

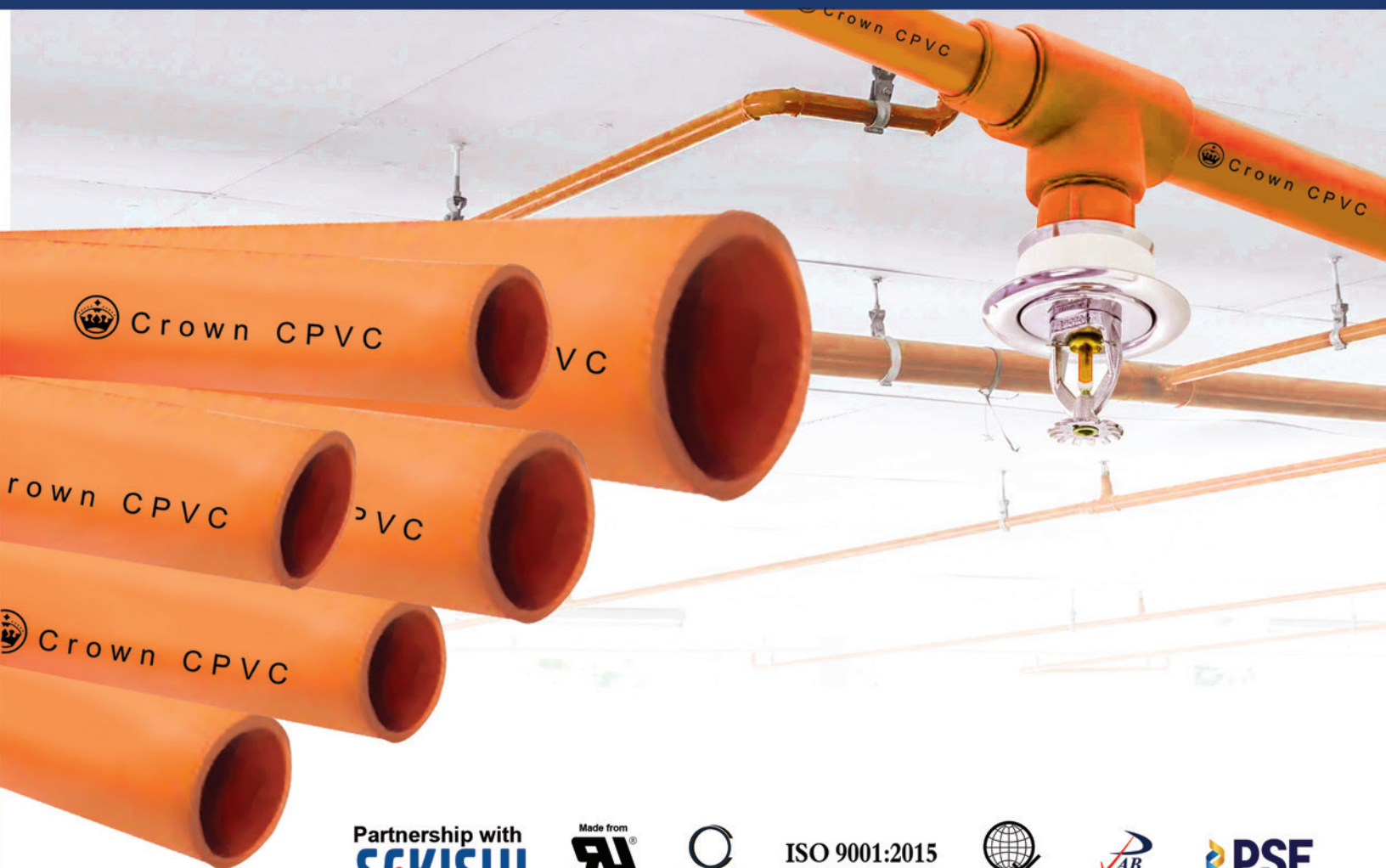


# CROWN<sup>®</sup> CPVC

**WORLD CLASS CPVC PIPES & FITTINGS**  
for superior fire protection system.



**"MAXIMUM  
SAFETY &  
PROTECTION"**



Partnership with  
**SEKISUI**



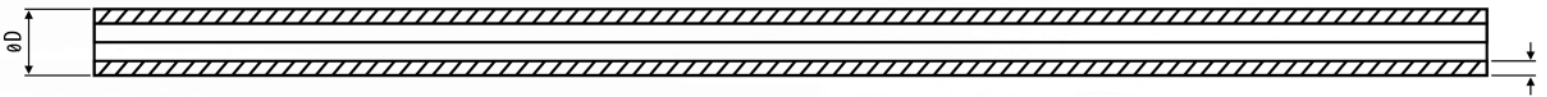
ISO 9001:2015  
CERTIFIED COMPANY



## Flammability

CROWN CPVC is suitable for wet, automatic fire sprinkler systems due to its excellent balance of properties such as lightweight, exceptional corrosion resistance, low friction loss, and easy installation. It is unique in offering outstanding resistance to fire and low smoke generation qualities.

Nominal diameter	external diameter (mm)	internal diameter (mm)	thickness (mm)
1" (25)	33.40 ~ 33.50	28.02	2.46 ~ 2.97
1-1/4" (32)	42.20 ~ 42.30	35.50	3.12 ~ 3.63
1-1/2" (40)	48.25 ~ 48.35	40.63	3.58 ~ 4.09
2" (50)	60.30 ~ 60.40	50.88	4.47 ~ 5.00
2-2/1" (65)	73.08 ~ 73.18	61.65	5.41 ~ 6.07
3" (80)	89.00 ~ 89.10	75.10	6.58 ~ 7.37



Nominal Size		Outside Diameter (OD)				Wall Thickness (T)				Allowable Water Pressure Rating at 73°F / 22.7°C
		Average		Tolerance		Minimum		Tolerance		
in	mm	mm	mm	mm	mm	in	mm	in	mm	
1"	25	1.315	33.4	±0.005	0.13	0.097	2.46	+0.02	0.51	315 PSI (22.22 kg/cm <sup>2</sup> )
1-1/4"	32	1.660	42.2	±0.005	0.13	0.123	3.12	+0.02	0.51	
1-1/2"	40	1.900	48.2	±0.006	0.15	0.141	3.58	+0.02	0.51	
