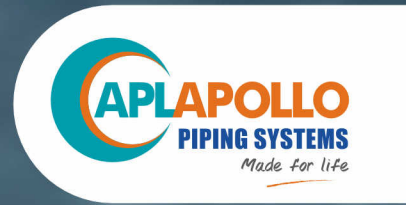


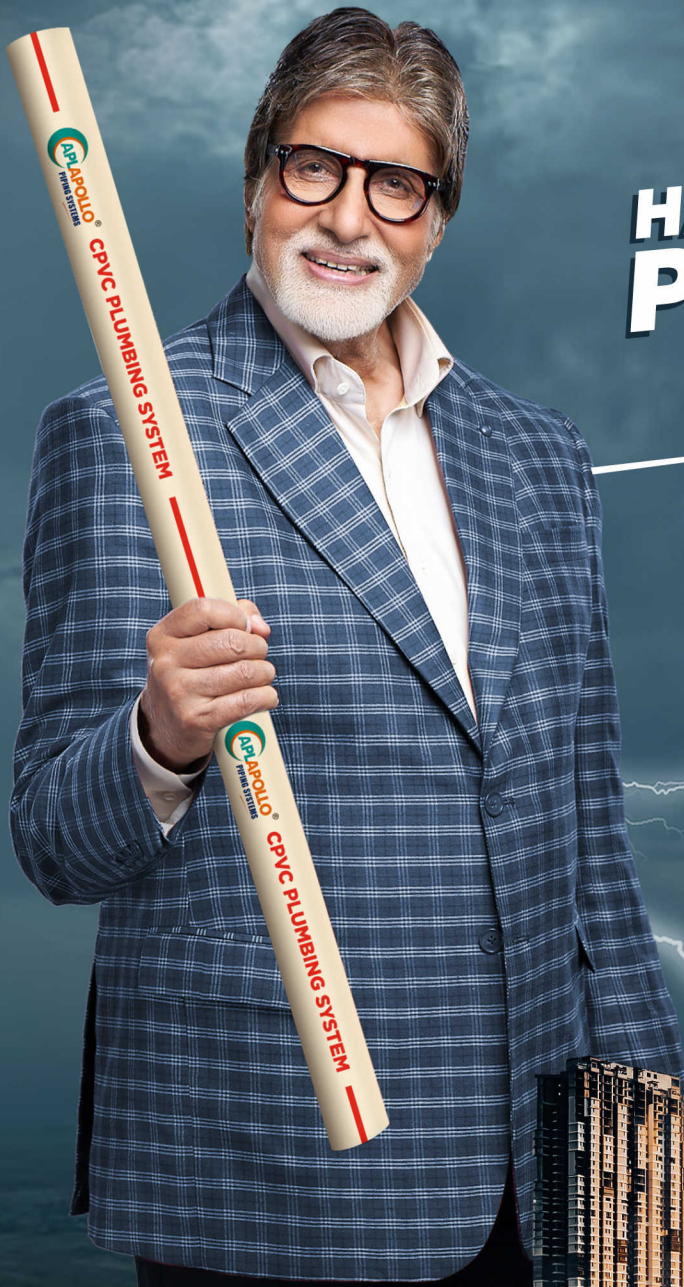


Sudesh Group

35 Years of excellence



HAR PRESSURE SE BEASAR



CPVC PLUMBING SYSTEM

COMPANY OVERVIEW



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VISION

We aspire to become a global leader in the field of Plastic Piping Systems through our relentless process of transforming innovative ideas into incredible realities. We aim to be a genuinely global, high-performing organisation that provides excellent goods and services to its customers.

With our ideals, we seek to create an innovative, high-performance company that is dedicated to offering great products to its clients. We strive to achieve total customer satisfaction by continually improving on product quality, ease of use, availability and cost performance. These values have guided our interactions with customers, partners, employees, and shareholders at large.

MISSION

Our mission is to become a market leader by being one of the best quality product suppliers by expanding continuously, using new technologies, improving business methods, satisfying market expectations, and ensuring employee happiness.

We have always believed in returning back to the society, and so we're working to harness the potential of non-renewable energy sources. Furthermore, we are devoted to deliver on every promise to our valued clients, and work with them to fully understand their evolving needs and long-term requirements.



