicat B [°C]	>83°C
Resistivity[Ωm]	1016
Surface resistivity [Ω]	10^{13} - 10^{14}

FIRE RESISTANT

Skipper uPVC pipes have

Fire-Resistant Properties: Self-extinguishing and don't support combustion

High Limiting Oxygen Index (LOI): Requires 45% oxygen to burn, making it difficult to ignite.

Safe for Buildings: Ideally suited for use in buildings and houses due to its fire-resistant properties.

This makes uPVC pipes & fittings a reliable choice for various applications.

Material	Limit Oxygen Index
Cotton	16 - 17
Polypropylene (PP)	18
Polyethylene (PE)	18
Wood	20
Atmospheric content of OXYGEN	21
uPVC	45
CPVC	60

FEATURES

Skipper is a trusted brand for plumbing solutions, offering several benefits & following are the Key Features:

Lead-Free: Skipper u-PVC leadfree Pipes and fittings made from a special lead-free compound, ensuring safe drinking water.

Antimicrobial Protection: Skipper Upvc leadfree Pipes and fittings advanced silver ion technology inhibits microbial growth, providing cleaner and safer water flow.

UV Resistance: Skipper Upvc leadfree Pipes and fittings Resistant to ultraviolet degradation, ensuring long-term durability.

Fire Safety: Skipper Upvc leadfree Pipes and fittings Self-extinguishing and doesn't support combustion, with a highLimiting Oxygen Index (LOI) of 45.

Safe for Drinking Water: Skipper Upvc leadfree Pipes and fittings Free from toxins, Odors, and tastes, making it ideal for potable water applications.

Easy Installation: Skipper Upvc leadfree Pipes and fittings Features a self-alignment system, ensuring precise fitting alignment and 100% leak-proof joints.

Cost-Effective: Skipper Upvc leadfree Pipes and fittings Lightweight, reducing material and installation costs.

Maintenance Free: Skipper Upvc leadfree Pipes and fittings are not rust, pit, scale, promote build-up on the system interior Trouble-free service can be expected from these pipe & fittings.

Strong and Durable: Skipper Upvc leadfree Pipes and fittings are highly resilient, tough and durable products have high tensile and high-impact.Strong and resistant to chemical attack, corrosion, and weathering strength. It can withstand High pressure for long periods.

Excellent Chemical Resistance: Skipper Upvc leadfree Pipes and fittings are inert to attack by a wide variety of strong acids, alkalis, salt solutions, alcohols and many other chemicals. They do not react with materials carried, nor act as a catalyst.

Low thermal conductivity: Skipper Upvc leadfree pipes and fittings have a much lower thermal conductivity factor than metal pipes. This ensures that fluids maintain a constant temperature.

Toxicity, Odours, Tastes: Skipper Upvc lead free pipes and fittings are non-toxic, odourless and tasteless.

PROPERTIES OF SKIPPER UPVC LEAD FREE PIPE

When you specify Skipper Cpvc pipes and fittings, you benefit from the most experienced installation and support network in the industry. Let us help you specify the pipes, fittings, solvent cement and installation technologies that meet your most stringent standards for reliability and performance.

General

Physical properties of uPVC pipe	Value	Test Method
Cell classification	**12454**	**ASTMD1784**
Maximum service temperature	140°F/60°C	-
Colour	White	-
Water Absorption % increase 24 hrs @ 25°C	0.05	ASTM D570
Rockwell hardness	110-120	ASTM D785
Poisson's Ratio @ 73°F	0.41	-
Hazen Williams factor	C=150	-

Mechanical

Physical properties of uPVC pipe	Value	Test Method
Specific gravity	**1.45 / 1.47**	**ASTM D792**
Tensile strength, psi @ 73°F	7,450	ASTM D638
Modulus of elasticity, psi @ 73°F (tensile modulus)	4,20,000	ASTM D638
Flexural strength, psi @ 73°F	14,450	ASTM D790
Compressive strength, psi @ 73°F	9,600	ASTM D695
Izod impact, ft-lb./in @ 73°F	0.75	ASTM D256

Thermal

Physical properties of uPVC pipe	Value	Test Method
Coefficient of linear expansion (in/in/°F)	**2.9×10^{-5}**	**ASTM D696**
Coefficient of thermal conductivity (BTU/hr/ft^2/°F/in)	1.02	ASTM C177
Heat deflection temperature °F @ 264 psi	170	ASTM D648
Specific heat, Cal/g/°C	0.25	ASTM D2766

Electrical

Physical properties of uPVC pipe	Value	Test Method
Dielectric strength, V/mil	**1,413**	**ASTM D149**
Dielectric Constant, 60Hz, 30°F	3.7	ASTM D150
Volume resistivity, W/cm @ 95°C, ohms/cm	1.2×10^{12}	ASTM D257

Flammability

Physical properties of uPVC pipe	Value	Test Method
Flammability rating	**V-0**	**UL94**
Flammability index	<10	
Flame spread	0-25	ULC S102.2
Flash ignition temperature	730°F	ASTM D1929
Average time of burning (sec.)	<5	ASTM D635
Average extent of burning	<10(mm)	ASTM D635
Burning rate (in/min)	Self Extinguishing	ASTM D635
Softening starts (approx)	250°F/121°C	-
Material becomes viscous	350°F/176°C	-
Material carbonizes	425°F/218°C	-
Smoke generation	80-225	ULC S102.2

Standards for Pipes & Fittings

Class of Pipe/Fitting	Standard	Sizes Available
Sch 40 Pipe	**ASTM D 1785**	**½" - 6"**
Sch 80 Pipe	ASTM D 1785	½" - 6"
Sch 80 Fitting	ASTM D 2467	½"- 6"

DIMENSION AND PRESSURE RATING OF SKIPPER UPVC LEADFREE PIPES AND FITTINGS

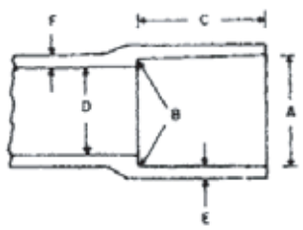
Dimension of u-PVC leadfree pipe

Nominal Pipe Size (in)	Outside Diameter (mm)	Average	Maximum out of Roundness	Wall Thickness			
				SCH 40		SCH 80	
				Minimum	Tolerance	Minimum	Tolerance
½	21.34	± 0.10	0.41	2.77	0.51	3.73	0.51
¾	26.67	± 0.10	0.51	2.87	0.51	3.91	0.51
1	33.40	± 0.13	0.51	3.38	0.51	4.55	0.53
1¼	42.16	± 0.13	0.61	3.56	0.51	4.85	0.58
1½	48.26	± 0.15	0.61	3.68	0.51	5.08	0.61
2	60.32	± 0.15	0.61	3.91	0.51	5.54	0.66
2½	73.02	± 0.18	0.76	5.16	0.61	7.01	0.84
3	88.90	± 0.20	0.76	5.49	0.66	7.62	0.91
4	114.30	± 0.23	0.76	6.02	0.71	8.56	1.02
6	168.28	± 0.28	1.78	7.11	0.86	10.97	1.32

