

**WORLD'S NO.1* CPVC
PLUMBING SYSTEMS**

FLOWGUARD PLUS[®]
CPVC PLUMBING SYSTEMS™



PRINCE PIPES AND FITTINGS LIMITED
Mfg. & Exporters of UPVC, CPVC, PPR & HDPE Pipes, Fittings, Valves & Water Tanks

Toll Free: 1800 267 7555
Please call between 10 am to 6 pm

www.princepipes.com

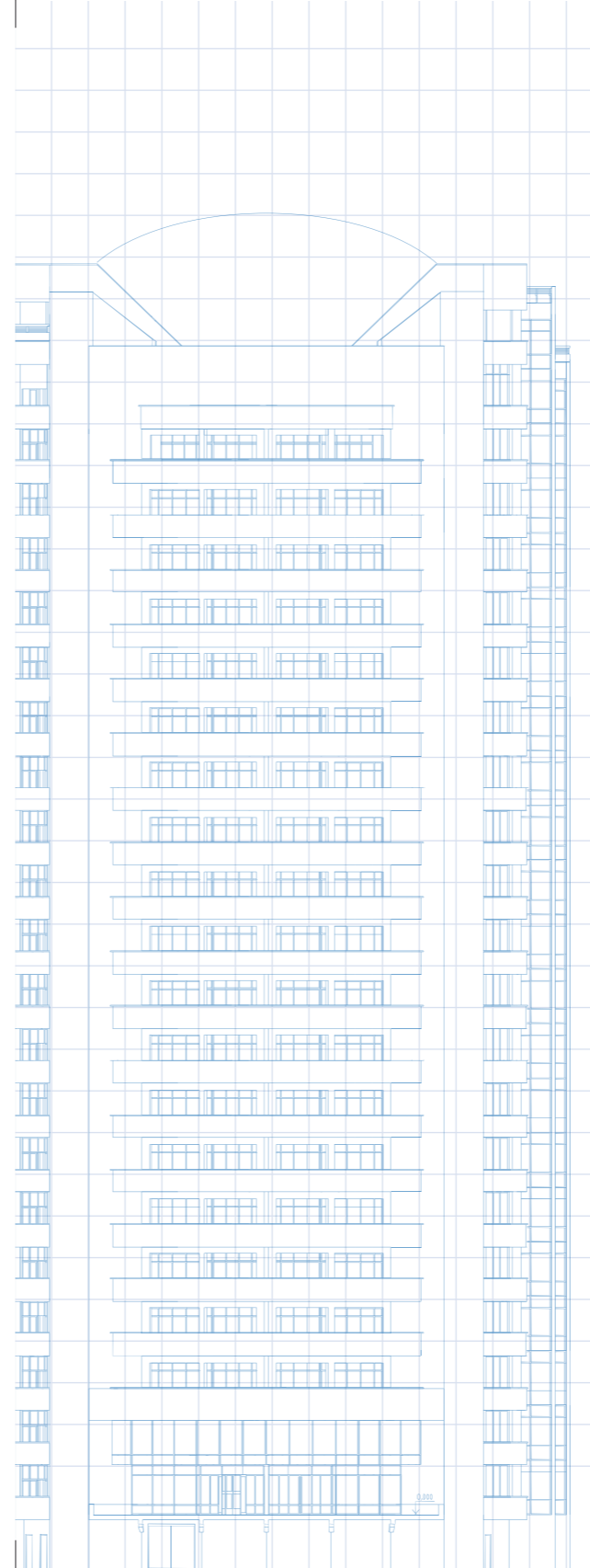
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Disclaimer: All information contained in this manual is given in good faith and believed to be accurate and reliable. No responsibility can be accepted for any error, omissions or incorrect assumptions. Any specification can change without prior notice. All the images are shown for representation purposes only.

PPF/FGP+Prince CPVC Booklet/Rev. No. 01/ January 2021
Printed in January 2021



*FlowGuard CPVC is No.1 based on the length of pipes installed.