2022-23

- PPR-C Pipes and Fittings Launch.
- Purchased of new land for upcoming plant at Dadri 2

2020-21

- Concluded the strategic acquisition of 'Kisan Mouldings' unit in Bengaluru.
- Successful listing of company's share on NSE.
- Started manufacturing water tank, solvent cement and Bath Fittings Robust.

2019

- Concluded promoter infusion of 142 crore through issuance of equity shares and fully convertible warrants on preferential basis.

2018

- Purchased a land with building in Noida to develop Apollo Pipes corporate office.
- Introduced a brand new products range of faucets, taps, showers and accessories.

2017

- Largest plastic piping solution company.
- Installed capacity of moulding division enhanced to 27,000 MTPA

2016

- First in north India to install 900kg/hr PVC extension line.
- Expanded capacity by 10,000 MTPA
- Took total available capacity to 50,000 MTPA

2013-15

- Started manufacturing uPVC plumbing pipes fittings with 180 MTPA Capacity.
- Commenced CPVC pipes & fittings using kemone, France resin.
- Started manufacturing uPVC agri and SWR fittings.

2005-10

- Started manufacturing HDPE pipes
- Setup new plant at Dadri-UP of capacity 21,000 MTPA

2000

- Commercial PVC pipe manufacturing operations.
- Established 3000 MTPA in Sikanderabad, U.P.

OUR PRESENCE



MANUFACTURING UNITS



Manufacturing Plant - Dadri (U.P.)



Corporate Office - Noida (U.P.)



Manufacturing Plant - Raipur (Chhattisgarh)



Manufacturing Plant - Bawla (Gujarat)



Manufacturing Plant - Sikandrabad (U.P.)



Manufacturing Plant - Tumkur (Karnataka)