2"	50	2.375	60.3	±0.006	0.15	0.176	4.47	+0.021	0.53	
2-1/2"	65	2.875	73.0	±0.007	0.18	0.213	5.41	+0.026	0.66	
3"	80	3.500	88.9	±0.008	0.20	0.259	6.58	+0.031	0.79	

Surface roughness constant for other piping material are given below:

$$f = 0.2083 \left( \frac{100}{C} \right)^{1.85} \frac{g \ 1.852}{d \ 4.8655}$$

Where f = friction head in feet of water per 100 feet of pipe  
 d = inside diameter of pipe in inches  
 g = flow rate in gallons per minute  
 c = pipe surface roughness constant

### Constant (C) Type of Pipe

150	CPVC Pipe, new-40 Years
130 - 140	Steel/Cast Iron Pipe, New
125	Steel Pipe, old
120	Cast Iron, 4-12 years old
110	Galvanized Steel/Cast Iron 13-20 Years
60 - 80	Cast Iron, Worn/Pitted

# CROWN® CPVC FITTINGS



Equal Tee

Size	
25mm	32mm
40mm	50mm
65mm	80mm



Elbow

Size	
25mm	32mm
40mm	50mm
65mm	80mm



Socket

Size	
25mm	32mm
40mm	50mm
65mm	80mm



Reducer

Size	
32X25mm	40X25mm
40X32mm	50X25mm
50X40mm	65X40mm
65X50mm	80X40mm
80X50mm	80X65mm



Bort

Size		
32X25mm	40X25mm	40X32mm
50X25mm	50X32mm	50X40mm
65X25mm	65X32mm	65X40mm
65X50mm	80X25mm	80X40mm
80X50mm	80X65mm	



45° Elbow

Size	
25mm	32mm
40mm	50mm
65mm	80mm



30° Elbow / 60° Elbow

Size
50mm



Cap

Size	
25mm	32mm
40mm	50mm



Valve Socket (PT)

Size	
25mm	32mm
40mm	50mm
65mm	80mm



Valve Socket  
(for connecting SP Joint)