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ABOUT PRINCE



STATE-OF-THE-ART MANUFACTURING UNITS



JAIPUR EST. 2019



KOLHAPUR EST. 2012



CHENNAI EST. 2012



HARIDWAR EST. 2008



DADRA EST. 2000

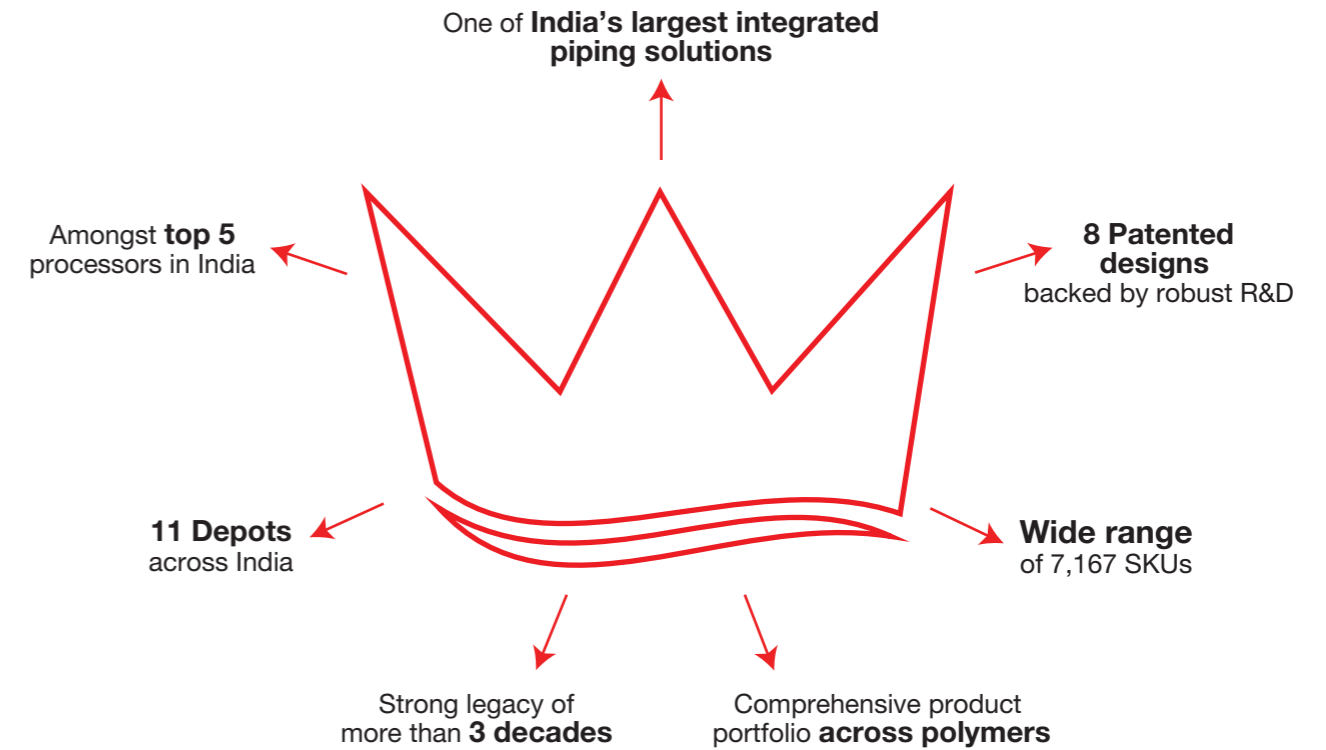


ATHAL EST. 1995



UPCOMING UNIT SANGAREDDY, TELANGANA

COMPANY OVERVIEW



RECENTLY VENTURED INTO STORAGE WATER TANKS AND PIPE DUCTING SOLUTIONS



TECHNICAL COLLABORATION



PRODUCT COLLABORATION



GLOBAL STANDARDS. WORLD-CLASS PRODUCTS.