AWARDS & CERTIFICATIONS

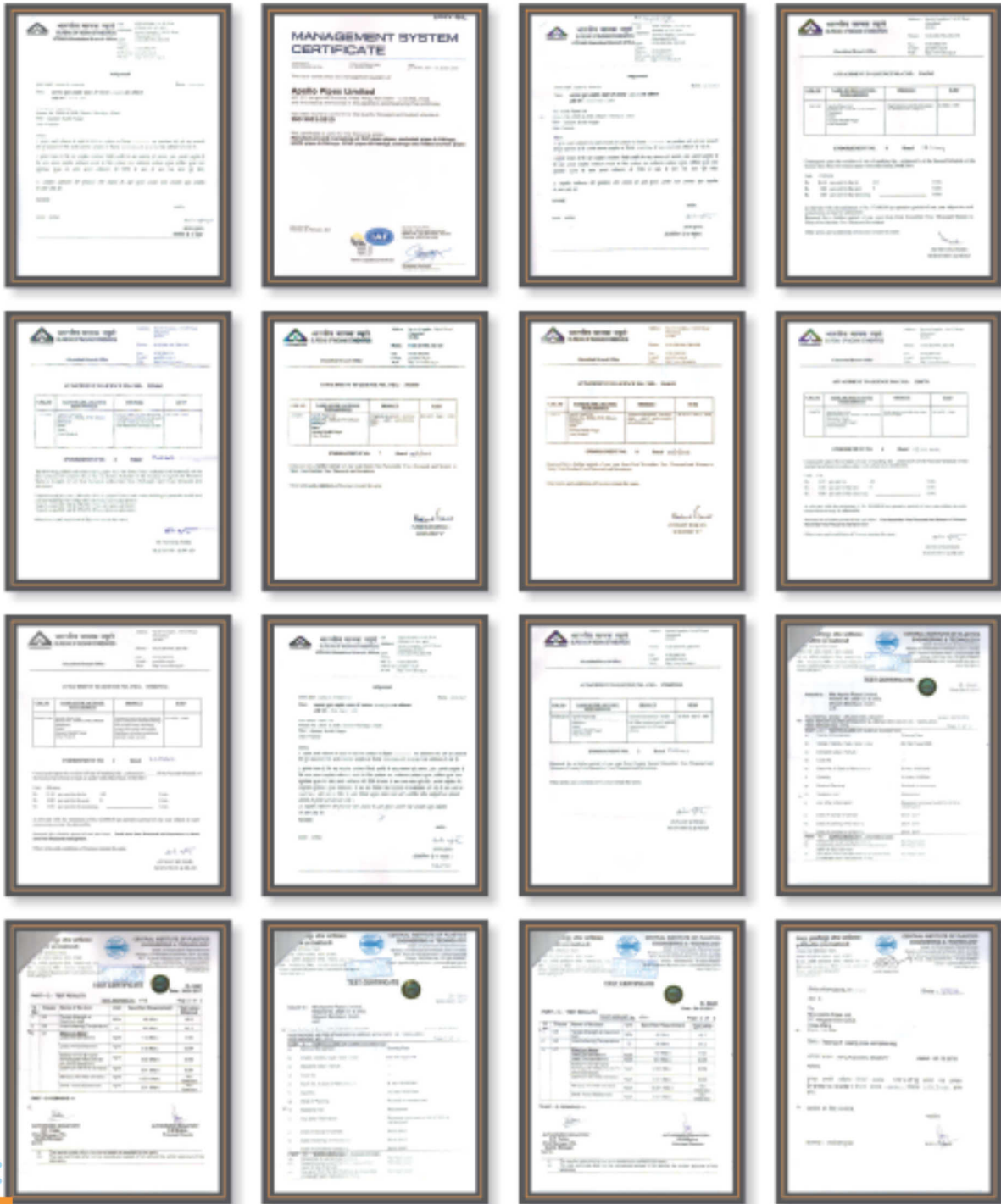


Iconic Brands Award of India-2022
by
The Economic Times



Best Brand Award-2021
by
The Economic Times

Recognises
APOLLO PIPES LIMITED.
as a Best Brand
in the Building Materials & Fittings Industry



CPVC PLUMBING SYSTEM

Introduction

APL Apollo CPVC Pipes & Fittings are the perfect solution for hot and cold potable water distribution requirements in residential, commercial and industrial spaces with a host of advantages over the conventional piping system. Produced from a unique blend of chlorinated polyvinyl chloride, they possess the perfect physical properties desirable for hassle free piping applications.

The APL APOLLO CPVC plumbing system has been certified for use with potable water in a number of countries, including the United States, the United Kingdom, Canada, Germany, France, the Netherlands, and the Middle East.

Applications

APL APOLLO CPVC pipes are used for hot and cold potable water flow in Residential Buildings, Commercial Buildings, Hotels, Educational Institutions, Swimming Pools, etc. which require a hygienic and uncontaminated supply of water.

Why should you choose APL Apollo CPVC Plumbing System over other pipes?

- Long Life
- Leak Proof
- Corrosion Free
- UV Resistance
- Bacteria Free
- Ideal for Hot and Cold Water
- ISI certified product
- Lowest Bacterial Growth



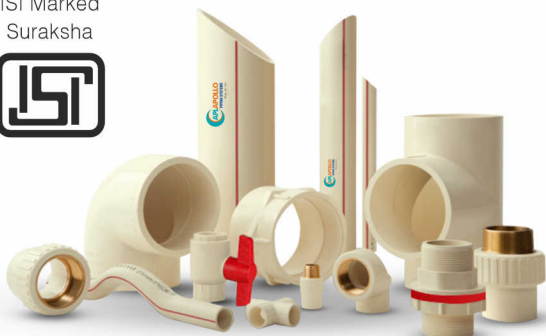
Standard Compliance

APL Apollo CPVC Pipes & Fittings are manufactured as per the following standards:

ASTM D-1784	Standard specification for Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) compounds
ASTM D-2846 IS-15778	Specification for Chlorinated Polyvinyl Chloride (CPVC) plastic pipes For hot and cold water distribution system
ASTM F-439	Standard specification for socket-type-chlorinated Polyvinyl Chloride plastic pipes & fittings (SCH-80)
ASTM F-441	Standard specification for Chlorinated Polyvinyl Chloride (CPVC) plastic pipes (SCH-40 & 80)
ASTM F-438	Standard specification for socket-type-chlorinated Polyvinyl Chloride plastic fittings (SCH-40)