Pressure Rating uPVC lead free Pipes Schedule 40 and Schedule 80

		Schedule 40		Schedule 80	
Nominal (in)	Size (mm)	Max. work pressure rating (kg/cm2) at 23°C	Burst Pressure (kg/cm^2)	Max. work pressure rating (kg/cm2) at 23°C	Burst Pressure (kg/cm^2)
½	15	42.40	134.30	59.75	191.30
¾	20	33.75	108.30	48.50	154.50
1	25	31.60	101.25	44.25	141.95
1¼	32	26.00	83.00	36.60	116.70
1½	40	23.25	74.50	33.00	106.05
2	50	19.65	62.55	28.70	90.60
2½	65	21.10	68.20	29.55	95.60
3	80	18.25	59.00	26.00	84.30
4	100	15.50	49.95	22.50	73.05
6	150	12.60	39.35	19.65	62.60

uPVC Fittings Socket Dimensions



Tapered Socketed Dimension for uPVC Pipe Fittings, Schedule 80 (as per ASTM D2467)

Nominal Size(in)	Socket Entrance Diameter (A) inch(mm)	Tolerance on Socket Entrance Diameter in inch (mm)	Socket Bottom Diameter (B) inch(mm)	Tolerance on Bottom Diameter in inch (mm)	Socket Length in inch (mm) '(C)	Inside Diameter in inch (mm) (D)	Wall Thickness in inch (mm) Middle if the Socket "E"	Wall Thickness in inch (mm) Beyond the Socket "F"
½	0.848(21.54)	±0.004 (±0.10)	0.836 (21.23)	±0.004 (±0.10)	0.875(22.22)	0.502 (12.75)	0.147 (3.73)	0.185 (4.70)
¾	1.058 (26.87)	±0.004 (±0.10)	1.046 (26.57)	±0.004 (±0.10)	1.000(25.40)	0.698 (17.73)	0.154 (3.91)	0.195 (4.95)
1	1.325 (33.65)	±0.005 (±0.13)	1.310 (33.27)	±0.005 (±0.13)	1..125(28.58)	0.911 (23.14)	0.179 (4.55)	0.225 (5.72)
1¼	1.670 (42.42)	±0.005 (±0.13)	1.655(42.04)	±0.005 (±0.13)	1.250(31.75)	1.227 (31.17)	0.191 (4.85)	0.239 (6.07)
1½	1.912 (48.56)	±0.006 (±0.15)	1.894 (48.11)	±0.006 (±0.15)	1.375(34.93)	1.446 (36.73)	0.200 (5.08)	0.250 (6.35)
2	2.387(60.63)	±0.006 (±0.15)	2.369(60.17)	±0.006 (±0.15)	1.500(38.10)	1.881 (47.78)	0.218 (5.54)	0.275 (6.99)
2½	2.889 (73.38)	±0.007 (±0.18)	2.868(72.85)	±0.007 (±0.18)	1.750(44.45)	2.250 (57.15)	0.276 (7.01)	0.345 (8.75)
3	3.516 (89.31)	±0.008 (±0.20)	3.492 (88.70)	±0.008 (±0.20)	1.875(47.63)	2.820 (71.63)	0.300 (7.62)	0.375 (9.53)
4	4 .518 (114 .76)	±0.009 (±0 . 23)	4 .491 (114.10)	±0.009 (±0 .23)	2.250(57.15)	3. 737 (94.92)	0.337 (8. 56)	0.420 (10.67)
5	5.583(141.81)	±0.010(±0.25)	5.553 (141.0)	±0.010(±0.25)	2..625(66.68)	4.703 (119.46)	0.375(9.53)	0.470 (11.94)
6	6.647(168.83)	±0.011(±0.28)	6.614 (168.0)	±0.011(±0.28)	3.000(76.20)	5.646 (143.41)	0.432(10.97)	0.540 (13.72)

QUALITY CONTROL PROCEDURES AT SKIPPER

Skipper's quality control process ensures

DEFECT- FREE PRODUCTS: Stringent checks guarantee high-quality pipes and fittings.

RELIABLE SYSTEMS: Users can trust the products for long-term performance.

Various quality control checks regularly being conducted at Skipper follow the highest specifications of BIS (India) and ASTM (USA) as follows.

PIPES:

FLATTENING TEST: Samples are compressed opposite walls are brought together without pipe cracking, Good measure of correct extrusion techniques during production.

DROP IMPACT TEST: Weights dropped onto pipe at 0oC. No cracks or failures are expected to be seen after testing.

HEAT REVERSION TEST: Pipe changes in length when heated in an oven and left to cool. Measure of residual stresses left in pipe from production process.

TENSILE STRENGTH: The maximum stress that a pipe can withstand while being stretched or pulled.

PIPES AND FITTINGS:

VISUAL APPEARANCE: To ensure that all pipes and fittings are uniform in colour and free visual effects such as black dots, scratches, burn marks, etc.

DIMENSIONS: To ensure that all pipes and fittings comply to the appropriate standards.

DENSITY: Density of pipes and fittings is to be determined as mass per unit volume.

BURST PRESSURE: Maximum pressure before pipes and fittings burst.

OPACITY: To measure the percentage of light flux passing through the wall.

HYDROSTATIC PRESSURE TEST: Pipe & fittings sustained the pressure by hydrostatic pressure.

FITTINGS:

STRESS RELIEF TEST: There should not be any blisters, weld line splitting or any cracking.

HANDLING AND STORAGE

HANDLING OF PIPES

When receiving pipes & fittings , it's essential to inspect them for potential damage. Here are some key points to consider.

TRANSPORT DAMAGE: Check for signs of damage caused by shifting loads or improper handling during transportation.

VISUAL INSPECTION: Examine the pipe ends for cracks, dents, or other forms of damage.

HANDLING PRECAUTIONS: Avoid throwing, dropping, dragging, or pushing pipes, as this can cause damage.

PROTECTION FROM SHARP OBJECTS: Keep pipes away from sharp objects to prevent scratches or damage.