INTEGRATED PIPING & STORAGE SOLUTIONS

PLUMBING & INDUSTRIAL

FLOWGUARD PLUS - CPVC Hot and Cold Potable Water Plumbing Systems

EASYFIT - UPVC Plumbing Systems

EASYFIT RE - Reclaim Piping Systems

GREENFIT - PP-R Plumbing and Industrial Piping Systems

BLUE GREENFIT - PP-R Industrial Piping Systems

SWR

ULTRAFIT - SWR Systems with World-class Seals

SILENTFIT - Low-noise SWR Systems

RAINFIT - Roofwater Systems

UNDERGROUND

CORFIT - Underground Double Wall Corrugated Pipes

DRAINFIT - UPVC Underground Drainage Piping Systems

FOAMFIT - Underground Drainage Piping Systems

CABLEFIT - Cable Ducting Pipes

DURAFIT - FRP Manhole and Chamber Covers

AGRI

AQUAFIT - Pressure & Non-pressure Agri Pipes & Fittings

SAFEFIT - Borewell Systems

WATER TANK

STOREFIT - Water Tanks



THE CPVC THAT'S GOING TO CHANGE PLUMBING FOREVER.

A technology by Lubrizol - the inventors and the world's largest manufacturers of CPVC compounds. A product by Prince Pipes - India's leading pipes and fittings brand. A combination that will change the way you look at plumbing forever. CPVC being the first choice globally for potable water applications, Flowguard Plus is undeniably one of the world's most preferred range of CPVC pipes and fittings. Known for approximately 50 years of life span and extreme temperature resistance, this world-class product now comes with 30 years of trust carried by the name Prince Pipes and Fittings Ltd.

FLOWGUARD PLUS
CPVC PLUMBING SYSTEMS™

FLOWGUARD is the registered mark of The Lubrizol Corporation.
The Lubrizol Corporation is a Berkshire Hathaway Company.



THE 'PLUS' IN FLOWGUARD PLUS

FEATURES

No Corrosion, Leakage, Scaling and Pitting

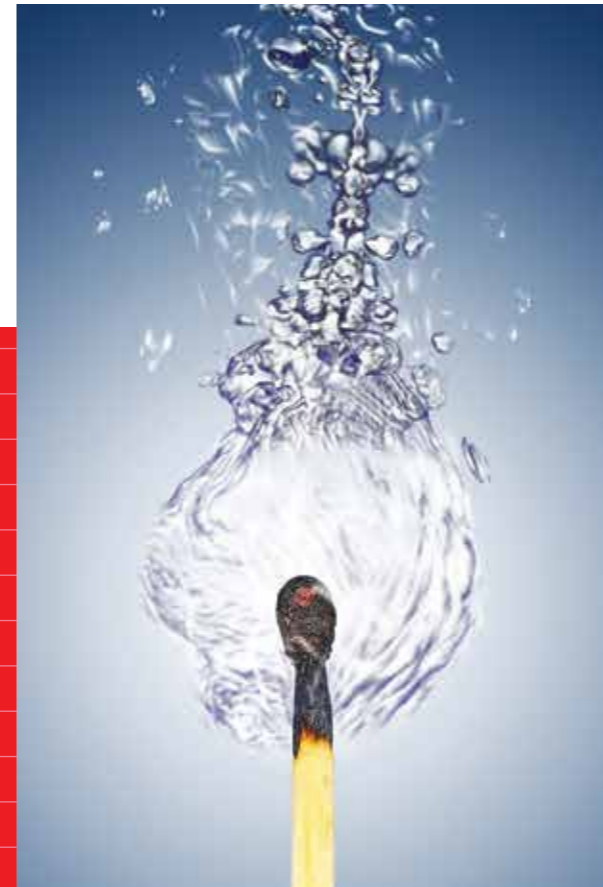
Excellent corrosion resistance - prevents contamination, bad taste & odour and water discoloration. Unaffected by the low pH of water, coastal air or corrosive soils.