APL Apollo CPVC Plumbing System are better than other Pipes

ISI Marked
Suraksha



Performance Characteristics	APL Apollo CPVC	COPPER	GI
Corrosion	No effect due to superb chemical resistance	Corrodes over a period of time	Corrodes quickly and deteriorates
Scaling, Pitting and Leaching	Absence of scaling, pitting and leaching leads to full bore flow	Scaling, pitting and leaching leads to reduced bore flow	Severe scaling, pitting and leaching leads to reduced bore flow
Thermal Conductivity & Insulation Levels	Lower thermal conductivity reduces heat loss and requires reduced insulation levels	Extremely high thermal conductivity increases heat loss & requires higher insulation	Extremely high thermal conductivity increases heat loss & requires higher insulation
Bacterial Growth	Extremely low	More than that in CPVC	More than that in Copper
Fire Resistance	LOI is 60% hence does not catch fire or sustain burning	Being metallic, exhibits better resistance to fire	Being metallic, exhibits better resistance to fire
Installation	Easy through cold welding; requires less man hours. No electric/heat source required	Requires highly skilled manpower and electric/heat source	Extremely slow; requires more man hours
Leakage	Leak-free installation for life	Leak-free, provided carried out by highly trained manpower	Always susceptible to leakage from initial day of installation
Thermal Expansion	Lower; leads to lesser pipe expansion, lesser looping and offsets	Although thermal expansion is lower, the stress induced is far greater	Although thermal expansion is lower, the stress induced is far greater
Special Tools	Simple cutter or Hex-Saw Blade and CPVC solvent cement are adequate for 100% leak-proof joints and satisfactory plumbing	Requires special tools like metal cutting flame torch, solder, flux, etc. to carry out desired plumbing procedures	Requires heavy tools for pipe cutting, threading and fitting to carry out the desired plumbing
Range of Fittings	Wide range	Limited range, needs frequent cutting and welding	Limited range

Technical Specifications

Dimensional details & pressure ratings of SDR-13.5 (Class-2) CPVC Pipes as per IS-15778 & ASTM D-2846

Nominal Size		Mean Outside Diameter (mm)		Wall Thickness (mm)		Pressure at 27 °C		Pressure at 82 °C	
(In)	(mm)	Average	Tolerance	(mm)	Tolerance	(kg/cm ²)	(MPA)	(kg/cm ²)	(MPA)
1/2	15	15.9	±0.1	1.65	±0.25	21.8	2.18	5.5	0.55
3/4	20	22.2	±0.1	1.95	±0.25	21.8	2.18	5.5	0.55
1	25	28.6	±0.1	2.36	±0.25	21.8	2.18	5.5	0.55
1(1/4)	32	34.9	±0.1	2.85	±0.25	21.8	2.18	5.5	0.55
1(1/2)	40	41.3	±0.1	3.85	±0.25	21.8	2.18	5.5	0.55
2	50	54.3	±0.1	4.25	±0.25	21.8	2.18	5.5	0.55

Dimensional details & pressure ratings of SDR-11 (Class-1) CPVC Pipes as per IS-15778 & ASTM D-2846

Nominal Size		Mean Outside Diameter (mm)		Wall Thickness (mm)		Pressure at 27 °C		Pressure at 82 °C	
(In)	(mm)	Average	Tolerance	(mm)	Tolerance	(kg/cm ²)	(MPA)	(kg/cm ²)	(MPA)
1/2	15	15.9	±0.1	1.95	±0.25	27.6	2.76	6.8	0.68
3/4	20	22.2	±0.1	2.25	±0.25	27.6	2.76	6.8	0.68
1	25	28.6	±0.1	2.85	±0.25	27.6	2.76	6.8	0.68
1(1/4)	32	34.9	±0.1	3.45	±0.25	27.6	2.76	6.8	0.68
1(1/2)	40	41.3	±0.1	4.05	±0.25	27.6	2.76	6.8	0.68
2	50	54.3	±0.1	5.20	±0.25	27.6	2.76	6.8	0.68



Product Range

CPVC Pipes in SDR 11 & 13.5

PIPE SDR-11
(3mtr./5mtr.) 1/2" to 2"



PIPE SDR-13.5
(3mtr./5mtr.) 1/2" to 2"



CPVC Pipes in SCH 40 & SCH 80

PIPE SCH-40
(3mtr./5mtr.) 2 1/2" to 4"



PIPE SCH-80
(3mtr./5mtr.) 2 1/2" to 4"



CPVC Fittings in SDR 11 as per ASTM D-2846 & SCH 40 as per ASTM F-438

COUPLER
1/2" to 4"



REDUCING COUPLER
3/4"x1/2" to 2"x1 1/4"



