

Fixed Extinguishing Systems | Foam | **Foam Extinguishing Systems, Low Expansion**

Low Expansion Foam Systems Using ANSUL NFF-332 3%x3% AR-SFFF Foam Concentrate



Product Description

Foam Concentrates

Used as a component of foam systems. Concentrates are only Approved for use with the specific proportioning, bladder tank, foam water sprinklers, and discharge devices listed below.

Use of a concentrate with other devices or outside the listed ranges may result in solutions too lean or rich or may produce foam unable to provide the required extinguishing or sealing performance.

Concentrate listed below is compatible with both fresh water and sea water.

Product	Concentrate Type	Concentrate % in Water	Configuration	Approved Fuel Hazards
ANSUL NFF-332	AR-SFFF	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or other proportioning equipment Approved for a range of viscosities and which is determined to be compatible with the concentrate specified in this listing. For use with discharge devices evaluated with the specific concentrate only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone

Foam Concentrate Viscosity

The viscosity of non-Newtonian foam concentrates will vary depending on the fluid's flow velocity and resultant shear rate. As such, it is important to define this relationship and consider how the viscosity changes with shear rate. The following table provides viscosity vs. shear rate data for the subject concentrate throughout a range of given shear rates.

Shear Rate, (1/s)	Viscosity @ 68°F (20°C), (Cp)
5	2693
10	1640



Shear Rate, (1/s)	Viscosity @ 68°F (20°C), (Cp)
20	1014
50	558
100	365
600	151

Bladder Tanks

For use with the concentrate specified in this listing within the specifications identified in the table below.

Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	CCV Part No	CCV Valve Size		CCV Min Actuator Pressure		CCV Max Operating Pressure		Type	Max Operating Pressure		Sizes	
						in	(mm)	psi	(bar)	psi	(bar)		psi	(bar)	gal	(L)
Vertical Bladder TanksPart Numbers 444065-444083	Bladder Tank	3%	Vertical	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	443678, 443679, 443480, 443481, 443682, 443683, 443684, 443685	1, 1 1/4, 1 1/2, 2, 2 1/2	(25, 32, 40, 50, 65, 25, 40, 50)	30	(2.1)	175	(12)	ASME Section VIII Division 1, Standard or Epoxy CR Coating	175	(12)	25-2000	(95-7571)



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	CCV Part No	CCV Valve Size		CCV Min Actuator Pressure		CCV Max Operating Pressure		Type	Max Operating Pressure		Sizes	
						in	(mm)	psi	(bar)	psi	(bar)		psi	(bar)	gal	(L)
Horizontal Bladder TanksPart Numbers 444044-444064	Bladder Tank	3%	Horizontal	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	443678, 443679, 443480, 443481, 443682, 443683, 443684, 443685	1,1 1/4,1 1/2,2,2 1/2,1,1 1/2,2	(25, 32, 40, 50, 65, 25, 40, 50)	30	(2.1)	175	(12)	ASME Section VIII Division 1, Standard or Epoxy CR Coating	175	(12)	100-3000	(379-11356)

Pre-Piped Bladder Tanks

For use with the concentrate specified in this listing within the specifications identified in the table below.

Pre-piped bladder tanks are complete balanced pressure proportioning systems inclusive of a proportioner and hydraulic concentrate control valves, and all other valves and piping required for operation.



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	CCV Part No	CCV Valve Size		CCV Min Actuator Pressure		CCV Max Operating Pressure		Type	Max Operating Pressure		Sizes	
						in	(mm)	psi	(bar)	psi	(bar)		psi	(bar)	gal	(L)
Vertical Pre-Piped Bladder TanksPart Numbers 444105-444123	Bladder Tank	3%	Vertical	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	443678, 443679, 443480, 443481, 443682, 443683, 443684, 443685	1, 1 1/4, 1 1/2, 2, 2 1/2	(25, 32, 40, 50, 65, 25, 40, 50)	30	(2.1)	175	(12)	ASME Section VIII Division 1, Standard or Epoxy CR Coating	175	(12)	25-2000	(95-7571)
Horizontal Pre-Piped Bladder TanksPart Numbers 444084-444104	Bladder Tank	3%	Horizontal	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	443678, 443679, 443480, 443481, 443682, 443683, 443684, 443685	1, 1 1/4, 1 1/2, 2, 2 1/2	(25, 32, 40, 50, 65, 25, 40, 50)	30	(2.1)	175	(12)	ASME Section VIII Division 1, Standard or Epoxy CR Coating	175	(12)	100-3000	(379-11356)

