BLAZEMASTER FIRE SPRINKLER SYSTEMS

3/4" - 3" (20mm - 75mm)

BlazeMaster®

Specially formulated for fire sprinkler systems, IPEX BlazeMaster pipe and fittings are made from post-chlorinated polyvinyl chloride (CPVC) and is fully approved for use in NFPA 13 Light Hazard applications in both new and retrofit construction including:

- High buildings, including apartments and hotels
- Schools and institutions
- Single-family residences

Manufactured by IPEX, a world leader in thermoplastic piping systems, CPVC has a 40-year history of continuous and proven service.

With a high flash ignition temperature, low flame spread and smoke development ratings, and a fuel contribution of 0, IPEX BlazeMaster pipe and fittings are an ideal choice for fire sprinkler systems.

IPEX BlazeMaster pipe and fittings meet the most stringent requirements governing the use of combustible pipe in most building types. IPEX BlazeMaster pipe and fittings have been successfully exposed to flame temperatures of 1400°F. After undergoing continuous elevated pressure testing at 400 psi (more than twice the rated pressure) for more than one year, IPEX BlazeMaster CPVC systems showed no sign of weakness or failure.

IPEX BlazeMaster pipe and fittings are manufactured under a strict Quality Assurance Program that guarantees consistency and reliability.

APPLICATIONS

IPEX BlazeMaster Fire Sprinkler Systems offer a level of superior performance that exceeds your requirements:

- Fully approved for use in all NFPA 13 Light Hazard applications
- Field fabrication reduces design engineering
- Smooth inner surface allows pipe downsizing with superior hydraulics – Hazen-Williams "C" factor of 150
- Great in corrosive environments – immune to Microbiology Influenced Corrosion (MIC)
- Less impact on occupants during retrofits
- Design savings
- UL and ULC Listed for use in NFPA 13, 13R, and 13D Light Hazard applications including high buildings
- FM Approved, NSF certified, and permitted for use in air plenums per NFPA 90A

STANDARDS

LISTINGS AND APPROVALS

UL 1821 Listed

- Exposed system risers NFPA 13D, 13R
- Exposed basement NFPA 13D (solid wood joist)
- Extended coverage (exposed) – 20' spacing on pendent in lieu of 15'
- Exposed extended coverage sidewall sprinkler Listings for exposed pipe & fittings
  - 24' extended coverage sidewall sprinkler, 12" drop, 155°F sprinkler head
  - 18' extended coverage sidewall sprinkler, 12" drop, 165°F sprinkler head
  - 16' extended coverage sidewall sprinkler, 12" drop, 175°F sprinkler head
  - 14' standard coverage sidewall sprinkler, 12" drop, 200°F sprinkler head
- Permitted for use with return air plenums with no set-back at ceiling openings per NFPA 90A

ULC Listed

Factory Mutual Approved

- Factory Mutual Approval exposed
- Factory Mutual Approval above drop-in ceilings
- Factory Mutual Approval exposed w/ Soffi-Steel® soffiting covering system

Listed to NSF Standard 61

DID YOU KNOW?

IPEX BlazeMaster pipe and fittings have a 50-year life expectancy with a safety factor of two. Properly selected and correctly installed, BlazeMaster pipe and fittings provide years of maintenance-free service.

ADVANTAGES

IPEX BlazeMaster® pipe and fittings are designed specifically for fire sprinkler systems. They are made from a specialty thermoplastic known chemically as post-chlorinated polyvinyl chloride (CPVC). IPEX BlazeMaster pipe and fittings provide unique advantages in sprinkler installations including superior hydraulics, ease of joining, increased hanger spacing in comparison to other thermoplastics and ease of assembly. They also are based on a technology with a continuous and proven service history of more than 40 years.

1 Lower Installation Costs

In addition to a lower material cost, IPEX BlazeMaster pipe and fittings can significantly reduce labor and transportation costs on a typical installation. The reason? Plastics are easily handled, stored, cut and joined. And, heavy equipment used to install metallic and other piping systems is not required, thereby reducing project costs.