ELBOW 90°
1/2" to 4"



ELBOW 45°
1/2" to 4"



TEE
1/2" to 4"



REDUCING ELBOW
3/4"x1/2" to 1"x3/4"



REDUCING TEE
3/4"x1/2" to 2" x1 1/2"



UNION
1/2" to 4"



CROSS TEE

3/4" x 1 1/4"



TRANSITION BUSH

1/2"x1/2" to 1 1/2"x1 1/2"



STEP OVER BEND

3/4" to 1 1/4"



BALL VALVE

1/2" to 4"



**TANK CONNECTOR
PIPE FITMENT**

3/4" to 1"



TANK CONNECTOR

1/2" to 2"



END CAP

1/2" to 4"



REDUCING BUSH

3/4"x1/2" to 4"x3"



END PLUG THREADED

1/2" to 3/4"



**MALE ADAPTOR PLASTIC
THREADED**

1/2" to 4"



**FEMALE ADAPTOR
PLASTIC THREADED**

1/2" to 4"



**RED. MALE ADAPTOR
PLASTIC THREADED**



**MALE ADAPTOR
BRASS THREADED**

1/2" to 2"



**RED. FEMALE ADAPTOR
PLASTIC THREADED**



**RED. MALE ADAPTOR
BRASS THREADED**
¾"x½" to 1"x¾"



**FEMALE ELBOW
BRASS THREADED**
½" to 1¼"



**FEMALE ADAPTOR
BRASS THREADED**
½" to 2"



**RED. FEMALE ELBOW
BRASS THREADED**
¾"x½" to 1"x¾"



**RED. FEMALE ADAPTOR
BRASS THREADED**
¾"x½" to 1"x½"



**FEMALE TEE
BRASS THREADED**
½" to 1¼"



**RED. FEMALE TEE
BRASS THREADED**
¾"x½" to 1"x½"



**MALE ADAPTOR WITH
HEXAGANOL BRASS INSERT**
1"x1" to 4"



**FEMALE ADAPTOR WITH
HEXAGANOL BRASS INSERT**
1"x1" to 4"



MIXER ADAPTOR
¾" to 1"



**CONCEALED VALVE
SWEPT**
¾"x½" to 1"x½"



**NRV (NON RETURNABLE
VALVE)**
¾" to 1½"



INSTALLATION GUIDE



MEASURING

In order to make a proper and neat joint, we should measure the pipe length accurately and make a visible marking using a pen. Ensure that the Pipe and Fittings are compatible.



CUTTING

We can cut the Pipe easily with a sharp saw/cutter. Cutting the Pipe as squarely as possible (at 90°) provides optimal bonding area within a joint. Inspect Pipe ends thoroughly prior to make a joint. If a crack or splintering is noticed cut off a minimum of 25 mm beyond the visible crack before proceeding



DEBURRING/BEVELING

Burrs in and on end can obstruct flow or 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 slight bevel end of the Pipe will ease entry of the Pipe into the socket of the Fitting socket.



FITTING PREPERATION

Use a clean dry cloth, wipe the dirt and moisture from the Fittings, sockets and Pipe. Dry fit the Pipe to ensure total entry into the bottom of the Fittings socket and make a visible marking using a dark pen.