STORAGE OF PIPES

Proper storage is crucial for maintaining pipe quality. Key storage guidelines include:-

INDOOR STORAGE: Preferably store pipes indoors to protect them from environmental factors.

UV PROTECTION: If outdoor storage is necessary, cover bundles to prevent sunlight exposure and UV damage.

STACKING HEIGHT: Limit stacking height to 7 feet to prevent damage and instability.

Stacking Technique:-Alternatively, pipes can also be stacked with adjacent layers lying at right angles to each other to ensure stability and prevent damage.

LEVEL GROUND: Store pipes on level ground, free from sharp objects.

PIPE PLACEMENT: Store heavier pipes below lighter ones when stacking different classes together.

DRY SURFACE: Ensure the storage surface is dry to prevent damage or degradation.

INSTALLATION GUIDE OF SOLVENT CEMENT JOINT

Step 1: Cutting
Measure the pipe length accurately and make a visible marking using a felt tip pen. Ensure that the pipe and fittings are size compatible. You can easily cut with a plywood cutting saw/ ratchet cutter or a wheel cutter. Cutting the pipe as squarely as possible (at 90°) provides optimal bonding area within a joint. Inspect pipe ends thoroughly prior to making a joint. If a crack or splintering is noticed cut-off a minimum of 25 mm beyond the visible crack before proceeding.

Step 2: Deburring
Burrs in and on pipe end can obstruct flow/proper contact between the pipe and socket of the fitting during assembly and should be removed from both in and outside of the pipe. A 15 mm dia half round file/a pen knife or a deburring tool are suitable for this purpose. A slight bevel on the end of the pipe will ease entry of the pipe into the socket of the fitting socket.

Step 3: Test dryfit of the joint
Using a clean dry rag, wipe the dirt and moisture from the fitting sockets and pipe end. Dry fit the pipe to ensure total entry into the bottom of the fittings socket and make a visible marking using a felt tip pen.

Step 4: Application of solvent cement
Use only Skipper uPVC Solvent adhesive conforming to IS 14182 to ensure a perfect solvent weld joint. When making a joint, apply an even coat of solvent adhesive at the end of the pipe and also inside the fitting socket.

Step 5: Assembly of the joints
Immediately insert the pipe into the fitting socket, rotate the pipe 1/4 to 1/2 turn while inserting. This motion ensures an even distribution of solvent adhesive within the joint. Properly align the fittings as per patented alignment system shown with picture diagram on the right side. Hold the assembly for 3 seconds to allow the joint to setup and avoid push-out.Solvent adhesive must be formed around the entire socket fitting entrance. With a clean, dry cloth remove the excess solvent adhesive from the surface of the pipe and fitting.

SOLVENT CEMENT – HANDLING & CURING OF JOINTS

AVERAGE INITIAL SET TIME SCHEDULE FOR UPVC SOLVENT CEMENTS*

Temperature Range	Pipe diameter 1/2" to 11/4" 15mm to 32mm	Pipe diameter 1 1/2" to 2" 40mm to 50mm	Pipe diameter 2 1/2" to 6" 65mm to 150mm	Pipe diameter 8" onwards 200mm
20° to 45°C	2 minutes	5 minutes	30 minutes	2 hours
5° to 20°C	5 minutes	10 minutes	2 hours	6 hours
0° to 5°C	10 minutes	15 minutes	12 hours	24 hours

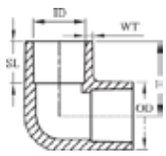
SOLVENT CEMENT - HANDLING, CURING & NUMBER OF JOINTS

AVERAGE INITIAL SET TIME SCHEDULE FOR UPVC SOLVENT CEMENTS*

Temperature Range	Pipe diameter 1/2" to 11/4" 15mm to 32mm	Pipe diameter 1 1/2" to 2" 40mm to 50mm	Pipe diameter 2 1/2" to 6" 65mm to 150mm	Pipe diameter 8" onwards 200mm
20° to 45°C	2 minutes	5 minutes	30 minutes	2 hours
5° to 20°C	5 minutes	10 minutes	2 hours	6 hours
0° to 5°C	10 minutes	15 minutes	12 hours	24 hours

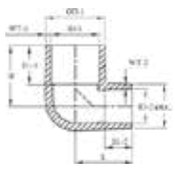
FITTINGS - DIMENSIONS

ELBOW 90° (SCH 80)



SIZE(INCH)	ID	OD	WT	SL	H
½"	21.54	29.10	3.73	22.22	34.80
¾"	26.87	35.00	3.91	25.40	40.20
1"	33.65	43.40	4.55	28.58	45.35
1¼"	42.42	52.35	4.85	31.75	55.52
1½"	48.56	58.70	5.08	34.93	60.05
2"	60.63	71.50	5.54	38.10	69.85

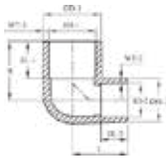
ELBOW 90° THREADED



SIZE(INCH)	ID	OD	WT	SL	H
½"	21.54	29.10	3.73	22.22	34.82
¾"	26.87	35.00	3.91	25.40	40.20
1"	33.65	43.38	4.55	28.58	45.35
1¼"	42.42	52.36	4.85	31.75	55.52
1½"	48.56	58.70	5.08	34.93	60.05
2"	60.63	71.50	5.54	38.10	69.85
2½"	73.38	-	7.01	44.45	-
3"	89.31	-	7.62	47.63	-
4"	114.76	-	8.56	57.15	-
5"	141.81	-	9.53	66.68	-
6"	168.83	-	10.97	76.20	-

FITTINGS - DIMENSIONS

ELBOW REDUCER 90° (SCH 80)

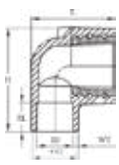


SIZE(INCH)	ID-1	WT-1	SL-1	ID-2	WT-2	SL-2
¾" x ½"	26.87	3.91	25.40	21.54	3.73	22.22
1" x ½"	33.65	4.55	28.58	21.54	3.73	22.22
1" x ¾"	33.65	4.55	28.58	26.87	3.91	25.40

BRASS ELBOW 90° (SCH 80)

SIZE(INCH)	ID	WT	SL
½"	21.54	3.73	22.22
¾"	26.87	3.91	25.40

BRASS REDUCER ELBOW 90° (SCH 80)



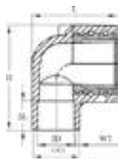
SIZE(INCH)	ID	WT	SL
¾" X ½"	26.87	3.91	25.40

