NPOLY
PIPE & FITTINGS

uPVC PIPES

Make a right decision

BUET Test REPORT

TEST REPORT OF uPVC PIPE

TEST RESULTS

TEST REPORT OF LAY FLAT FITA / HOSE PIPE

TEST RESULTS

CERTIFICATE

REGISTRATION CERTIFICATE

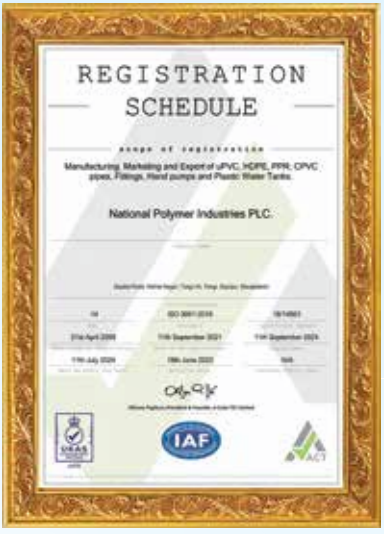
National Polymer Industries PLC.

ISO 45001:2018

19/0038 23rd June 2019

17th September 2024 22nd June 2022

Alfonso Pagliara, President & Founder, A Cube TIC Limited



REGISTRATION SCHEDULE

scope of registration

Manufacturing, Marketing and Export of uPVC, HDPE, PPR, CPVC pipes, Fittings, Hand pumps and Plastic Water Tanks.

National Polymer Industries PLC.

19	ISO 9001:2015	19/14063
21st April 2019	11th September 2021	11th September 2024
11th July 2024	19th June 2022	N/A

Alfonso Pagliara, President & Founder, A Cube TIC Limited

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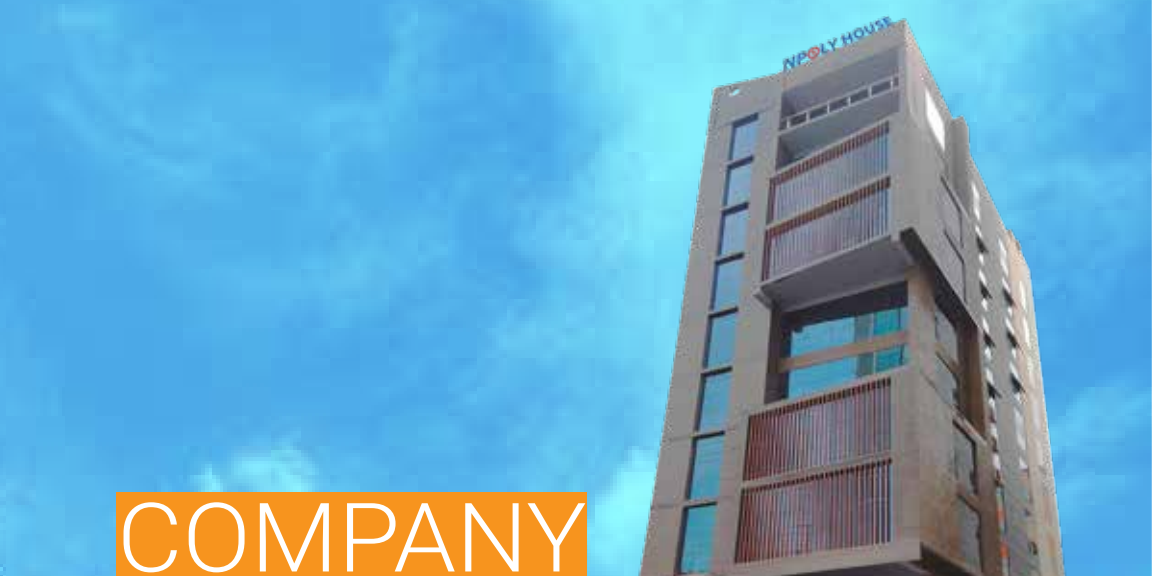
We believe in corporate governance to direct and control the company in the interest of shareholders and other stakeholders with the aim of sustaining and enhancing the value of the company. With this in mind we propel our corporate creed ahead:

MISSION

The corporate mission is to be a pre-eminent supplier of uPVC pipes & fittings to its customers through product leadership, excellent value and superior quality and service.