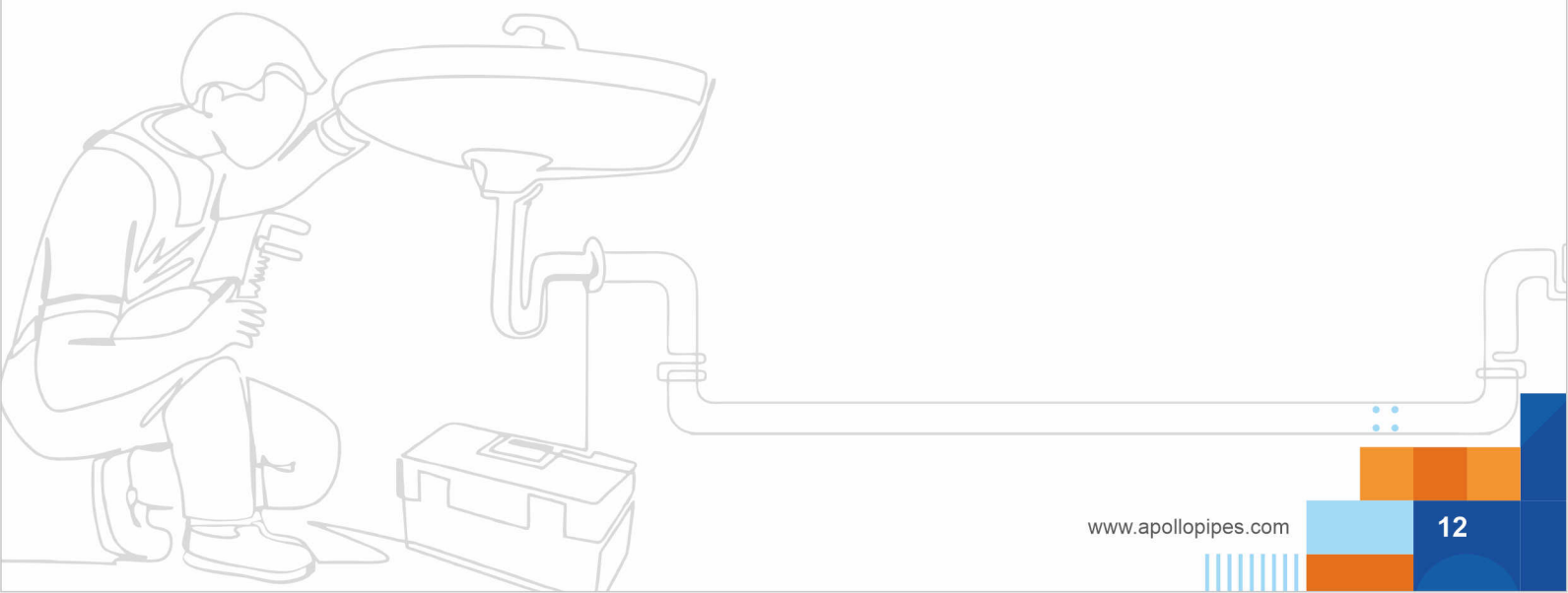
SOLVENT CEMENT APPLICATION

Use only APL Apollo CPVC Solvent Cement to ensure a perfect solvent weld joint. When making a joint, apply an even coat of cement on the Pipe end & also inside the Fitting socket. Do not use thickened or lumpy solvent cement; it should have a flow consistency like syrup.



ASSEMBLY

Immediately after applying the solvent, insert the Pipe into the socket. Rotate the Pipe 1/2 or 1/4 while inserting. This motion ensures an even distribution of cement within the joint. Properly align the Fittings and leave it for 10-20 seconds to allow the joint set-up.



DO'S AND DON'TS

Do's

1. Most importantly, use Pipes & Fittings from the same manufacturer (Read the manufacturer's installation instructions)
2. Install according to APL Apollo instructions and follow recommended safe work practices
3. Use tools designed for use with plastic Pipes & Fittings
4. Take correct precautions while installing Pipes & Fittings
5. Make certain that thread sealants, gasket lubricants, or fire stop materials are compatible with CPVC
6. Keep Pipes & Fittings in original packaging until needed
7. Cover Pipes & Fittings with an opaque tarp if stored outdoors
8. Follow proper handling procedures
9. Use tools specifically designed for use with plastic Pipes & Fittings
10. Use the proper solvent cement and follow application instructions
11. Use a drop cloth to protect interior finishes
12. Follow the manufacturer's recommended cure times prior to pressure testing
13. Flush the entire system including drops to remove Pipe shavings, dirt and debris left from installation
14. Fill lines slowly and bleed the air from the system prior to pressure testing
15. Keep threaded rod within 1/16" of the Pipe or use a surge arrestor
16. Provide the expansion loops on hot water Pipe
17. Avoid stress on the joints by using proper Pipes & Fittings
18. Use only glycerin and water solutions for freeze protection
19. Allow for movement due to expansion and contraction

Don'ts

1. Do not use edible oils such as Crisco as a gasket lubricant
2. Do not use petroleum or solvent-based sealants, lubricants, or fire stop materials
3. Do not install tape, insulated wire or cable in direct contact with CPVC
4. Do not use any glycol-based solutions as an anti-freeze
5. Do not mix glycerin and water solutions in contaminated containers
6. Do not allow solvent cement to plug the sprinkler head orifice
7. Do not connect rigid metal couplers to CPVC grooved adapters
8. Do not thread, groove, or drill CPVC Pipes
9. Do not use solvent cement near sources of heat, open flame, or when smoking
10. Do not use ratchet cutters below 50°F
11. Do not allow threaded rod to come in contact with the Pipe

QUALITY & TESTING

APL Apollo assured the quality of CPVC pipes & fittings is crucial for their durability, longevity, and reliability. To ensure quality, APL Apollo employ a robust testing process that covers all stages of production, from raw material sourcing to final product inspection.