FITTINGS - DIMENSIONS

BRASS ELBOW 90° WITH SS RING (SCH 80)

SIZE(INCH)	ID	WT	SL
½"	21.54	3.73	22.22
¾"	26.87	3.91	25.40
1"	33.65	4.55	28.58

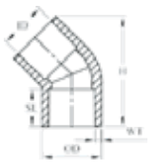
BRASS REDUCER ELBOW 90° WITH SS RING (SCH 80)



SIZE(INCH)	ID	WT	SL
¾" X ½"	26.87	3.91	25.40
1" X ½"	33.65	4.55	28.58
1" X 1/2"	33.65	4.55	28.58

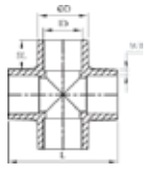
FITTINGS - DIMENSIONS

ELBOW 45° (SCH 80)



SIZE(INCH)	ID	WT	SL
½"	21.54	3.73	22.22
¾"	26.87	3.91	25.40
1"	33.65	4.55	28.58
1¼"	42.42	4.85	31.75
1½"	48.56	5.08	34.93
2"	60.63	5.54	38.10
2½"	73.38	7.01	44.45
3"	89.31	7.62	47.63
4"	114.76	8.56	57.15
5"	141.81	9.53	66.68
6"	168.83	10.97	76.20

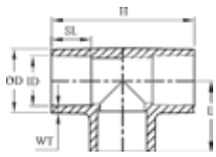
CROSS TEE (SCH 80)



SIZE(INCH)	ID	OD	WT	SL	L
½"	21.54	29.10	3.73	22.22	71.05
¾"	26.87	-	3.91	25.40	-
1"	33.65	-	4.55	28.58	-

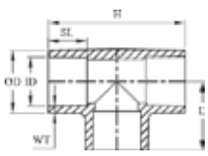
FITTINGS - DIMENSIONS

TEE (SCH 80)



SIZE(INCH)	ID	OD	WT	SL	L	H
½"	21.54	29.10	3.73	22.22	35.45	70.40
¾"	26.87	35.05	3.91	25.40	40.20	80.35
1"	33.65	43.00	4.55	28.58	45.65	92.15
1¼"	42.42	52.70	4.85	31.75	55.00	110.87
1½"	48.56	58.90	5.08	34.93	60.73	120.88
2"	60.63	71.60	5.54	38.10	66.56	139.50
2½"	73.38	-	7.01	44.45	-	-
3"	89.31	114.70	7.62	47.63	92.65	195.00
4"	114.76	132.00	8.56	57.15	119.70	236.70
5"	141.81	161.00	9.53	66.68	142.80	286.50
6"	168.83	191.50	10.97	76.20	162.95	326.00

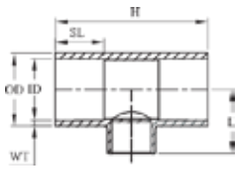
THREADED TEE (SCH 80)



SIZE(INCH)	ID	OD	WT	SL	L	H
½"	21.54	29.10	3.73	22.22	35.45	70.40
¾"	26.87	35.05	3.91	25.40	40.20	80.35
1"	33.65	42.98	4.55	28.58	45.65	92.15

FITTINGS - DIMENSIONS

REDUCER TEE (SCH 80)



SIZE(INCH)	ID-1	WT-1	SL-1	ID-2	WT-2	SL-2
½" x½" x ¾"	21.54	3.73	22.22	26.87	3.91	25.40
¾" x ¾" x ½"	26.87	3.91	25.40	21.54	3.73	22.22
1" x 1" x ½"	33.65	4.55	28.58	21.54	3.73	22.22
1" x 1" x ¾"	33.65	4.55	28.58	26.87	3.91	25.40
1¼" x 1¼" x ½"	42.42	4.85	31.75	21.54	3.73	22.22
1¼" x 1¼" x ¾"	42.42	4.85	31.75	26.87	3.91	25.40
1¼" x 1¼" x 1"	42.42	4.85	31.75	33.65	4.55	28.58
1½" x 1½" x ½"	48.56	5.08	34.93	21.54	3.73	22.22
1½" x 1½" x ¾"	48.56	5.08	34.93	26.87	3.91	25.40
1½" x 1½" x 1"	48.56	5.08	34.93	33.65	4.55	28.58
1½" x 1½" x 1¼"	48.56	5.08	34.93	42.42	4.85	31.75
2" x 2" x ½"	60.63	5.54	38.10	21.54	3.73	22.22
2" x 2" x ¾"	60.63	5.54	38.10	26.87	3.91	25.40
2" x 2" x 1"	60.63	5.54	38.10	33.65	4.55	28.58
2" x 2" x 1¼"	60.63	5.54	38.10	42.42	4.85	31.75
2" x 2" x 1½"	60.63	5.54	38.10	48.56	5.08	34.93
2½" x 2½" x1½"	73.38	7.01	44.45	48.56	5.08	34.93
2½" x 2½" x 2"	73.38	7.01	44.45	60.63	5.54	38.10
3" x 3" x 2"	89.31	7.62	47.63	60.63	5.54	38.10
3" x 3" x 2½"	89.31	7.62	47.63	73.38	7.01	44.45
4" x 4" x 2½"	114.76	8.56	57.15	73.38	7.01	44.45
4" x 4" x 3"	114.76	8.56	57.15	89.31	7.62	47.63
6" x 6" x 3"	168.83	10.97	76.20	89.31	7.62	47.63
6" x 6" x 4"	168.83	10.97	76.20	114.76	8.56	57.15

FITTINGS - DIMENSIONS

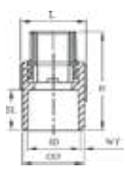
BRASS TEE (SCH 80)

SIZE(INCH)	ID	WT	SL
½" x ½" x ½"	21.54	3.73	22.22
¾" x ¾" x ½"	26.87	3.91	25.40

BRASS REDUCER TEE WITH SS RING(SCH 80)

SIZE(INCH)	ID	WT	SL
½" x ½" x ½"	21.54	3.73	22.22
¾" x ¾" x ¾"	26.87	3.91	25.40
1" x 1" x 1"	33.65	4.55	28.58
¾" x ¾" x ½"	26.87	3.91	25.40
1" x 1" x ½"	33.65	4.55	28.58
1" x 1" x ¾"	33.65	4.55	28.58

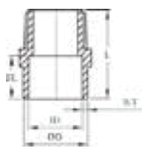
BRASS MALE THREAD ADAPTOR(SCH 80)