OBJECTIVES

To promote quality products with the objective of setting benchmarks for industry practice. To promote and assist in the development of standards, specifications and practices that help ensure the proper use of plastic pipes. To enhance the knowledge and awareness of contemporary plastic pipeline technologies amongst specifies, users and installers.



COMPANY OVERVIEW

National Polymer is one of the premier conglomerates in Bangladesh. It was founded in 1987 at Squibb Road, Tongi I/A, Tongi Gazipur with a view to provide piping solutions, building materials solutions and household solutions to its valued customers. Its plant area covers about 15 acres of land while its Corporate Headquarter is situated at NPOLY HOUSE: GA-99/3, Pragati Shoroni, Middle Badda, Dhaka-1212, Bangladesh. It conducts business countrywide, driven by the passion to be the best with a team of unique professionals.

National Polymer believes in delivering operational excellence to meet commitments. For the progression of its mission, it has diversified products and growing to be one of the largest industrial conglomerates of the country. With diversification and Research and Development of products it has earned reputation among Bangladeshi people and also abroad as a manufacturer of premium quality products and services.

The Company maintains high standards of quality and is able to guarantee highly professional service to meet up the customers' demand. The Company's product quality has attained a level which paved the way for the Company to receive internationally acknowledged quality management system certification ISO 9001:2015 & 14001:2015, 45001:2018.

uPVC PIPES

National Polymer is the large manufacturer of uPVC pipes (Unplasticised Polyvinyl Chloride) in Bangladesh, and it has continued to progress, successfully developing many export markets. Our comprehensive range of quality uPVC Pipes and Fittings are manufactured in accordance with the requirements of British Standard BSEN 3505, ISO 4422 & 4065 and Singapore Standard SS213.

The internal surface of NPOLY uPVC pipes and fittings is "extremely smooth" equivalent to a Manning and Kutter coefficient of 0.010, giving excellent flow properties which remain constant due to reduced build-up of scale.

Other specifications are also available that confirm to the industry or ISO, ASTM, SS specifications and specialist requirements. All quality control testing for conformity with the various production standards is carried out by the NPOLY in house laboratory.

Applications of uPVC Pipes

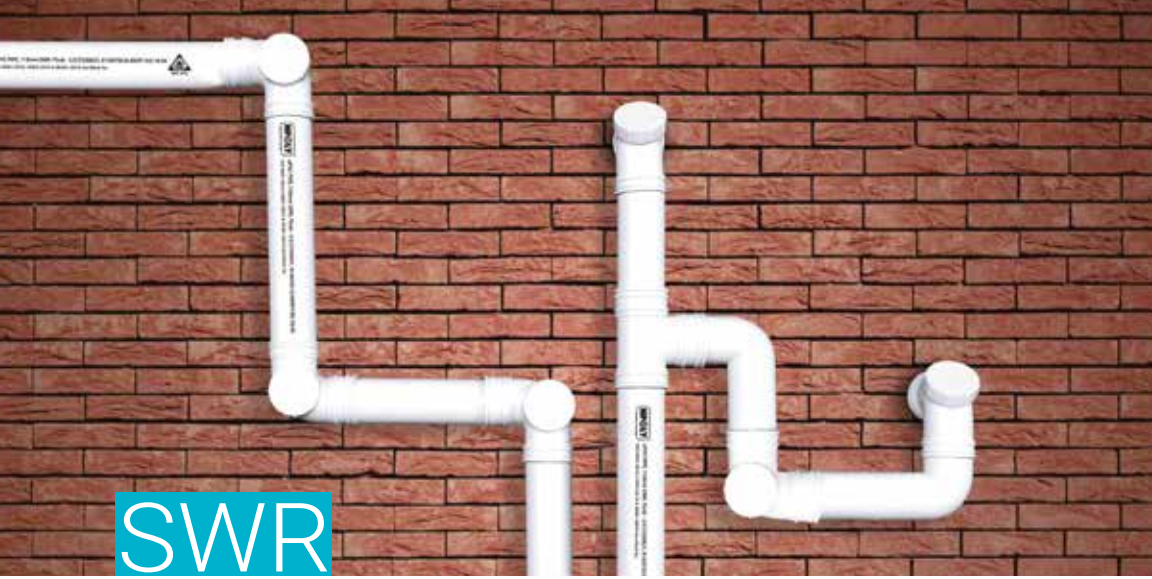
- Water supply systems, including drinking water, irrigation and industrial applications
- Drain-waste-vent (DWV) systems, roof drainage systems and underground drainage systems.
- ventilation systems, including air conditioning and heating systems
- Irrigation and water distribution systems
- Chemical processing applications due to chemical resistance
- Transporting chemicals, acids, and other corrosive substances