Lowest Bacterial Growth

FlowGuard Plus has lower bacterial growth than generic CPVC increasing the safety of water.

ADVANTAGES

-  Prince FlowGuard Plus CPVC Pipes & Fittings are manufactured from Lubrizol's **NSF/ANSI 14** certified **TEMPRITE® 88619 TAN 311** & **TEMPRITE® 88096 TAN 311** CPVC compounds respectively
-  Suitable for use up to 93°C
-  High tensile and impact strength
-  Freedom from toxicity, odours and tastes
-  Low thermal expansion
-  UV resistant
-  25% Higher pressure bearing capacity at higher temperatures
-  Consistent product quality
-  Peace of mind assured



Fire Retardant

Because of high LOI (Limiting Oxygen Index), it does not propagate fire or support combustion. Once the fire source (flame) is put off, it will self extinguish.

- Low flammability
- Low smoke generation
- Low toxicity



APPLICATIONS

-  Indoor and outdoor installations of hot & cold water plumbing lines
-  For concealed, downtake & terrace looping
-  Public utilities & swimming pools
-  Residential & commercial buildings
-  Solar water heaters

**CHOOSE BETTER.
CHOOSE PRINCE FLOWGUARD PLUS.**



COMPETITIVE EDGE

Today FlowGuard Plus is world's No. 1 CPVC, and the 'total number of pipes installed' is just one of the multiple factors. Here's a detailed comparison to help you choose wisely:

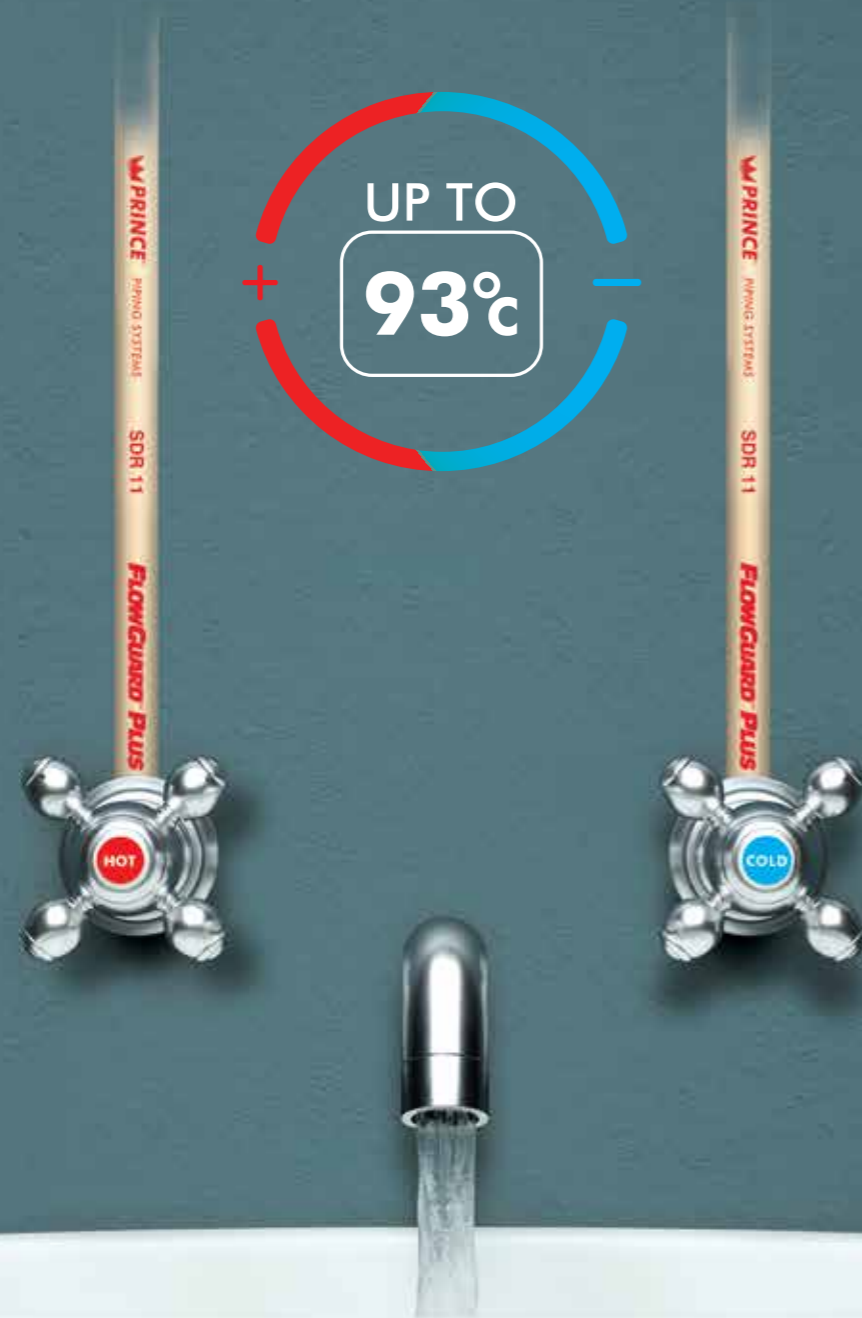
Factor	Prince FlowGuard Plus CPVC	Generic CPVC
Compound credibility	Inventors of CPVC compound.	New and unproven.
Assembly	Complete system of Prince FlowGuard Plus (Pipes, Fittings & Solvent Cements).	Different sources for making the system complete.
Market reach	Highest number of projects in India.	Piggybacking the success of FlowGuard to capture market.
Material strength	Withstands test duration of 4 hours (Sustained Pressure Test as per ASTM) assuring long life.	Fails before the test duration of 4 Hours, meaning higher probability of failure.
Durability	No cracks or damage observed, ensuring better quality of compound.	Gets damaged easily, questionable quality of compound.
Pressure rating	Higher HDB compounds result in 25% higher pressure rating at elevated temperatures.	Normal compound means no additional pressure rating.
Quality consistency	Finished products manufactured exclusively by our global network of select manufacturing partners to ensure product quality and consistency.	Manufactured by multiple parties utilizing various raw material sources.
Popularity	All top ten national builders specify our technology by name. Leader in testing and code acceptance efforts.	No national specification. Limited code support.
Standard	All compounds and finished goods produced to one standard. Quality Assurance Program helps ensure that only the highest quality CPVC finished goods are delivered to the marketplace.	Multiple formulation and raw material process.
Safety	Product manufactured with a safety factor of 2.0. Designed & manufactured for a service life of 50 years (Time Tested).	No history of the product & no mention of safety factor by manufacturers.

PIPE DERATING FACTOR

Prince FlowGuard Plus CPVC Plumbing Systems' ability to perform even at increased temperatures gives them a better derating factor. Another reason why FlowGuard Plus CPVC Plumbing Systems come with a promise of 50 years of life.

Working Temperature		Pipe Derating Factor	
°F	°C	FlowGuard® Plus	Generic CPVC
73-80	23-27	1.00	1.00
90	32	0.91	0.91
100	38	0.83	0.82
120	49	0.70	0.65
140	60	0.57	0.50
160	71	0.44	0.40
180	82	0.31	0.25

TECHNICALLY SUPERIOR



PRODUCT RANGE

- Pipes: 1/2 to 10 inches • Fittings: 1/2 to 6 inches

STANDARDS

Pipes				Fittings			
Size (inches)	Class	Standard	End Connection	Size (inches)	Class	Standard	End Connection
1/2 - 2	SDR 11	IS 15778	Solvent Cement Joint	1/2 - 2	SDR 11	ASTM D 2846	<ul style="list-style-type: none"> • Solvent cement Sockets joint. • For transition joints, fittings with plastic threads & metal threaded inserts.
1/2 - 2	SDR 13.5	IS 15778		2 1/2 - 4	SCH 80	ASTM F 439	
2 1/2 - 10	SCH - 40	ASTM F 441		6	SCH 40	ASTM F 438	
2 1/2 - 10	SCH - 80	ASTM F 441		-	-	-	

