

# FlameGuard®

## C-PVC Fire Sprinkler System

...Your safety is our concern



The Supreme Industries Ltd., is an acknowledged leader of India's plastic industry. It is credited with several path breaking products and has been a torch bearer in the transition from conventional to advanced plastic piping products in the country. Its customer centric approach fuels its research for designing unmatched quality products to meet the aspirations of its quality conscious customers. The innovative product portfolio offered by Supreme is extensive in range and application and comprises variety of pipes and vast spectrum of fittings totaling over 8000 diverse products.

Nowadays fire protection has become the crucial subject. To address this important requirement, Supreme has introduced 'FlameGuard', a cost effective and the most useful fire sprinkler system in C-PVC. Manufactured from specially developed C-PVC compound this system is totally free from all the problems that we normally experience with the conventional metal pipe systems. C-PVC fire sprinkler system is based on proven products that has been in continuous use for over 35 years. Besides UL certification this system has also been approved by the Chief Fire Officer Mumbai, Director Fire Services Maharashtra, Gujarat, Uttar Pradesh and Karnataka.

### Unique Features

- Corrosion resistant C-PVC material does not encourage biological growth
- Superior flow characteristics for lower friction losses
- Pressure rated to 12 bar (175psi) @ 65°C (150°F)
- Simple and easy installation resulting in lower costs
- UL listed (UL 1821) for NFPA 13, 13R and 13D systems

### Unique Features

- **Corrosion resistant C-PVC material does not encourage biological growth** - Unlike metal systems, Supreme FlameGuard C-PVC products never rust or are not prone to scaling or pitting and do not encourage biological growth - a cause of Microbiologically Influenced Corrosion (MIC) which could destroy metal fire sprinkler systems from inside out.
- **Superior flow characteristics for lower friction losses** - The smooth-wall interior surface of Supreme FlameGuard C-PVC System results in reduced friction loss over metal systems. It also helps in quick discharge of water in times of need. The design flow characteristics remain constant throughout the life of the product as there is no interior corrosion in the system due to microbiological activity.
- **Pressure rating** - 12 bar (175psi) @ 65°C (150°F) and 21.7 bar (315 psi)@ 23°C
- **Simple and easy installation resulting in lower costs** - Supreme FlameGuard C-PVC system installation significantly reduce the costs over conventional metal piping by virtually eliminating prefabrication. System can be fully installed on site using solvent cement jointing methods.
- **UL listed (UL 1821) for NFPA 13, 13R and 13D systems** - Supreme FlameGuard C-PVC system is UL-1821 listed. UL certificate no. is 20150729-EX26525.
- **Light in weight and easy maintenance**
- **Environment friendly**

### Product Range and Standards

- **Pipes**- Supreme FlameGuard C-PVC fire sprinkler pipes are available in ¾" to 3" dia, conforming to IS:16088 standards for SDR 13.5 C-PVC pipes.
- **Fittings**- Supreme provides a complete range of FlameGuard fittings imported from Spears® USA. The fittings range includes special metal insert sprinkler head adapters, special reinforced (SR) head adapters, revolutionary gasket sealed and thread sealant free head adapters. The dimensions of schedule 40 fittings are as per ASTM F 438 and are available from 20 mm (¾") to 32 mm (1¼") while the dimensions of schedule 80 fittings are as per ASTM F 439 and the range is from 40 mm (1½") to 80 mm (3").

### Application Areas

Supreme FlameGuard C-PVC fire sprinkler products are UL listed for light hazard occupancies as defined in NFPA 13, residential occupancies up to and including 4 - storeyed buildings as defined in NFPA 13R, residential occupancies for one and two family dwellings and manufactured homes as defined in NFPA 13D.







Few examples of light hazard occupancies are given below:-








1. Residential buildings excluding parking
2. Educational institutes, hotels and hospitals
3. 1 or 2 family dwellings.








### Supreme FlameGuard pipe dimensions as per ASTM F 442

Nominal size		Outer diameter		Wall thickness SDR 13.5		Working pressure
mm	inch	Avg. (mm)	Tolerance (mm)	Min (mm)	Tolerance (mm)	
20	¾"	26.7	0.10	1.98	0.51	12 bar @ 65°C 21.7 bar @ 23°C
25	1"	33.4	0.13	2.46	0.51	
32	1¼"	42.2	0.13	3.12	0.51	
40	1½"	48.2	0.15	3.58	0.51	
50	2"	60.3	0.15	4.47	0.53	
65	2½"	73.0	0.18	5.41	0.66	
80	3"	88.9	0.20	6.58	0.79	