Traditional materials such as steel, cast iron and asbestos suffer from problems of corrosion, health hazards, cost,transportation, breakage and a short as well as uncertain life span. NPOLY uPVC pipes involve none of these problems. Some comparisons are listed in the table given below:

Properties	uPVC	Galvanized Iron (GI)	Cast Iron (CI)	Asbestos
Weight	Light weight	Very heavy Weight	Very heavy Weight	Heavy weight
Internal surface	Very smooth	Not smooth	Rough	Not smooth
Durability	50 years	10 years	20 years	No guarantee
Costing	Impartially cheap	Expensive	Expensive	Costlier than PVC
Installation	Very easy	Very Complicated	Very Complicated	Complicated
Water Flow	Satisfactory flow of water	Satisfactory flow reduces after 5 years	Satisfactory flow reduces after 10 years	Not satisfactory
Maintenance	Easy to clean and inspect	Difficult to clean and inspect	Difficult to clean and inspect	Difficult to clean
Effect On Rust	No rust at all	Get rusted	Get rusted	No rust
Health concern	No health hazard	Health hazard	Health hazard	Health hazard

Pressure Pipe	
Available Size	Class
1.25", 1.5"	D
2"	C,D,E
3" , 5", 6"	B, C, D, E
8", 10" , 12", 14", 16"	B, C, D, E
20", 24"	B,C

Non Class /Non Pressure Pipe	
Size	Grade
1.5", 6", 8"	O class
1.5", 2", 3"	Eco special
3", 4", 5"	STD
5"	Diamond