SIZE(INCH)	ID	WT	SL
½"	21.54	3.73	22.22
¾"	26.87	3.91	25.40
1"	33.65	4.55	28.58
1¼"	42.42	4.85	31.75
1½"	48.56	5.08	34.93
2"	60.63	5.54	38.10

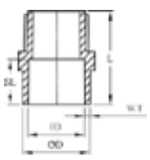
FITTINGS - DIMENSIONS

MALE ADAPTOR PLASTIC THREADED (SCH 80)



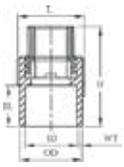
SIZE(INCH)	ID	WT	SL
½"	21.54	3.73	22.22
¾"	26.87	3.91	25.40
1"	33.65	4.55	28.58
1¼"	42.42	4.85	31.75
1½"	48.56	5.08	34.93
2"	60.63	5.54	38.10
2½"	73.38	7.01	44.45
3"	89.31	7.62	47.63
4"	114.76	8.56	57.15

REDUCER MALE ADAPTOR PLASTIC THREADED (SCH 80)



SIZE(INCH)	ID	WT	SL
¾" x ½"	26.87	3.91	25.40

BRASS REDUCER MALE THREAD ADAPTOR(SCH 80)



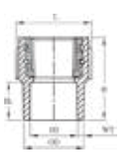
SIZE(INCH)	ID	WT	SL
¾" X ½"	26.87	3.91	25.40

FITTINGS - DIMENSIONS

FEMALE THREAD ADAPTOR (SCH 80)

SIZE(INCH)	ID	OD	WT	SL	L
½"	21.54	29.10	3.73	22.22	42.00
¾"	26.87	34.70	3.91	25.40	48.25
1"	33.65	42.70	4.55	28.58	53.70
1¼"	42.42	52.05	4.85	31.75	59.40
1½"	48.56	-	5.08	34.93	-
2"	60.63	-	5.54	38.10	-
2½"	73.38	-	7.01	44.45	-
3"	89.31	-	7.62	47.63	-
4"	114.76	-	8.56	57.15	-

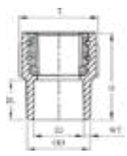
BRASS FEMALE THREADED ADAPTER WITH SS RING (SCH 80)



SIZE(INCH)	ID	WT	SL
½"	21.54	3.73	22.22
¾"	26.87	3.91	25.40
1"	33.65	4.55	28.58
1¼"	42.42	4.85	31.75
1½"	48.56	5.08	34.93
2"	60.63	5.54	38.10

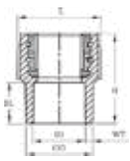
FITTINGS - DIMENSIONS

BRASS REDUCER FEMALE THREAD ADAPTOR (SCH 80)



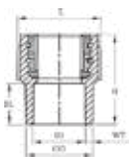
SIZE(INCH)	ID	WT	SL
½ x ½	21.54	3.73	22.22
¾ x ½	26.87	3.91	25.40
1 x ½	33.65	4.55	28.58

BRASS REDUCER FEMALE THREAD ADAPTOR WITH SS RING(SCH 80)



SIZE(INCH)	ID	WT	SL
¾" x ½"	26.87	3.91	25.40
1" x ½"	33.65	4.55	28.58

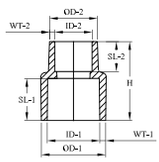
BRASS FEMALE THREAD ADAPTOR HEX TYPE(SCH 80)



SIZE(INCH)	ID	WT	SL
½"	21.54	3.73	22.22
1"	33.65	4.55	28.58

FITTINGS - DIMENSIONS

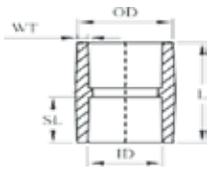
REDUCER COUPLER (SCH 80)



SIZE(INCH)	ID-1	WT-1	SL-1	ID-2	WT-2	SL-2
¾" x ½"	26.87	3.91	25.40	21.54	3.73	22.22
1" x ½"	33.65	4.55	28.58	21.54	3.73	22.22
1" x ¾"	33.65	4.55	28.58	26.87	3.91	25.40
1¼" x ½"	42.42	4.85	31.75	21.54	3.73	22.22
1¼" x ¾"	42.42	4.85	31.75	26.87	3.91	25.40
1¼" x 1"	42.42	4.85	31.75	33.65	4.55	28.58
1½" x ½"	48.56	5.08	34.93	21.54	3.73	22.22
1½" x ¾"	48.56	5.08	34.93	26.87	3.91	25.40
1½" x 1"	48.56	5.08	34.93	33.65	4.55	28.58
1½" x 1¼"	48.56	5.08	34.93	42.42	4.85	31.75
2" x ½"	60.63	5.54	38.10	21.54	3.73	22.22
2" x ¾"	60.63	5.54	38.10	26.87	3.73	25.40
2" x 1"	60.63	5.54	38.10	33.65	4.55	28.58
2" x 1¼"	60.63	5.54	38.10	42.42	4.85	31.75
2" x 1½"	60.63	5.54	38.10	48.56	5.08	34.93
2½" x ½"	73.38	7.01	44.45	21.54	3.73	22.22
2½" x 2"	73.38	7.01	44.45	60.63	5.54	38.10
3" x 2"	89.31	7.62	47.63	60.63	5.54	38.10
3" x 2½"	89.31	7.62	47.63	73.38	5.16	44.45
4" x 2½"	114.76	8.56	57.15	73.38	5.16	44.45
6" x 4"	168.83	10.97	76.20	114.76	8.56	57.15

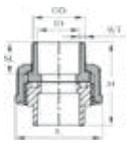
FITTINGS - DIMENSIONS

COUPLER (SCH 80)



SIZE(INCH)	ID	OD	WT	SL	L
½"	21.54	29.10	3.73	22.22	47.45
¾"	26.87	35.05	3.91	25.40	55.00
1"	33.65	42.65	4.55	28.58	59.76
1¼"	42.42	51.82	4.85	31.75	67.80
1½"	48.56	58.39	5.08	34.93	72.29
2"	60.63	71.54	5.54	38.10	78.94
2½"	73.38	87.30	7.01	44.45	97.20
3"	89.31	115.00	7.62	47.63	102.90
4"	114.76	131.90	8.56	57.15	123.60
5"	141.81	161.20	9.53	66.68	140.00
6"	168.83	191.45	10.97	76.20	159.90

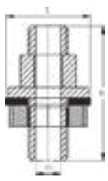
UNION (SCH 80)



