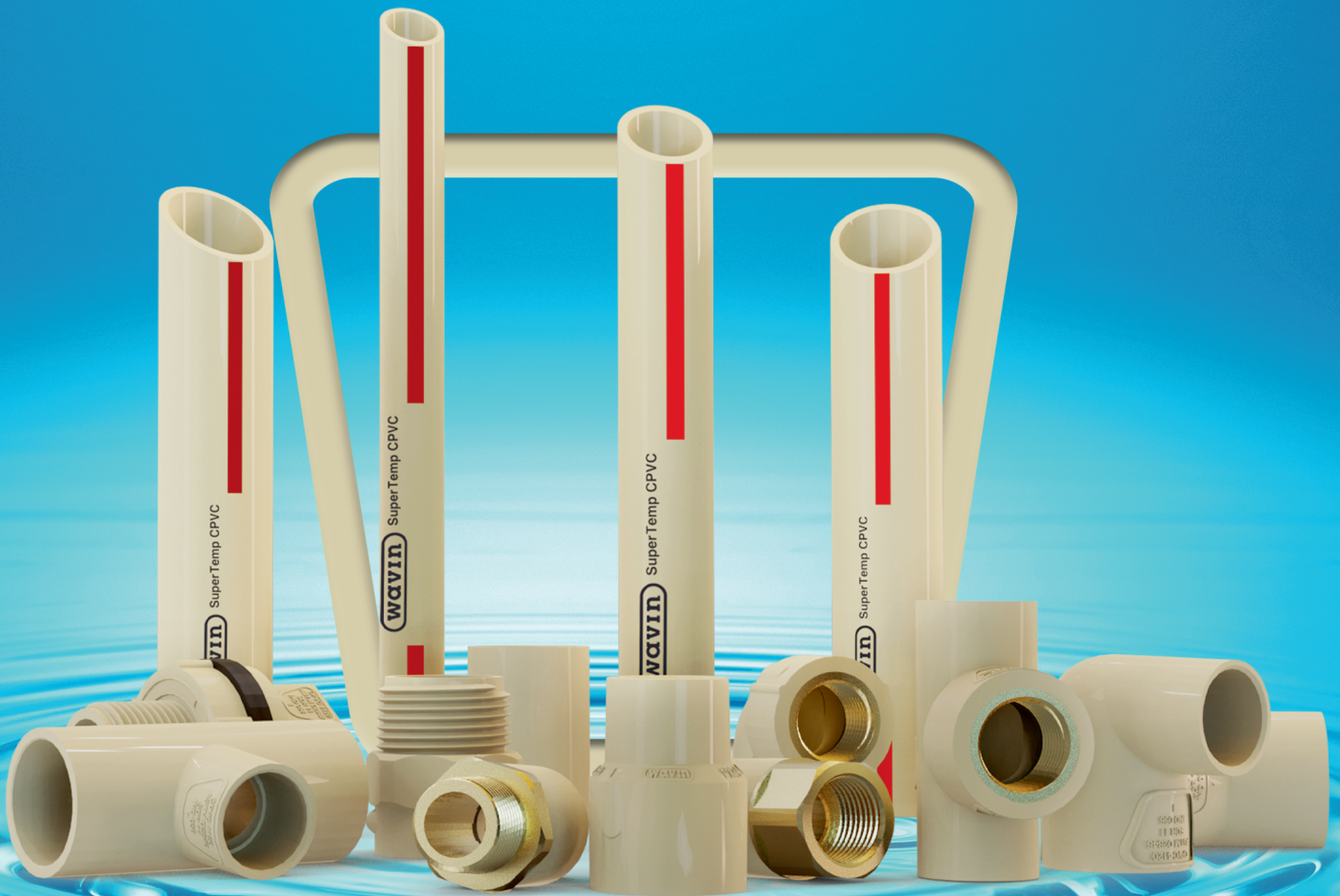


# WAVIN SuperTemp CPVC Product Guide

## New Age Advanced Formulated Plumbing System



# About Wavin

Wavin is an innovative solution provider for the building and infrastructure industry across multiple continents. Backed up by 60+ years of expertise, we are geared up to tackle some of the world's biggest challenges around: water supply, sanitation, climate-resilient cities and building performance.

At Wavin, we focus on creating a positive change in the world. Our passion is to build liveable and loveable places. We engage and collaborate with city leaders, engineers, planners and installers to help make cities future-proof, and their buildings comfortable and energy-efficient.