SWR PIPES

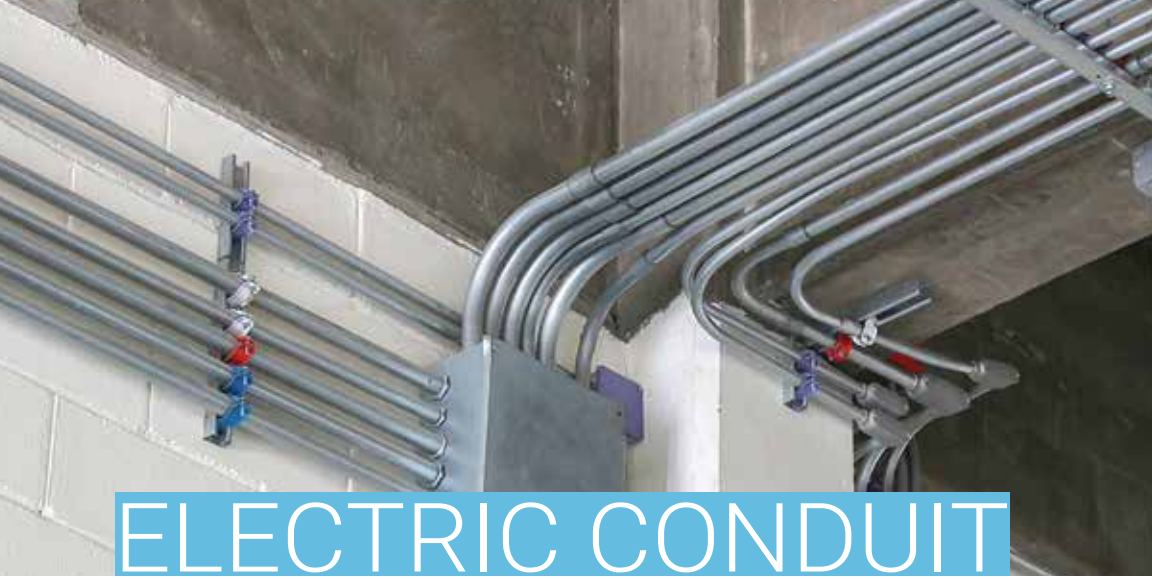
SWR (Soil, Waste, and Rainwater) uPVC (Unplasticized Polyvinyl Chloride) pipes are widely used in plumbing systems due to their high durability, chemical resistance, and low maintenance requirements. The uPVC material used in SWR pipes has a high tensile strength, making it resistant to external pressures and impact loads. The pipes are also designed with a high coefficient of thermal expansion, allowing for thermal expansion and contraction without damage to the system.

Applications of SWR Pipes

- Sewage disposal and distribution in building construction
- Drainage of wastewater, rainwater, and sewage in residential, commercial, and industrial buildings.
- Chemical plants, food processing plants, and pharmaceutical manufacturing facilities.
- Ventilation pipes in the drainage system to prevent the buildup of harmful gasses.

SWR PIPES

Available Size	Thickness	Colour
32 mm	1.6	Gr/WT
40 mm	2	Gr/WT
50 mm	2.4	Gr/WT
80 mm(swr)	3.0/3.60	Gr/WT
80 mm (Diamond)	2.2	wt
110 mm Economy	1.6	Gr/WT
110 mm Diamond	2.7	Gr/WT
110 mm SPL	2	Gr/WT
110 mm SWR	2.7/3.00/3.4/4.2	Gr/WT
160 mm SWR	4.0/4.5/6.2/	Gr/WT
160 mm Diamond	2.7	Gr/WT
200 mm SWR	3.9/4.9/6.2/7.7	Gr/WT
250 mm SWR	6.2	Gr
315 mm SWR	7.7	Gr
630 mm (24") PN	6.3	Gr
630 mm (24") PN	8	Gr



ELECTRIC CONDUIT
PIPES & FITTINGS

Electric conduit pipes are a type of raceway system that is used to protect and route electrical wiring in buildings. They are typically made of metal or plastic and can be rigid or flexible. Conduit pipes are designed to comply with electrical codes and standards and can provide protection against physical damage, moisture, and electromagnetic interference. They are often installed in conduit systems that include fittings, junction boxes, and other components to facilitate the safe and efficient routing of electrical cables.

Applications of Electric Conduit Pipes

- Building wiring for residential, commercial, and industrial applications
- Protect outside electrical cables and wiring
- Protect data communication wiring, such as fiber optic cables
- Protect from exposure to corrosive chemicals, extreme temperatures or other hazardous conditions.
- Bridge and tunnel construction to protect the electrical wiring and cables

ELECTRIC CONDUIT PIPES

Available Size	Thickness	Colour
1/2" (E/C)	1.3	Gr/wt
3/4"(E/C)	1.4	Gr/wt
1"(E/C)	1.5	Gr/wt
1/2" Water Grade pipe (class E)	1.7	Gr/wt
3/4" Water Grade pipe (class E)	1.9	Gr/wt
1" Water Grade pipe (class E)	2.2	Gr/wt