SIZE(INCH)	ID	OD	WT	SL	L	H
½"	21.54	29.35	3.73	22.22	47.48	59.50
¾"	26.87	34.79	3.91	25.40	53.00	65.00
1"	33.65	43.73	4.55	28.58	62.43	72.81
1¼"	42.42	-	4.85	31.75	-	-
1½"	48.56	-	5.08	34.93	-	-
2"	60.63	-	5.54	38.10	-	-

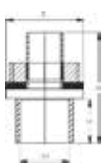
FITTINGS - DIMENSIONS

TANK NIPPLE (SCH 80)

SIZE(INCH)	ID
½"	21.54
¾"	26.87
1"	33.65
1¼"	42.42
1½"	48.56
2"	60.63

TANK NIPPLE (WITH ONE SIDE SOCKET)

SIZE(INCH)	ID	SL
¾"	26.97	25.40
1"	33.78	28.58
1¼"	-	-

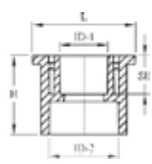
TANK NIPPLE (WITH ONE SIDE PIPE FITTMENT)

SIZE(INCH)
½"
¾"
1"
1¼"

TANK NIPPLE (WITH ONE SIDE FITTMENT)


SIZE(INCH)
¾"
1"

REDUCER BUSH (SCH 80)

SIZE(INCH)	ID-1
¾" x ½"	21.54
1" x ½"	21.54
1" x ¾"	26.87
1¼" x ½"	21.54
1¼" x ¾"	26.87
1¼" x 1"	33.65
1½" x ½"	21.54
1½" x ¾"	26.87
1½" x 1"	33.65
1½" x 1¼"	42.42
2" x ½"	21.54
2" x ¾"	26.87
2" x 1"	33.65
2" x 1¼"	42.42
2" x 1½"	48.56
2½" x 2"	60.63
3" x 1½"	48.56
3" x 2"	60.63
3" x 2½"	73.38
4" x 2"	60.63
4" x 3"	89.31
5" x 4"	141.76
4" x 3"	89.31
6" X 3"	89.31
6" X 4"	141.76
6" X 5"	141.81

FITTINGS - DIMENSIONS

COMPACT BALL VALVE

SIZE(INCH)
½"
¾"
1"
1¼"
1½"
2"

UNION LONG HANDLE BALL VALVE

SIZE(INCH)
½"
¾"
1"
1¼"
1½"
2"

LONG HANDLE BALL VALVE

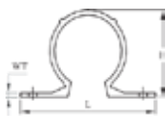
SIZE(INCH)
½"
¾"
1"
1¼"
1½"
2"
2½"

SINGLE UNION BALL VALVE

SIZE(INCH)
½"
¾"
1"
1¼"
1½"
2"

FITTINGS - DIMENSIONS

PLASTIC CLAMP



SIZE(INCH)
½"
¾"
1"
1¼"
1½"
2"

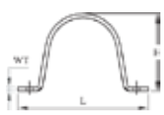
SS CLAMP

SIZE(INCH)
½"
¾"
1"
1¼"
1½"
2"

STEP OVER BEND (SCH 80)

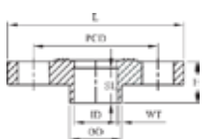
SIZE(INCH)	ID	WT
½"	21.54	3.73
¾"	26.87	3.91
1"	33.65	4.55

POWER COATED METAL CLAMP



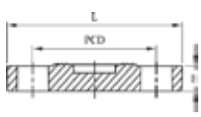
SIZE(INCH)
½"
¾"
1"
1¼"
1½"
2"

FLANGE END CAP OPEN



SIZE(INCH)
1"
1¼"
1½"
2"

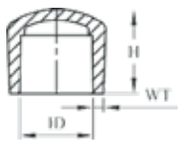
FLANGE END CAP CLOSED



SIZE(INCH)
1"
1¼"
1½"
2"

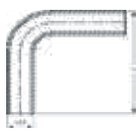
FITTINGS - DIMENSIONS

END CAP (SCH 80)



SIZE(INCH)	ID	WT	SL
½"	21.54	3.73	22.22
¾"	26.87	3.91	25.40
1"	33.65	4.55	28.58
1¼"	42.42	4.85	31.75
1½"	48.56	5.08	34.93
2"	60.63	5.54	38.10
2½"	73.38	7.01	44.45
3"	89.31	7.62	47.63
4"	114.76	8.56	57.15
6"	168.83	10.97	76.20

SHORT BEND



SIZE(INCH)
½"
¾"
1"
1¼"
1½"
2"
3"
4"

SOLVENT CEMENT

CAPACITY IN ML	CONTAINER TYPE
59	Tin
118	Tin
237	Tin
473	Tin
946	Tin

CHEMICAL RESISTANCE CHART OF UPVC

Chemical+A5:C29	23°C (73°F)	60°C (140°F)
A		
Acetaldehyde	N	N
Acetaldehyde, aq 40%	C	N
Acetamide - -	-	-
Acetic acid, vapor	R	R
Acetic acid, glacial	R	N
Acetic acid, 25%	R	R
Acetic acid, 60%	R	N
Acetic acid, 85%	R	N
Acetic anhydride	N	N
Acetone	N	N
Acetylene	N	N
Acetyl chloride	N	N
Acetylnitrile	N	N
Acrylonitrile	N	N
Acrylic acid	N	N
Adipic acid	R	R
Alcohol, allyl	R	C
Alcohol, amyl	N	N
Alcohol, benzyl	N	N
Alcohol, butyl (n-butanol)	R	R
Alcohol, diacetone	N	N
Alcohol, ethyl (ethanol)	R	R
Alcohol, hexyl (hexanol)	R	R
Alcohol, isopropyl (2-propanol)	R	R
Alcohol, methyl (methanol)	R	R
Alcohol, propyl (1-propanol)	R	R
Alcohol, propargyl	R	R
Allyl chloride	N	N
Alums	R	R
except Aluminim fluoride	R	N
Ammonia, gas	R	R
Ammonia, liquid	N	N
Ammonium salts	R	R
except Ammonium Dichromate	R	N
Ammonium fluoride, 10%	R	R
Ammonium fluoride, 25%	R	C
Amyl acetate	N	N

