

FlameGuard[®]

C-PVC Fire Sprinkler System

...Your safety is our concern



IS 16088 : 2012



CML 7700075512



STAY SAFE



The Supreme Industries Ltd. is an acknowledged leader of India's plastic industry. It is credited with pioneering several path breaking products and has gained a valuable experience in providing innovative and cost effective piping solutions. The Company has been a trend setter and a torch bearer in the transition from conventional to advanced plastic piping products in the country. The Company's objective is to meet the growing needs of its clientele in water and waste management and in infrastructure sector through a specially designed high performance range of piping products. The innovative product portfolio offered by Supreme is extensive in nature and applications. With its range of over 7500 products, the most comprehensive in the piping industry, Supreme caters to almost every conceivable need and application in piping.

Supreme FlameGuard[®] is manufactured from a specially developed C-PVC compound. Supreme FlameGuard[®] products provide a cost effective yet effective alternative to metal pipe systems with advantages of high corrosion resistance, improved hydraulics, comparatively very easy and quick installation. C-PVC fire sprinkler system is based on proven products that has been in continuous use for over 33 years. The system is approved by UL[®].

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 the inside out.

Superior flow characteristics for lower friction losses - The smooth-wall interior surfaces of Supreme FlameGuard® C-PVC Systems result in reduced friction loss over metal systems resulting in a 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 rated to 12 bar (175psi) @ 65°C (150°F) - Supreme FlameGuard® C-PVC products are produced in a combination of SCH 40 and SCH 80 class. Fitting configurations conform to ASTM F 438 or F 439 standards and FlameGuard® SDR 13.5 C-PVC fire sprinkler pipes conform to ASTM F 442 standards. UL rated working pressure is 12 bar psi (175 psi) @ 65°C (150°F).

Simple and easy installation resulting in lower costs - Supreme FlameGuard® C-PVC system installation significantly reduce 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.

Product range

Pipes - Supreme FlameGuard® C-PVC fire sprinkler pipes are available in ¾" to 3" dia and they conform 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.

Special Push on and Repair Couplings - Both types of couplings use no solvent cement eliminating system downtime.

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. High rise buildings – residential buildings, hotels, data processing centers etc.
2. Educational institutes 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 175 PSI (1.21 MPa) |
| 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 | |
|------------|--------------|--|
| 20 | ¾ |  Coupler |
| 25 | 1 | |
| 32 | 1¼ | |
| 40 | 1½ | |
| 50 | 2 | |
| 65 | 2½ | |
| 80 | 3 | |
| 20 | ¾ |  Elbow 90° |
| 25 | 1 | |
| 32 | 1¼ | |
| 40 | 1½ | |
| 50 | 2 | |
| 65 | 2½ | |
| 80 | 3 | |
| 25 x 20 | 1x¾ |  Reducing Elbow |
| 20 | ¾ |  Elbow 45° |
| 25 | 1 | |
| 32 | 1¼ | |
| 40 | 1½ | |
| 50 | 2 | |
| 65 | 2½ | |
| 80 | 3 | |
| 20 | ¾ |  Equal Tee |
| 25 | 1 | |
| 32 | 1¼ | |
| 40 | 1½ | |
| 50 | 2 | |
| 65 | 2½ | |
| 80 | 3 | |
| 25x20 | 1x¾ |  Reducing Tee |
| 32x20 | 1¼x¾ | |
| 32x25 | 1¼x1 | |
| 40x20 | 1½x¾ | |
| 40x25 | 1½x1 | |
| 40x32 | 1½x1¼ | |
| 50x20 | 2x¾ | |
| 50x25 | 2x1 | |
| 50x32 | 2x1¼ | |
| 50x40 | 2x1½ | |
| 65x25 | 2½x1 | |
| 65x32 | 2½x1¼ | |
| 65x40 | 2½x1½ | |
| 65x50 | 2½x2 | |
| 80x25 | 3x1 | |
| 80x32 | 3x1¼ | |
| 80x40 | 3x1½ | |
| 80x50 | 3x2 | |

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

| Size in mm | Size in inch | | Size in mm | Size in inch | |
|--|------------------------------------|--|-------------------------|--------------------|--|
| 20x15 25x15 32x15 | ¾x½ 1x½ 1¼x½ |  Sprinkler Head Tee (Soc x SR FPT) | 20x15 25x20 | ¾x½ 1x¾ |  Female Sprinkler Head Adapter |
| 20 25 32 40 50 65 80 | ¾ 1 1¼ 1½ 2 2½ 3 |  Flange (one piece) | 20 | ¾ |  Male Adapter (Brass) |
| 32 40 50 65 80 | 1¼ 1½ 2 2½ 3 |  Grooved Coupling | 20x15 25x20 32x20 | ¾x½ 1x¾ 1¼x¾ |  Torque Safe 90° Sprinkler Head Elbow |
| 20 25 32 40 50 | ¾ 1 1¼ 1½ 2 |  Female Adapter (Brass) | | 473 ml 946 ml |  One Step Solvent Cement |

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 require 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, National Fire Protection Association Standards 13, 13R, 13D 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 applications including air plenum, system risers, underground, attic and garage installations.

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