PIPE DIMENSIONS

FlowGuard Plus CPVC has **25% higher pressure bearing capacity** at higher temperatures (Up to 2" & at 60°C)

Nominal Bore		Outside Diameter		SDR-11				SDR-13.5			
				Wall Thickness		Working Pressure		Wall Thickness		Working Pressure	
		Min	Max	Min	Max	At 27°C	At 82°C	Min	Max	At 27°C	At 82°C
(mm)	(inches)	(mm)	(mm)	(mm)	(mm)	(kg/cm ²)	(kg/cm ²)	(mm)	(mm)	(kg/cm ²)	(kg/cm ²)
15	1/2	15.80	16.00	1.70*	2.20*	28.14	6.93	1.40*	1.90*	22.22	5.62
20	3/4	22.10	22.30	2.00	2.50	28.14	6.93	1.70	2.20	22.22	5.62
25	1	28.50	28.70	2.60	3.10	28.14	6.93	2.10	2.60	22.22	5.62
32	1 1/4	34.80	35.00	3.20	3.70	28.14	6.93	2.60	3.10	22.22	5.62
40	1 1/2	41.20	41.40	3.80	4.30	28.14	6.93	3.10	3.60	22.22	5.62
50	2	53.90	54.10	4.90	5.50	28.14	6.93	4.00	4.60	22.22	5.62

Nominal Bore		Outside Diameter		Schedule 40				Schedule 80			
				Wall Thickness		Working Pressure		Wall Thickness		Working Pressure	
		Min	Max	At 27°C	At 82°C	Min	Max	At 27°C	At 82°C		
(mm)	(inches)	(mm)	(mm)	(kg/cm ²)	(kg/cm ²)	(mm)	(mm)	(kg/cm ²)	(kg/cm ²)		
65	2 1/2	73.00 (+/- 0.18)	5.16	5.77	21.10	5.30	7.01	7.85	29.57	7.34	
80	3	88.90 (+/- 0.20)	5.49	6.15	18.25	4.58	7.62	8.53	26.00	6.32	
100	4	114.30 (+/- 0.23)	6.02	6.73	15.49	3.87	8.56	9.58	22.53	5.60	
150	6	168.30 (+/- 0.28)	7.11	7.97	12.64	3.16	10.97	12.29	19.68	4.89	
200	8	219.10 (+/- 0.38)	8.18	9.17	11.21	2.85	12.70	14.22	17.54	4.18	
250	10	273.10 (+/- 0.38)	9.27	10.39	9.89	2.44	15.06	16.86	16.21	3.87	

Note:
 • Dimensions with "*" are not a function of SDR
 • Fittings are suitable for corresponding pipe pressure ratings

WORLD'S FIRST CPVC CEMENT WITH 3-YEAR SHELF LIFE



PRINCE PIPES IN ASSOCIATION WITH E-Z WELD, WORLD LEADERS IN SOLVENT CEMENTS, BRING TO YOU THE BEST-IN-CLASS ADHESIVE. THIS SOLVENT CEMENT IS FAST-SETTING, MAKING THE INSTALLATION PROCESS QUICK AND EASY.



World's best resin from Lubrizol manufactured exclusively for FlowGuard Plus



3-Year shelf life (unopened cans)



For copper tube size CPVC hot and cold potable water pipe & fittings up to 2" Dia (50 mm) interference fit



Adherence to the parameters of ASTM D2846 and F493



Sets faster resulting in quicker installation



Low VOC



NSF certified for solvent cement only

pw-G-dwv-sw
U.P. Code

FLOWGUARD PLUS
CPVC PLUMBING SYSTEMS

PRINCE
PIPING SYSTEMS