ELECTRIC CONDUIT FITTINGS

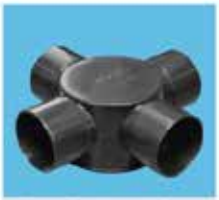

Plain Tee


Plain Tee Long


Circuler Box Long


Circuler Box Short


Circuler Box Long

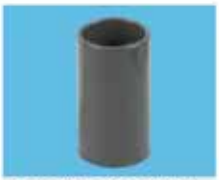

Circuler Box Short


Pressure Saddle Clamp


Electric Conduit Elbow


Electric Conduit Bend (GR)


Electric Conduit Bend (WT)


Electric Conduit Socket (GR)


Electric Conduit Socket (WT)

THREAD PIPES

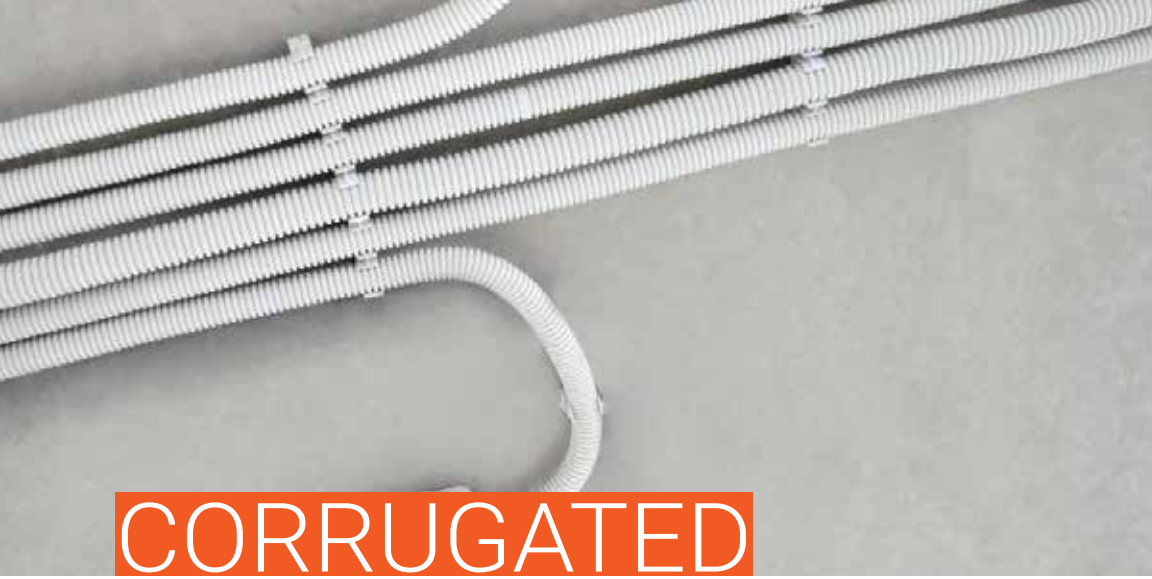
Thread pipe is a type of thermoplastic pipe that is highly resistant to corrosion, abrasion, and chemical damage. The threaded surface of thread pipes enables quick and easy installation, making them a popular choice for time-sensitive projects. These pipes are lightweight yet durable, with high tensile strength and impact resistance. thread pipes are designed to withstand high pressure and extreme temperature fluctuations, ensuring the longevity and reliability of the system they are used in.