2 Extended Life

The IPEX BlazeMaster System is fundamentally ageless and impervious to normal weather conditions. IPEX BlazeMaster Systems in uninterrupted service have operated successfully for over 20 years. During maintenance or revisions, examinations of the original plastic materials showed excellent physical and hydraulic characteristics.

Once properly selected for the application and correctly installed, IPEX BlazeMaster provides years of maintenance-free service. Our materials will not rust, pit, scale or corrode on either interior or exterior surfaces.

3 Improved Flow

IPEX piping has a substantially lower Roughness Factor than metal and other materials, and since IPEX BlazeMaster CPVC does not rust, pit, scale or corrode, the interior walls remain smooth in virtually any service. This high carrying capacity may result in the use of smaller diameter pipe.

4 Fire Performance

IPEX BlazeMaster will not independently support combustion, and as such will not burn once the flame source is removed. CPVC's ignition resistance is demonstrated by its flash ignition temperature of 900°F.

CPVC has a low Flame Spread Rating and provides excellent Smoke-Developed characteristics. In testing conducted to CAN/ULC S102.2, CPVC showed a flame spread of less than 15, and a smoke-developed classification of 15. And, like PVC, CPVC has a fuel contribution of 0.

Extensive tests on PVC and CPVC compounds prove their outstanding fire performance. These materials meet the most stringent requirements governing the use of combustible pipe in most building types.

IPEX SST™ FITTING REVOLUTIONIZES SPRINKLER INSTALLATION

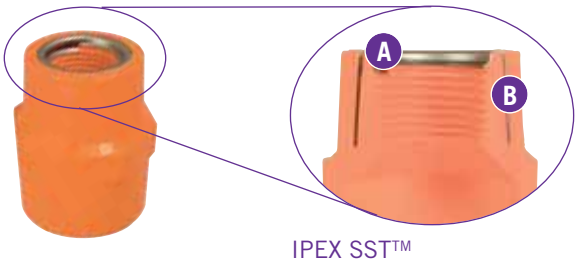
The new patent pending SST sprinkler head adapter (SHA) fittings improve how quickly, easily and reliably fire sprinkler heads are installed. Here's how…

A CROSS-THREADING REDUCED

Its one-of-a-kind stainless steel leading thread helps align sprinkler heads during installation, greatly reducing the chances of cross-threading.

B FRICTION AND INSTALLATION EFFORT IS REDUCED

Installers will benefit from the reduced level of installation friction between sprinkler heads and the new SST fitting when compared to typical brass SHA fittings. Less friction means less effort and reduced installation time.



IPEX SST™
SPRINKLER HEAD ADAPTER

PRESSURE RATING

BlazeMaster pipe and fittings 3/4" – 3" are rated for continuous service of 175psi at 150°F.

PIPE DIMENSIONS & WEIGHTS

IPEX BlazeMaster pipe is produced in SDR 13.5 dimensions. SDR, or standard dimensional ratio, means the pipe wall thickness is directly proportional to the outside diameter. This results in all diameters carrying the same pressure capability. IPEX BlazeMaster pipe is produced to the specifications of ASTM F 442. IPEX BlazeMaster fittings are produced to ASTM F 437, F 438, or F 439 specifications depending on the size and configuration.

PHYSICAL AND THERMAL PROPERTIES OF IPEX BLAZEMASTER CPVC

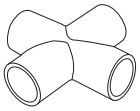
Property	CPVC	ASTM
Specific Gravity	1.53	D792
IZOD Impact Strength (ft. lbs./inch, notched)	3.0	D256A
Modulus of Elasticity @ 73°F, psi	4.23 x 105	D638
Ultimate Tensile Strength, psi	8,000	D638
Compressive Strength, psi	9,600	D695
Poisson's Ratio	.35 - .38	-
Working Stress @ 73°F, psi	2,000	D1598
Hazen-Williams C Factor	150	_
Coefficient of Linear Expansion in./(in.°F)	3.4 x 10-5	D696
Thermal Conductivity BTU/hr./ft.2/°F/in	0.95	C177
Limiting Oxygen Index	60%	D2863
Electrical Conductivity	Non Conductor	