### Fittings

Size in mm	Size in inch	SCH	 Coupler
20	¾	40	
25	1	40	
32	1¼	40	
40	1½	80	
50	2	80	
65	2½	80	
80	3	80	
Size in mm	Size in inch	SCH	 Elbow 90°
20	¾	40	
25	1	40	
32	1¼	40	
40	1½	80	
50	2	80	
65	2½	80	
80	3	80	
25x20	1x¾	40	 Reducing Elbow
Size in mm	Size in inch	SCH	 Elbow 45°
20	¾	40	
25	1	40	
32	1¼	40	
40	1½	80	
50	2	80	
65	2½	80	
80	3	80	
Size in mm	Size in inch	SCH	 Equal Tee
20	¾	40	
25	1	40	
32	1¼	40	
40	1½	80	
50	2	80	
65	2½	80	
80	3	80	
25x20	1x¾	40	 Reducing Tee
32x20	1¼x¾	40	
32x25	1¼x1	40	
40x20	1½x¾	80	
40x25	1½x1	80	
40x32	1½x1¼	80	
50x20	2x¾	80	
50x25	2x1	80	
50x32	2x1¼	80	
50x40	2x1½	80	
65x25	2½x1	80	
65x32	2½x1¼	80	
65x40	2½x1½	80	
65x50	2½x2	80	
80x25	3x1	80	
80x32	3x1¼	80	
80x40	3x1½	80	
80x50	3x2	80	
80x65	3x2½	80	

Size in mm	Size in inch	SCH	 Cross Tee
25	1	40	
32	1¼	40	
40	1½	80	
50	2	80	
65	2½	80	
80	3	80	
Size in mm	Size in inch	SCH	 Union
20	¾		
25	1		
32	1¼		
40	1½		
50	2		
25x20	1x¾	40	 Reducer
32x20	1¼x¾	40	
32x25	1¼x1	40	
40x20	1½x¾	40	
40x25	1½x1	40	
40x32	1½x1¼	40	
50x20	2x¾	80	
50x25	2x1	80	
50x32	2x1¼	80	
50x40	2x1½	80	
65x40	2½x1½	80	
65x50	2½x2	80	 End Cap
80x50	3x2	80	
80x65	3x2½	80	
20	¾	40	
25	1	40	
32	1¼	40	
40	1½	80	
50	2	80	
65	2½	80	
80	3	80	
25x20	1x¾	40	 Reducer Bushing
32x20	1¼x¾	40	
32x25	1¼x1	40	
40x20	1½x¾	80	
40x25	1½x1	80	
40x32	1½x1¼	80	
50x20	2x¾	80	
50x25	2x1	80	
50x32	2x1¼	80	
50x40	2x1½	80	
65x32	2½x1¼	80	
65x40	2½x1½	80	 Sprinkler Head Tee (Brass Thread)
65x50	2½x2	80	
80x50	3x2	80	
80x65	3x2½	80	
20x15	¾x½		 Sprinkler Head Tee (Brass Thread)
25x15	1x½		
32x15	1¼x½		
40x15	1½x½		

Size in mm	Size in inch		Size in mm	Size in inch	
20x15	¾x½	<b>Sprinkler Head Tee</b> (SR Plastic Thread) (Soc x SR FPT)	20x15	¾x½	<b>Female Sprinkler Head Adapter</b>
25x15	1x½		25x15	1x½	
32x15	1¼x½		25x20	1x¾	
20	¾		20	¾	<b>Male Adapter</b> (Brass)
25	1				
32	1¼				
40	1½				
50	2				
65	2½				
80	3				
32	1¼		20x15	¾x½	
40	1½		25x15	1x½	
50	2		25x20	1x¾	
65	2½		32x15	1¼x½	
80	3		32x20	1¼x¾	
20	¾		Pint (473.17ml) Quart (946.35ml)		
25	1				
32	1¼				
40	1½				
50	2				
		<b>Female Adapter</b> (Brass)			<b>One Step Solvent Cement</b>

### Solvent Cements and Thread Sealant

FlameGuard C-PVC products should be installed using Spears FS-5 One-Step solvent cement. For threaded joints, use Supreme BLUESIL thread sealant that has been tested for compatibility with FlameGuard C-PVC fire sprinkler products. Spears TorqueSafe™ gasket sealed adapter requires no sealant. Consult sprinkler head manufacturer prior to use.

### Installation

FlameGuard products must be installed in accordance with Supreme C-PVC fire sprinkler installation instructions, NFPA 13, 13R, 13D standards and in accordance with local codes. Code requirements and field conditions may differ according to location. It is the responsibility of the installing contractor to ensure that the product is suitable to meet these requirements.

### Installation Training

A team of experts at the Supreme provides installation training. You may approach the Supreme for the same. Refer to Supreme FlameGuard C-PVC fire sprinkler piping products installation instructions and NFPA standards for additional application installations including air plenum, system risers, underground, attic and garage.

*•Any specification may change without prior notice. •All information contained in this literature is given in good faith and believed to be accurate and reliable. Because of many factors which may be outside our knowledge or control and affect the use of the product, no warranty is given or implied with respect to such information, nor do we offer any warranty of immunity against patent infringement. No responsibility can be accepted for any error, omissions or incorrect assumptions.*

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