RAW MATERIALS

- Cell Classification Test
- Tensile Strength
- Modulus of Elasticity in Tension
- Izod Impact Strength
- Heat Deflection Temperature Under Load
- Density
- Color



FITTINGS

- Visual Appearance
- Dimensions
- Heat Distortion Test
- Thermocycling Test
- Torque Test
- Burst Pressure Test



PIPES

- Visual Appearance
- Dimensions and Ovality
- Tensile Strength Test
- Hydrostatic Pressure Test - Short Term & Long Term
- Drop Impact Test
- Heat Reversion Test
- Opacity Test
- UV Stability Test
- Vicat Softening Temperature Test
- Maximum Burst Pressure Test



COMPLETE SYSTEM TEST: ASSEMBLY OF PIPES & FITTINGS WITH SOLVENT CEMENT

- Quick pressure test at 23°C @36kg/cm² for 10 minutes.
- Malfunction test at 95°C @ 10kg/cm² for 1000 Hrs.
- Hydrostatic sustained pressure test at 82°C @ 28kg/cm² for 4 hours
- Effect on water
- Flattening Test



FEATURES & BENEFITS



Proven hot water performance from 0°C to 93°C.



Manufactured with environment-friendly virgin CPVC compounds.



Safe for drinking water.



Self-extinguishing. Does not support combustion.



UV resistance ensures that pressure and temperature bearing capability remains unaffected even after long term exposure to sun rays.



High impact resistance ensures high quality performance at lower temperature.



Fast and easy installation. Saves labour.



Lower thermal conductivity.



Lowest bacterial growth compared to other piping material.



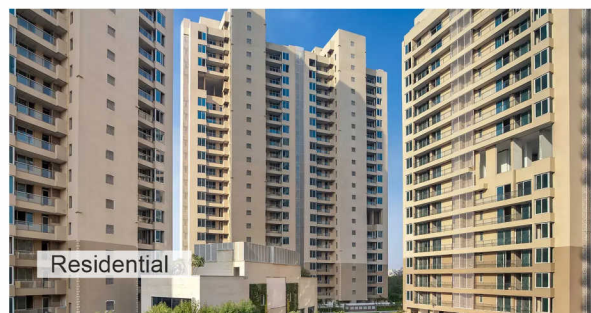
Long life.

APPLICATIONS

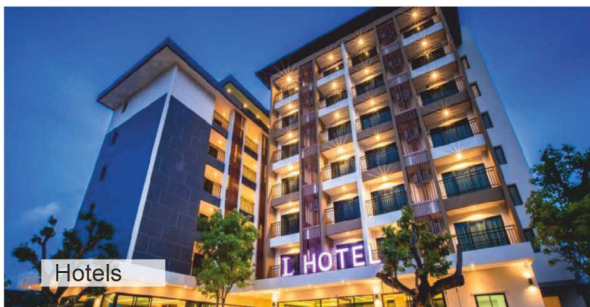
- Indoor and outdoor use for hot & cold water application from (0°C to 93°C only).
- Residential & commercial buildings.
- Public utilities, swimming pools & industrial applications.
- RO and DM water plants.



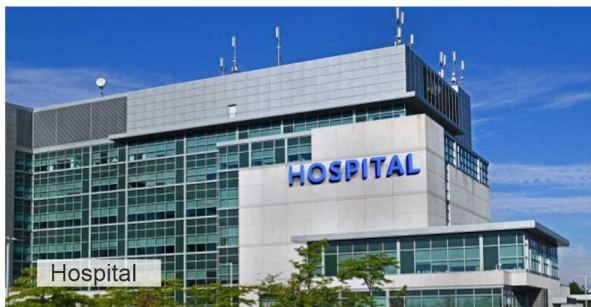
Malls



Residential



Hotels







Hospital



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