Applications of Thread Pipes & Fittings

- Plumbing systems to convey fluids such as water, gas, and sewage
- Heating, ventilation, and air conditioning (HVAC) systems
- Manufacturing process of various products, such as chemicals, pharmaceuticals, and food
- Irrigation systems to transport water to crops and other plants
- Fire protection systems to transport water and other fire suppressants to different areas of buildings

THREAD PIPES

Available Size	Thickness	Colour
1/2"	3.3	Gray/ Green/ WT
3/4"	3.4	Gray/ Green/ WT
1"	4	Gray/ Green/ WT
1.25"	4.2	Gray/ Green/ WT
1.5"	4.3	Gray/ Green/ WT
2"	4.5	Gray/ Green/ WT



CORRUGATED PIPES

Corrugated pipes are thermoplastic pipes with a high molecular weight and a high degree of crystallinity, making them highly resistant to chemical and mechanical stresses. The corrugated structure of the pipe provides increased stiffness and flexibility, allowing it to withstand a wide range of loads and deformations. corrugated pipes are lightweight and easy to handle, making them ideal. Their smooth inner surface reduces friction losses and prevents clogging, ensuring efficient fluid flow.

Available Size	RFT (Length)	Colour
.37", .50", .75" , 1" , 1.25" , 1.50" , 2.00"	100 ft	Gray

Applications of Corrugated Pipes

- Protection of electrical wires and cables
- Cable management
- Underground wiring
- Industrial wiring
- Residential wiring

GARDEN HOSE PIPES

A garden hose pipe can be described as a flexible conduit used for conveying water from a source to a target location. Its cylindrical shape and material properties, such as elasticity and durability, make it ideal for the intended purpose. The hose's cross-sectional area and length determine its hydraulic resistance and flow rate, respectively, based on the fluid dynamics principles. Additionally, the hose's end fittings, such as couplings and nozzles, enable easy attachment and detachment from the water source and facilitate flow control.

Applications of Garden Hose Pipes

- Watering plants, flowers, and vegetables in a garden or yard.
- Fill swimming pools and hot tubs quickly.
- Clean gutters and downspouts by flushing out debris.
- Power water toys, such as slip n' slides, sprinklers, and water guns.
- In emergencies, garden hoses can be used to extinguish small fires.

GARDEN HOSE PIPES

Available	Size	Length Colour
3/4"	100 RFT	Orange
1"	300 RFT	Transfarent
1.25"	500 RFT	Orange

SUCTION HOSE PIPES

A suction hose pipe is a flexible conduit that is designed to transport fluids by creating a vacuum at one end of the pipe, thereby drawing the fluid through the pipe via suction. The hose pipe is typically made of high-quality synthetic rubber, PVC, or other materials that have high chemical and abrasion resistance.

Applications of Suction Hose pipes

- Water transfer
- Transfer chemicals, such as acids or solvents, from one location to another
- Use in the oil and gas industry to transfer crude oil, refined petroleum products, and natural gas.
- Use in agriculture to transfer water, fertilizer, and other agricultural chemicals.
- Use in fish farming to transfer water, oxygen, and fish feed to the fish tanks.

SUCTION HOSE PIPES

Available Size	RFT (Length)	Colour
1", 1.25" , 1.5" , 2", 2.50", 3" , 4", 5", 6", 8"	100 RFT	Green & White

CABLE CASING PIPES

Cable casing is a protective covering used to house and protect electrical cables from external elements. It is typically made of a durable material such as PVC or metal and is designed to provide a secure and reliable environment for the cable.

In engineering terms, the primary function of a cable casing is to provide mechanical protection to the cable. This includes protection against physical damage from external objects, as well as protection against abrasion and wear caused by friction from surrounding surfaces. Additionally, cable casing can provide protection against moisture, dust, and other environmental hazards that can degrade the performance of the cable.

Applications of Cable Casing Pipes

- Electrical installations in buildings, factories, and other industrial settings.
- Use in telecommunications to protect fiber optic cables, coaxial cables and other communication cables
- Transportation systems such as railways, airports, and highways to protect cables and wires used for signaling, communication
- Use in renewable energy systems such as wind turbines and solar power plants

CABLE CASING PIPES

Available Size	Length	Colour
1/2" (15 mm)	6 RFT	White
3/4" (19 mm)		White
1" (25 mm)		White
1.25 (32 mm)		White
1.5" (38 mm)		White
2" (50 mm)		White

BS PIPES

BS (British Standard) PVC (Polyvinyl Chloride) pipes are integral to engineering applications, adhering to stringent British standards for quality and performance. These pipes are crafted from durable PVC material, known for its excellent corrosion resistance and versatility in fluid transport systems.