Chemical	23°C (73°F)	60°C (140°F)
Amyl chloride	N	N
Aniline	N	N
Aniline chlorohydrate	N	N
Aniline hydrochloride	N	N
Anthraquinone	R	R
Antimony trichloride	R	R
Anthraquinone sulfonic acid	R	R
Aqua regia	C	N
Arsenic acid, 80%	C	N
Aryl-sulfonic acid	R	R
B		
Barium salts	R	R
except Barium nitrate	R	N
Beer	R	R
Beet sugar liquor	R	R
Benzaldehyde, 10%	R	N
Benzene (benzol)	R	N
Benzene sulfonic acid, 10%	R	R
Benzene sulfonic acid, > 10%	N	N
Benzoic acid	R	R
Black liquor – paper	R	R
Bleach, 12% active chlorine	R	R
Bleach, 5% active chlorine	R	R
Borax	R	R
Boric acid	R	R
Brine	R	R
Bromic acid	R	R
Bromine, aq	R	R
Bromine, liquid	N	N
Bromine, gas, 25%	R	R
Bromobenzene	N	N
Bromotoluene	N	N
Butadiene	R	R

R - Generally Resistant

C - Less resistant than R but still suitable for some conditions

N - Not resistant

CHEMICAL RESISTANCE CHART OF UPVC

Chemical	23°C (73°F)	60°C (140°F)
Butane	R	R
Butynediol	R	N
Butyl acetate	N	N
Butyl stearate	R	N
Butyl phenol	R	N
Butylene, liquid	R	R
Butyric acid	R	N
C		
Cadmium Cyanide	R	R
Calcium salts	R	R
except Calcium bisulde	N	N
Calcium hypochlorite, 30%	R	R
Calcium hydroxide	R	R
Calcium Nitrate	R	R
Calcium Oxide	R	R
Calcium Sulfate	R	R
Camphor	R	N
Cane sugar liquors	R	R
Carbon disulfide	N	N
Carbon dioxide	R	R
Carbon dioxide, aq	R	R
Carbon monoxide	R	R
Carbitol	R	N
Carbon tetrachloride	R	N
Carbonic Acid	R	R
Castor oil	R	R
Caustic potash (potassium hydrc	R	R
Caustic soda (sodium hydroxide)	R	R
Cellosolve	R	N
Cellosolve acetate	R	N
Chloral hydrate	R	R
Chloramine, dilute	R	N
Chloric acid, 20%	R	R
Chlorine, gas, dry	C	N
Chlorine, gas, wet	N	N
Chlorine, liquid	N	N
Chlorine water	R	R
Chloracetic acid, 50%	R	R

Chemical	23°C (73°F)	60°C (140°F)
Chloroacetyl Chloride	R	N
Chlorobenzene	N	N
Chlorobenzyl chloride	N	N
Chloroform	N	N
Chloropicrin	N	N
Chlorosulfonic acid	R	N
Chromic acid, 10%	R	R
Chromic acid, 30%	R	R
Chromic acid, 40%	R	C
Chromic acid, 50%	N	N
Chromium potassium sulfate	R	N
Citric acid	R	R
Coconut oil	R	R
Coffee	R	R
Coke oven gas	R	R
Copper acetate	R	N
Copper salts, aq	R	R
Corn oil	R	R
Corn syrup	R	R
Cottonseed oil	R	R
Cresote	N	R
Cresol, 90%	N	N
Cresylic acid, 50%	R	R
Croton aldehyde	N	N
Crude oil, sour	R	R
Cupric Salts, aq	R	R
Cyclohexane	N	N
Cyclohexanol	N	N
Cyclohexanone	N	N
D		
Detergents, aq	R	R
Dextrin	R	R
Dextrose	R	R
Dibutoxyethyl phthalate	N	N
Diesel fuels	R	R
Diethylamine	N	N
Diethyl Ether	R	N
Disodium phosphate	R	R

CHEMICAL RESISTANCE CHART OF UPVC

Chemical	23°C (73°F)	60°C (140°F)
Diglycolic acid	R	R
Dioxane -1,4	N	N
Dimethylamine	R	R
Dimethyl formamide	N	N
Dibutyl phthalate	N	N
Dibutyl sebacate	R	N
Dichlorobenzene	N	N
Dichloroethylene	N	N
E		
Ether	N	N
Ethyl ether	N	N
Ethyl halides	N	N
Ethylene halides	N	N
Ethylene glycol	R	R
Ethylene oxide	N	N
F		
Fatty acids	R	R
Ferric salts	R	R
Fish Oil	R	R
Fluorine, dry gas	R	N
Fluorine, wet gas	R	N
Fluoboric acid	R	R
Fluosilicic acid, 50%	R	R
Formadehyde	R	R
Formic acid	R	N
Freon - F11, F12, F113, F114	R	R
Freon - F21, F22	R	N
Fructose	R	R
Furfural	N	N
G		
Gallic acid	R	R
Gas, coal, manufactured	N	N
Gas, natural, methane	R	R
Gasolines	C	C
Gelatin	R	R
Glucose	R	R
Glue, animal	R	R
Glycerine (glycerol)	R	R

Chemical	23°C (73°F)	60°C (140°F)
Glycolic acid	R	R
Glycols	R	R
Grape Sugar	R	R
Green liquor, paper	R	R
H		
Heptane	R	R
Hexane	R	N
Hexanol	R	R
Hydraulic Oil	R	N
Hydrobromic acid, 20%	R	R
Hydrochloric acid	R	R
Hydrofluoric acid, 30%	R	N
Hydrofluoric acid, 50%	R	N
Hydrofluoric acid, 100%	N	N
Hydrofluosilic acid	R	R
Hydrocyanic acid	R	R
Hydrogen	R	R
Hydrogen cyanide	R	R
Hydrogen fluoride	N	N
Hydrogen phophide	R	R
Hydrogen peroxide, 50%	R	R
Hydrogen peroxide, 100%	R	R
Hydrogen sulfide, aq	R	R
Hydrogen sulfide, dry	R	R
Hydroquinone	R	R
Hydroxylamine sulfate	R	R
Hydrazine	N	N
Hypochlorous acid	R	R
I		
Iodine, aq, 10%	N	N
J		
Jet fules, JP-4 and JP-5	C	C

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CHEMICAL RESISTANCE CHART OF UPVC

Chemical	23°C (73°F)	60°C (140°F)
K		
Kerosene	R	R
Ketones	N	N
Ketchup	R	N
Kraft paper liquor	R	R
L		
Lctic acid, 25%	R	R
Lactic acid, 80%	R	N
Lard oil	R	R
Lauric acid	R	R
Lauryl acetate	R	R
Lauryl chlorie	R	R
Lead salts	R	R
Lime sulfur	R	R
Linoleic acid	R	R
Linoleic oil	R	R
Linseed oil	R	R
Liqueurs	R	R
Lithium salts	R	R
Lubricating oils	R	R
M		
Magnesium salts	R	R
Maleic acid	R	R
Malic acid	R	R
Manganese sulfate	R	R
Mercuric salts	R	R
Mercury	R	R
Methane	R	R
Methoxyethl oleate	R	N
Methyl acetate	N	N
Methyl amine	N	N
Methyl bromide	N	N
Methyl cellosolve	N	N
Methyl chloride	N	N
Methyl chloroform	N	N
Methyl ethyl ketone	N	N
Methyl isobutyl carbinol	N	N
Methyl isopropyl ketone	N	N