Wavin is part of Orbia, a community of companies bound together by a shared purpose: to advance life around the world. Wavin has 12,000+ employees in 40+ countries worldwide and operates under brands like Wavin Amanco and Pavco.

**For more information about Wavin, visit us @ [www.wavin.com](http://www.wavin.com)  
or for Wavin India, visit us @ [www.wavin.co.in](http://www.wavin.co.in)**

## Let's build long-lasting cities

Wavin is a leading global solutions provider for the building and infrastructure industry. With a presence spread across continents and a legacy of over six decades, Wavin is now in India as a fully committed supplier & solution provider for sustainable water supply and management systems, Made In India.

Wavin India is committed to providing the best solutions to India's urban population for safe and efficient water supply, and better sanitation and hygiene through a comprehensive product Portfolio made available through our pan-India network of distributors, agents and licensed partners.

### Wavin India, Neemrana Factory



### Wavin India, Hyderabad Factory



# Wavin SuperTemp CPVC Product Information

Wavin advanced SuperTemp CPVC Pipes and Fittings are designed to provide superior leakproof efficiency in a wide range of applications, including hot & cold water systems in residential, commercial, industrial and miscellaneous setups. Their robust design and flexibility make them suitable for all uptake and downpipes, including concealed pipe applications. With its RoHS compliant raw material, it is also suitable for potable water supply.

## Key Features & Highlights:



Self-extinguishing, does not spread flame



Free of external & internal corrosion or abrasion



Water hammer design efficiency



Lower thermal conductivity



Manufactured under the ASTM D2846 / ASTM F439 / ASTM F493 / IS 15778 Standard Manufacturing



Advanced CPVC resin formulation



Low waste on site due to its high impact resistance



NSF CERTIFIED: NSF / ANSI 14 NSF / ANSI / CAN 61 NSF / ANSI / CAN 372

## System Advantages

Wavin SuperTemp CPVC systems offer a wide range of advantages that make them suitable for different applications:



### Chlorine resistance:

Chlorine, which is a widely used chemical to guarantee a safe water supply, can damage pipes. Wavin SuperTemp CPVC offers superior chlorine resistance to supply safe potable water.



### Self-extinguishing:

The pipe material of Wavin SuperTemp CPVC is self-extinguishing, that is, it ceases to burn once the source of the flame has been removed, making it a safe choice.

## Standards and Portfolio Range

Wavin SuperTemp CPVC Pipes and Fittings meet all necessary quality standards to provide superior efficiency.

Wavin SuperTemp CPVC Pipes & Fittings	
Type of System	Standards
For Pipes	ASTM D2846, ASTM F441, NSF / ANSI / CAN 61, NSF / ANSI 14, NSF / ANSI / CAN 372, IS 15778
For Fittings	ASTM D2846, ASTM F439
For solvent weld	ASTM F493

Our portfolio goes from 1/2" up to 2" CTS size And from 2 1/2" up to 4" IPS.

## Technical Details

Dimensional detail of SDR-11 [class-1] and SDR-13.5 [class-2]

Wavin SuperTemp CPVC pipes conforming to IS:15778:2007, NSF / ANSI 14, NSF / ANSI / CAN 61-2022 & NSF / ANSI / CAN 372-2022

Wavin SuperTemp CPVC Pipes & Fittings					
Size	Outside Diameter(mm)		Tolerance	Min. Wall Thickness [mm]	
	mm (inch)	Min.		Max.	SDR-11
15 (½)	15.80	16.00	±0.08	1.70	1.40
20 (¾)	22.20	22.40	±0.08	2.00	1.70
25 (1)	28.40	28.80	±0.08	2.60	2.10
32 (1-¼)	34.70	35.10	±0.08	3.20	2.60
40 (1-½)	41.10	41.50	±0.10	3.80	3.10
50 (2)	54.30	54.70	±0.10	4.90	4.00

## Technical Information

### Hydraulic Design

Wavin SuperTemp CPVC pipe systems, as other materials, have to take into account different stress conditions in order to provide an adequate design and system performance. These stresses can be caused by hydrostatic pressure, water hammer, fill or dead loads and live loads.

### Internal Hydrostatic Pressure

To determine the maximum hydrostatic pressure to which Wavin SuperTemp CPVC pipes can be exposed, it is necessary to know what the design hydrostatic stress (S) is. S is defined as the estimated value of the maximum tensile stress in its cross direction, caused by the water pressure, and, which can be applied continuously on the tube walls with a high degree of reliability such that no failure will occur.