With precise engineering and adherence to standards like BS EN 1452, PVC pipes offer reliable and efficient fluid conveyance, essential in various engineering systems. Their standardized dimensions and fittings compatibility simplify installation, making BS PVC pipes a preferred choice for industries requiring dependable and durable fluid handling solutions.

Applications of BS Pipes

- Widely used for potable water distribution due to their resistance to corrosion
- Suitable for carrying wastewater and sewage
- Utilized for agricultural irrigation systems, efficiently transporting water to fields for crop cultivation.
- Used in various industrial processes for chemical transport, air supply & more
- PVC pipes are employed in pool plumbing systems for water circulation and filtration

BS 3505: 1968

Nominal Size	Outer dia (mm)		Class B (6 bar)		Class C (9 bar)		Class D (12 bar)		Class E (15 bar)		Class 7 (22-40 bar)	
			Wall thickness (mm)									
Inch	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
0.50″	21.2	21.5	...	...	...	...	...	...	1.7	1.9	3.7	4.3
0.75″	26.6	26.9	...	...	...	...	...	...	1.9	2.1	3.9	4.5
1.00″	33.4	33.7	...	...	...	...	...	...	2.2	2.4	4.5	5.2
1.25″	42.1	42.4	...	...	...	...	2.2	2.4	2.7	3.0	4.8	5.5
1.50″	48.1	48.4	...	...	...	...	2.5	2.8	3.1	3.4	5.1	5.9
2.00″	60.2	60.5	...	...	2.5	2.8	3.1	3.4	3.9	4.3	5.5	6.3
3.00″	88.7	89.1	2.9	3.3	3.5	3.9	4.6	5.1	5.7	6.3	...	...
4.00″	114.1	114.5	3.4	3.8	4.5	5.0	6.0	6.6	7.3	8.0	...	...
5.00″	140.0	140.4	3.8	4.2	5.5	6.1	7.3	8.0	9.0	9.9	...	...
6.00″	168.0	168.5	4.5	5.0	6.6	7.3	8.8	9.7	10.8	11.9	...	...
8.00″	218.8	219.4	5.3	5.8	7.8	8.6	10.3	11.3	12.6	13.9	...	...
10.00″	272.6	273.4	6.6	7.3	9.7	10.7	12.8	14.1	15.7	17.3	...	...
12.00″	323.4	324.3	7.8	8.6	11.5	12.7	15.2	16.7	18.7	20.6	...	...
14.00″	355.0	356.0	8.5	9.4	12.6	13.9	16.7	18.4	20.5	22.6	...	...
16.00″	405.9	406.9	9.7	10.7	14.5	16.0	19.0	20.9	23.4	25.8	...	...
18.00″	456.7	457.7	11.0	12.1	16.3	17.9	21.4	23.6	...	...	...	...
20.00″	507.5	508.5	12.2	13.4	18.1	19.9	...	...	...	...	...	...
22.00″	558.3	559.3	13.4	14.8	19.9	21.9	...	...	...	...	...	...
24.00″	609.1	610.1	14.6	16.1	21.7	25.0	...	...	...	...	...	...