IPEX BLAZEMASTER PIPE DIMENSIONS & WEIGHTS SDR 13.5 (ASTM F 442)

Nominal Size		Average OD		Average ID		lb/ft	kg/m	lb/ft	kg/m
In	mm	In	mm	In	mm	Empty	Empty	H_20 Filled	H_20 Filled
3/4	19.05	1.050	26.67	.874	22.2	0.168	0.250	0.428	0.637
1	25.40	1.315	33.40	1.101	28.0	0.262	0.390	.0675	0.100
1-1/4	31.75	1.660	42.16	1.394	35.4	0.418	0.622	1.079	1.606
1-1/2	38.10	1.900	48.26	1.598	40.6	0.548	0.816	1.417	2.109
2	50.80	2.375	60.33	2.003	50.9	0.859	1.278	2.224	3.310
2-1/2	63.50	2.875	73.03	2.423	61.5	1.257	1.871	3.255	4.844
3	76.20	3.500	88.90	2.950	75.0	1.867	2.778	4.829	7.186

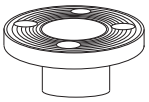
PRODUCT SELECTION CHART

Cross Soc x Soc x Soc x Soc



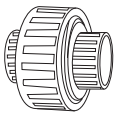
Dimension inches	Dimension mm	Product Code
3/4	20	048414
1	25	048415
1-1/4	32	048416
1-1/2	40	048417
2	50	048418
2-1/2	65	048419

Flange Soc



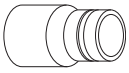
Dimension inches	Dimension mm	Product Code
3/4	20	048443
1	25	048444
1-1/4	32	048445
1-1/2	40	048446
2	50	048447
2-1/2	65	048448
3	75	048449

Union Soc x Soc



Dimension inches	Dimension mm	Product Code
3/4	20	048519
1	25	048520
1-1/4	32	048521
1-1/2	40	048522
2	50	048523

Adapter Coupling Soc x Groove



Dimension inches	Dimension mm	Product Code
1-1/4	32	048524
1-1/2	40	048540
2	50	048541
2-1/2	65	048542
3	75	048543

Female Adapter Soc x FPT

Dimension inches	Dimension mm	Product Code
3/4	20	048023
1	25	048024
1-1/4	32	048025
1-1/2	40	048036
2	50	048035

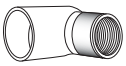
Sprinkler Head Adapter Tee Soc x Soc x FPT

Dimension inches	Dimension mm	Product Code
3/4 x 3/4 x 1/2	20 x 20 x 12	048010
1 x 1 x 1/2	25 x 25 x 12	048012
1 x 3/4 x 1/2	25 x 20 x 12	048011
1 x 1 x 1	25 x 25 x 25	048008
1-1/4 x 1 x 1/2	32 x 25 x 12	048013
1-1/4 x 1-1/4 x 1/2	32 x 32 x 12	048014
1-1/2 x 1-1/4 x 1/2	40 x 32 x 12	048015
1-1/2 x 1-1/2 x 1/2	40 x 40 x 12	048016
2 x 1-1/2 x 1/2	50 x 40 x 12	048017
2 x 2 x 1/2	50 x 50 x 12	048018

Sprinkler Head Adapter Tee FPT x FPT x Soc

Dimension inches	Dimension mm	Product Code
1/2 x 1/2 x 1	12 x 12 x 25	048062

Sprinkler Head Adapter 90º Elbow Soc x FPT

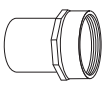


Dimension inches	Dimension mm	Product Code
3/4 x 1/2	20 x 12	048019
1 x 1/2	25 x 12	048020
1 x 3/4	25 x 20	048021
1-1/4 x 1/2	32 x 12	048022

Sprinkler Head Adapter Soc x FPT

Dimension inches	Dimension mm	Product Code
3/4 x 1/2	20 x 12	048026
1 x 1/2	25 x 12	048527
1 x 3/4	25 x 20	048028

Sprinkler Head Adapter Sp x FPT



Dimension inches	Dimension mm	Product Code
3/4 x 1/2	20 x 12	048029
1 x 1/2	25 x 12	048030