### Water Hammer Design

Wavin SuperTemp CPVC pipes are designed to handle water hammer phenomenon which can occur during the transportation of liquids. When valves are installed to control the water flow in the pipe network, it can cause pressure overload, which in turn can lead to burst pipes. With their advanced design, Wavin SuperTemp CPVC pipes can handle the pressure variation and ensure seamless flow of water even with frequent spikes in flow and pressure.

### Thermal Performance

Wavin SuperTemp CPVC pipes are designed to provide superior thermal performance in the range of 0-93 degree Celsius. However, in case the installation conditions are above or below this range, it can cause contraction or expansion in the pipe, affecting its mechanical properties.

To accommodate the thermal expansion, change in direction of flow and direction can be made in Wavin SuperTemp CPVC pipes.

### Linear Expansion

Owing to their mechanical properties, Wavin SuperTemp CPVC pipes are subject to linear expansion when exposed to changes in temperature, both in the liquid being transported as well as in the environment. Regardless of their diameter, Wavin SuperTemp CPVC pipes will expand about 7.5 cm per 30 metres for a temperature variation of 40° C. Thermal expansion can be accommodated during the installation itself by using expansion loops which allow for the pipe to expand without affecting its performance.

### Pipe Support Design Considerations

Proper pipe support is important to guarantee best performance for Wavin SuperTemp CPVC system installations. The distance between supports depends on the pipe size, temperature, wall thickness, etc. However, it must be kept in mind that pipe supports must not trap the pipe and limit longitudinal movements due to thermal expansions. Fixed points are only advisable on valves or fittings where strong direction changes occur. Except for joints, all fittings must be individually supported, and valves must be anchored to prevent torque on the line. The vertical sections must be guided with rings or brackets. A line of Wavin SuperTemp CPVC pipe should not be laid adjacent to a steam line or chimney.

Since Wavin SuperTemp CPVC pipes are free from condensation, they do not need insulation, but for environmental benefits, designer-recommend insulations may be used.

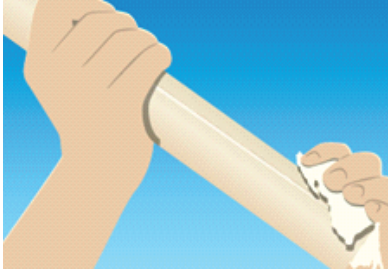


# Installation Instructions

## Cemented Joint

Wavin SuperTemp CPVC line has fittings that are attached to pipes using solvent cement, which is detailed as follows:

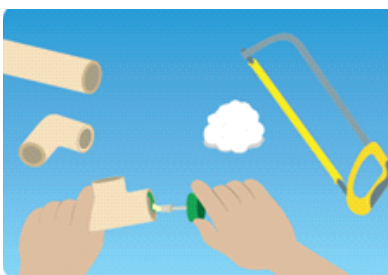
a) To perform an efficient jointing between pipes and fittings, clean the product thoroughly. Make sure that both ends, of the fittings and the pipes, are free of grease or dirt.



b) Cut the pipes squarely using recommended cutters or a hacksaw. Remove debris with the aid of a blade, making sure that the surface is smooth. The surface must not be sanded.

Note: Check the fit between the end of the pipe and the fitting before starting the execution of the weldable joint. There must be a proper insertion for leakproof connections, and this occurs when the end of the pipe occupies 1/3 to 2/3 of the total socket length of the fitting.

c) With the help of a brush, apply a thin and uniform layer of Wavin SuperTemp CPVC solvent cement in the fitting bell and the tip of the pipe. Apply the adhesive on both areas, preventing any excess to ensure perfect welding.



d) Push the pipe firmly into the fitting and provide a 1/4 turn. Press them for approximately 30 seconds. Remove excess cement with a clean cloth and let it dry.

## Handling Precautions

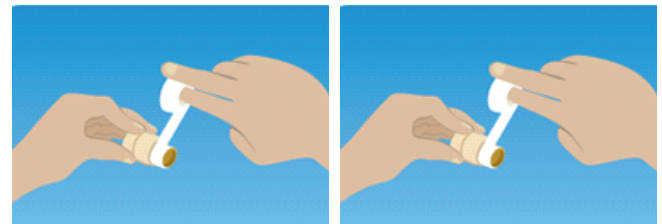
- Work in a ventilated place in absence of children and animals.
- Avoid contact with skin and eyes and, in case of an accident, follow the information presented on the packaging for remedy.