BS 3505 1986

Nominal Size	Mean outside diameter (mm)		Individual outside diameter (mm)		Wall Thickness (mm)								
					9 bar (class C)			12 bar (class D)			15 bar (class E)		
					Average value*	Individual value		Average value*	Individual value		Average value*	Individual value	
Inch	Min	Max	Min	Max	Max	Min	Max	Max	Min	Max	Max	Min	Max
.375″	17.0	17.3	17.0	17.3	...	...	...	...	...	...	1.9	1.5	1.9
0.50″	21.2	21.5	21.2	21.5	...	...	...	...	...	...	2.1	1.7	2.1
0.75″	26.6	26.9	26.6	26.9	...	...	...	...	...	...	2.5	1.9	2.5
1.00″	33.4	33.7	33.3	33.8	...	...	...	...	...	...	2.7	2.2	2.7
1.25″	42.1	42.4	42.0	42.5	...	...	...	2.7	2.2	2.7	3.2	2.7	3.2
1.50″	48.1	48.4	48.0	48.5	...	...	...	3.0	2.5	3.0	3.7	3.1	3.7
2.00″	60.2	60.5	60.0	60.7	3.0	2.5	3.0	3.7	3.1	3.7	4.5	3.9	4.5
3.00″	88.7	89.1	88.4	89.4	4.1	3.5	4.1	5.3	4.6	5.3	6.5	5.7	6.6
4.00″	114.1	114.5	113.7	114.9	5.2	4.5	5.2	6.8	6.0	6.9	8.3	7.3	8.4
5.00″	140.0	140.4	139.4	141.0	6.3	5.5	6.4	8.3	7.3	8.4	10.1	9.0	10.4
6.00″	168.0	168.5	167.4	169.1	7.5	6.6	7.6	9.9	8.8	10.2	12.1	10.8	12.5
8.00″	218.8	219.4	218.0	220.2	8.8	7.8	9.0	11.6	10.3	11.9	14.1	12.6	14.5
10.00″	272.6	273.4	271.6	274.4	10.9	9.7	11.2	14.3	12.8	14.8	17.5	15.7	18.1
12.00″	323.4	324.3	322.2	325.5	12.9	11.5	13.3	17.0	15.2	17.5	20.8	18.7	21.6
14.00″	355.0	356.0	353.7	357.3	14.1	12.6	14.5	18.6	16.7	19.2	22.8	20.5	23.6
16.00″	405.9	406.9	404.3	408.5	16.2	14.5	16.7	21.1	19.0	21.9	26.0	23.4	27.0
18.00″	456.7	457.7	454.9	459.5	18.2	16.3	18.8	23.8	21.4	24.6	...	...	...
20.00″	507.5	508.5	505.4	510.6	20.2	18.1	20.9	...		...	...	...	...
24.00″	609.1	610.1	606.5	612.7	24.1	21.7	25.0	...		...	...	...	...

TEFLON TAPE

Teflon tape is a polytetrafluoroethylene (PTFE) film tape commonly used in plumbing for sealing pipe threads. The tape is sold cut to specific widths and wound on a spool, making it easy to wind around pipe threads. Thread seal tape lubricates allowing for a deeper seating of the threads, and it helps prevent the threads from seizing when being unscrewed.

Applications of Teflon Tape

- Used in plumbing applications to create a watertight seal on threaded pipe fittings
- Used in gas and fluid piping systems to create a reliable seal between threaded pipe connections
- used in heating, ventilation, and air conditioning (HVAC) systems

TEFLON TAPE

Colour	Size
Black	16 m
Blue	20 m

PVC SOLVENT CEMENT

Introducing our premium-grade PVC solvent cement, a reliable adhesive designed to ensure secure and leak-free connections between PVC pipes and fittings. Crafted with a precise blend of high-quality solvents and PVC resin, our solvent cement creates a strong and durable bond that withstands rigorous pressure and environmental conditions. Its easy-to-use application and quick-drying formula make installation hassle-free, saving both time and effort. Tested and trusted by professionals in the plumbing and construction industries, our PVC solvent cement guarantees long-lasting performance and exceptional reliability

Applications of PVC Solvent Cement

- leak-proof joints between PVC pipes and fittings
- Ttrusted choice for electrical conduit installations
- Our solvent cement is an essential component in HVAC (heating, ventilation, and air conditioning) systems

SOLVENT CEMENT SIZE

500 ml

200 ml

100 ml

NPOLY™
PIPE & FITTINGS

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