Chemical	23°C (73°F)	60°C (140°F)
Methyl methacrylate	R	N
Methyl sulfate	R	N
Methyl sulfuric acid	R	R
Methylene bromide	N	N
Methylene chloride	N	N
Methylene iodide	N	N
Milk	R	R
Mineral oil	R	R
Molasses	R	R
Monochloroacetic acid	R	R
Monochlorobenzene	N	N
Monoethanolamine	N	N
Motor oil	R	R
N		
Naptha	R	R
Naphthalene	N	N
Natural Gas	R	R
Nickel acetate	R	N
Nickel salts	R	R
Nicotine	R	R
Nicotinic acid	R	R
Nitric acid, 0 to 40%	R	R
Nitric acid, 50%	R	C
Nitric acid, 100%	N	N
Nitrobenzene	N	N
Nitroglycerine	N	N
Nitrous acid, 10%	R	R
Nitrous oxide, gas	R	N
Nitroglycol	N	N
O		
Oleic acid	R	R
Oleum	N	N
Olive oil	R	R
Oxalic acid	R	R
Oxygen, gas	R	R
Ozone, gas	R	R

CHEMICAL RESISTANCE CHART OF UPVC

Chemical	23°C (73°F)	60°C (140°F)
P		
Palmitic acid, 10%	N	N
Palmitic acid, 70%	R	N
Paraffin	R	R
Pentane	C	C
Peracetic acid, 40%	R	N
Perchloric acid, 15%	R	N
Perchloric acid, 70%	R	N
Perchloroethylene	R	N
Perphosphate	R	N
Phenol	R	N
Phenylhydrazine	N	N
Phosphoric anhydride	R	N
Phosphoric acid	R	R
Phosphorus pentoxide	R	N
Phosphorous trichloride	N	N
Photographic chemicals, aq	R	R
Phthalic acid	N	N
Plating solutions, metal	R	R
Potash	R	R
Potassium amyl xanthate	R	N
Potassium salts, aq	R	R
except Potassium iodide	R	N
Potassium permanganate, 10%	R	R
Potassium permanganate, 25	R	N
Propane	R	R
Propylene dichloride	N	N
Propylene oxide	N	N
Pyridine	N	N
Pyrogallic acid	R	N
R		
Rayon coagulating bath	R	R
S		
Salicylic acid	R	R
Salicyladehyde	N	N
Selenic acid, aq.	R	R
Silicic acid	R	R
Silicone oil	R	N

Chemical	23°C (73°F)	60°C (140°F)
Silver salts	R	R
Soaps	R	R
Sodium salts, aq	R	R
except Sodium chlorite	N	N
except Sodium chlorate	R	N
except Sodium hypochlorite	R	N
Stannic chloride	R	R
Stannous chloride	R	R
Starchy	R	R
Stearic acid	R	R
Stoddard solvent	N	N
Succinic acid	R	R
Sulfamic acid	N	N
Sulfate & Sulfite liquors	R	R
Sulfur	R	R
Sugars, aq	R	R
Sulfur dioxide, dry	R	R
Sulfur dioxide, wet	R	N
Sulfur trioxide, gas, dry	R	R
Sulfur acid, wet	R	N
Sulfuric acid, up to 80%	R	R
Sulfuric acid,90 to 93%	R	N
Sulfuric acid, 94 to 100%	N	N
Sulfurous acid	R	R
T		
Tall oil	R	R
Tannic acid	R	R
Tanning liquors	R	R
Tar	N	N
Tartaric acid	R	R
Terpineol	C	C
Tetrachloroethane	C	C
Toluene	N	N

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C - Less resistant than R but still suitable for some conditions

N - Not resistant

CHEMICAL RESISTANCE CHART OF UPVC

Chemical	23°C (73°F)	60°C (140°F)
Tomato juice	R	R
Transformer oil	R	R
Tributyl phosphate	N	N
Tributyl citrate	R	R
Trichloroacetic acid	R	R
Trichloroethylene	R	N
Triethanolamine	R	N
Triethylamine	R	R
Trimethyl propane	R	N
Trisodium phosphate	R	R
Turpentine	R	R
U		
Urea	R	R
Urine	R	R

Chemical	23°C (73°F)	60°C (140°F)
V		
Vaseline	N	N
Vegetable oils	R	R
Vinegar	R	R
Vinyl acetate	N	N
W		
Water, deionized	R	R
Water, distilled	R	R
Water, salt	R	R
White Liquor	R	R
Whiskey	R	R
Wines	R	R
X		
Xylene	N	N
Z		
Zinc salts	R	R

DO'S

- Use pipes and fittings from the same manufacturer for compatibility and warranty.
- Cut pipes squarely (perpendicular) and deburr edges for a smooth, secure fit.
- Clean pipes and fittings before assembly to remove dirt and debris.
- Dry-fit pipes and fittings before gluing to ensure proper alignment.
- Use only solvent cement specifically designed for uPVC for joining; apply to both pipe and fitting, then give a quarter turn when inserting.
- Allow recommended curing time for solvent cement before pressure testing or use.
- Provide proper support and alignment to avoid stress on joints.
- Conduct hydraulic pressure testing after installation to check for leaks.
- Insulate pipes exposed to sunlight or extreme temperatures.
- Regularly inspect and maintain the system for leaks or damage.

DONT'S

- Do not overtighten threaded joints; finger-tighten plus one or two turns only to prevent cracking.
- Do not use PTFE (Teflon) tape or sealant paste meant for metal pipes on uPVC threads; use only sealants approved for plastic.
- Do not use metal hooks, nails, or sharp-edged straps to support pipes.
- Do not expose uPVC pipes to open flame or use them for pneumatic (air/gas) applications.
- Do not use petroleum-based or solvent-based sealants, adhesives, or lubricants not intended for uPVC.
- Do not drop pipes from heights or walk on them to avoid cracks or deformation.
- Do not thread uPVC pipes unless specifically designed for threading.
- Do not use plastic threaded fittings for hot water above 60°C.
- Do not rush pressure testing; always wait for the full curing time.

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