- For greater durability, we recommend closing the packaging after each use.
- Before using the product, make sure that it is valid within the expiry date, as indicated on the packaging.

## Threaded Joint

The use of the Wavin SuperTemp CPVC Line in water installations sometimes requires a transition between the Wavin SuperTemp CPVC and the metal parts, which is carried out by threaded joints. Installation of threaded joints may be carried out as follows:

- To ensure an effective threaded joint, clean the products and make sure both male and female threads are free of rust and debris.
- Check that the thread pattern of both parts to be joined is compatible.
- Apply the sealing tape clockwise over the thread to be joined.
- Execute the threaded joint, performing manual tightening to secure the connection.



**Note: Teflon Tape withstands temperatures between  $-90^{\circ}\text{C}$  and  $230^{\circ}\text{C}$  and can be used for hot and cold-water installations with PVC threads or metallic.**

## Outdoor Installation

Outdoor installations of Wavin SuperTemp CPVC pipes require special considerations. When the Wavin SuperTemp CPVC pipes are exposed to solar radiation, they must be covered or protected with a paint that meets the following characteristics:

- It should not contain solvent or be a thinner-based product. These substances are not compatible with Wavin SuperTemp CPVC.
- It must have a reflective component such as aluminum or similar substance.
- Adherence to Wavin SuperTemp CPVC must be ensured with direct application or through the application of a "primer".

Before painting the pipe, the surface must be prepared to ensure adherence; lightly dry, sand, clean and apply water base paint.

## Applications and Installation Examples

Single-family home | Multi-family home | Industry | Hotels | Apartments | Offices | Commercial

### Advantages

Better control over material needs on site | Waste reduction | Saves time! | Saves money

## Testing Guidance and Protocols

### Pressure Test

The pressure test can be applied considering a 50% increase over the operating pressure. The pressure test must not exceed the design pressure of the piping, fittings or anchors. Pressure must be controlled at the lowest point of the section, so that it does not exceed the design of the pipeline.

## Cleaning and Disinfection Before Entering Operation Protocols

- Inject water into the section of the pipe to be disinfected, keeping the outlet free.
- Let the water drain out to wash the pipe.
- Calculate the water volume required to fill the section of pipe to be disinfected and determine the amount of disinfectant to be injected to guarantee 50mg/l concentration of chlorine.
- Inject drinking water into the section to be disinfected, allowing it to come out of the outlet end for a few minutes.
- Inject the disinfectant, either with liquid chlorine or Sodium hypochlorite, with the concentration indicated in the following step (f). This can be diluted prior to water filling or injected separately.
- Let the solution sit for some minutes to guarantee the required concentration of 50mg / l.
- Leave it to rest for 24 hours, during which time the concentration of chlorine must be at least 25mg / l. If it is below this value, more disinfectant must be added.
- Take a water sample from the pipe being disinfected. When tested in a laboratory qualified for this purpose, it must be free of coliform microorganisms.
- Let another 24 hours pass and take another sample by the same assay.
- If the results are satisfactory, carry out the disinfection of the water and proceed to make the connection definitive.

## Guidelines for Handling and Storage Protocols

- Handling and storage of Wavin pipes and fittings must be carried out with care, avoiding damage to the material.
- During the loading and unloading of the pipes do not throw them to the floor or hit them.
- While shipping, pipes must be tied to protect them using non-metallic ties. Do not overload the pipes.
- Pipes can be shipped in open or closed trucks; however, they should always be placed on flat surfaces to avoid damage.
- To optimize shipping, pipes can be inserted into others, when their diameters allow it.
- The height of the pipe load must not exceed 2.50 meters. To achieve greater capacity and stability of the load, pipes should be placed alternating bells and spigot.
- When shipping over long distances and time, the pipe load must be protected. Space must be left between the container or truck top and the pipes to allow air circulation to avoid deformations caused by the weight of the pipes and the existing temperature.
- Pipes should be stored horizontally using a flat surface or blocks of wood that allow the support to be 9 cm wide and spaced a maximum of 1.50 m.
- For on-site storage, pipes must be separated by size and packed at a maximum of 1.50 m in height.
- When exposed to the sun, pipes must be protected with an opaque material, maintaining adequate ventilation.
- Solvent cement should not be exposed to extreme heat or cold. The site must be well ventilated since solvent cement is flammable (check product datasheet).

# wavin

# VECTUS

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