Size
25mm



M,F Valve Socket, F Elbow

Size
25mm



Fittings for PT

Size	
Socket	25mmX1/2" (15mm)
Elbow	25mmX1/2" (15mm)
Tee	25mmX1/2" (15mm)



Bort

Size	
32X25X25mm	40X32X25mm
50X40X25mm	



Flange

Size	
40mm	50mm
65mm	80mm



Gasket

Size	
40mm	50mm
65mm	80mm



CROWN Solvent

Size	
500g	1kg
USA, KOR	USA, KOR



Insert M Valve Socket (STS)

Size	
25mm	50mm



Insert M Valve Socket  
(for connecting SP Joint)

Size
25mm

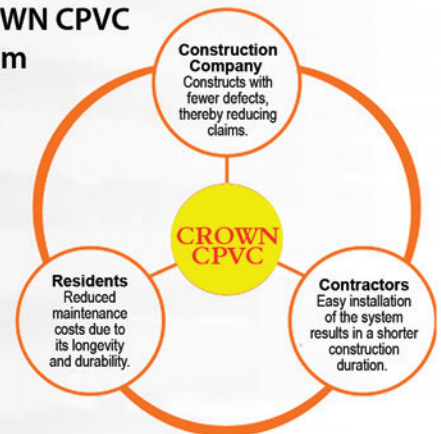
CROWN CPVC Pipes and Fittings are precisely designed for fire sprinkler systems, using a specialty thermoplastic identified chemically as post-chlorinated polyvinyl chloride (CPVC). This material offers distinct advantages in sprinkler installations, including superior hydraulics when contrasted with traditional metal systems, simplified joining procedures, expanded hanger spacing in comparison to other thermoplastics, and straightforward assembly. CROWN CPVC Pipes and fittings are manufactured by CROWN Asia Chemicals Corporation, which has 35 years of excellence in producing world-class quality products.



### Application

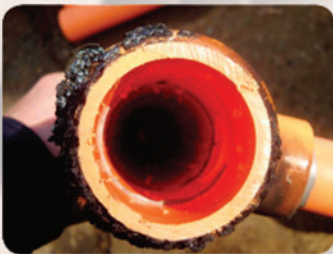
- Fire Sprinkler Systems: CPVC pipes and fittings are widely used in fire sprinkler systems for offices, high-rise buildings, condominiums, hotels, hospitals, churches, and schools.
- Residential Plumbing Installations for both hot and cold water supply lines, providing reliability and longevity
- Industrial Piping Systems for transporting a wide range of chemicals and fluids.
- HVAC (Heating, Ventilation, and Air Conditioning) Systems suitable for both hot and cold water distribution, offering thermal resistance and energy efficiency.
- Aquariums, Water Parks, and underground water pressure piping systems due to their resistance to corrosion from chlorinated water and their ability to handle high temperatures.

### Benefits of CROWN CPVC Plumbing System



### Characteristics of CROWN CPVC plumbing material

CPVC (Chlorinated Polyvinyl Chloride) pipe is a heat-resistant rigid PVC pipe that utilizes the excellent chemical resistance, corrosion resistance, and workability of Polyvinyl Chloride. It substantially enhances thermal resistance, effectively addressing a previously identified weakness.



#### • Corrosion resistance and hygiene

1. CROWN CPVC resists corrosion and scale buildup, ensuring rust-free pipes and uninterrupted flow, even in harsh chemical environments like acids, alkalis, salts, and halogens.
2. CROWN CPVC materials and bonding agents are safe for humans and the environment.
3. CROWN CPVC's antimicrobial properties prevent bacterial growth in the piping system.

#### • Self-extinguishing

1. CPVC self-extinguishes upon exposure to flames, requiring more than three times the normal oxygen level for combustion.
2. When heated, it does not spread flames; rather, it undergoes a process where its surface turns into carbon.
3. CPVC produces lower levels of smoke toxicity compared to ordinary building materials, verified by combustion tests conducted by Pittsburgh University and the California Institute for Environmental Studies.

Materials	Limited Oxygen Rate	Remarks
CPVC	60	oxygen content in the air 21%
Cotton	16-17	
PE	17	
PP	18	
PS	18	
PB	18	



QUALITY PRODUCTS MANUFACTURED BY:

## CROWN ASIA CHEMICALS CORPORATION

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