Note: Pre-piped bladder tanks must include a bladder tank type proportioner listed in the bladder tank type proportioners table in this Ansul low expansion foam systems listing.

Proportioners

For use with the concentrate specified in this listing within the specifications identified in the table below.



Product	Part No	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Approved Flow Range		Approved Pressure Range		Connection	Sizes	
						gpm	(Lpm)	psi	(bar)		in	(mm)
2" Ratio Controller	A16382U0G1	Ratio Controller	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	53-252	(201-954)	30-175	(2-12)	Threaded	2	(50)
2-1/2" Ratio Controller	A16382U6RL	Ratio Controller	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	97-411	(367-1556)	30-175	(2-12)	Threaded	2 1/2	(65)
3" Ratio Controller	A16382UFMU	Ratio Controller	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	133-860	(503-3255)	30-175	(2-12)	Between Flange	3	(80)
3" Ratio Controller	A16382U6UW	Ratio Controller	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	133-860	(503-3255)	30-175	(2-12)	Flanged	3	(80)
4" Ratio Controller	A16382UG7A	Ratio Controller	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	277-1560	(1048-5905)	30-175	(2-12)	Between Flange	4	(100)
4" Ratio Controller	A16382UG1T	Ratio Controller	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	277-1560	(1048-5905)	30-175	(2-12)	Flanged	4	(100)



Product	Part No	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Approved Flow Range		Approved Pressure Range		Connection	Sizes	
						gpm	(Lpm)	psi	(bar)		in	(mm)
6" Ratio Controller	A16382UJ5Y	Ratio Controller	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	720-2970	(2725-11242)	30-175	(2-12)	Between Flange	6	(150)
6" Ratio Controller	A16382UJ5C	Ratio Controller	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	720-2970	(2725-11242)	30-175	(2-12)	Flanged	6	(150)
8" Ratio Controller	A16382UJ91	Ratio Controller	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	1580-4500	(5980-17033)	30-175	(2-12)	Between Flange	8	(200)
8" Ratio Controller	A16382UJ8B	Ratio Controller	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	1580-4500	(5980-17033)	30-175	(2-12)	Flanged	8	(200)
6" SKUM TPW MK3	A1682YN9M	Wide Range Proportioner	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	50-3056	(189-11567)	72.5-232.1	(5-16)	Between Flange	6	(150)
8" SKUM TPW MK3	A16382YNCA	Wide Range Proportioner	3%	For use with Ansul Inc. bladder tanks and discharge devices as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	50-4980	(189-18850)	72.5-232.1	(5-16)	Between Flange	8	(200)

Note: Maximum static pressure is 250 psi (17.2 bar)

Topside Discharge Devices



For use with the concentrate specified in this listing within the specifications identified in the table below.

Product	Type of Equipment	Part No	Concentrate % in Water	Configuration	Approved Fuel Hazards	Approved Flow Range		Approved Pressure Range		Connection	Construction Material	Sizes		Footnote
						gpm	(Lpm)	psi	(bar)			in	(mm)	
HL-60	Handline Nozzle	77796	3%	For use with Ansul Inc. bladder tanks and proportioners as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	45-75	(170-284)	50-150	(3-10)	NH Threaded	Stainless Steel	1 1/2	(40)	Nozzle without shutoff only.
HL-95	Handline Nozzle	77797	3%	For use with Ansul Inc. bladder tanks and proportioners as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	72-116	(273-439)	50-150	(3-10)	NH Threaded	Stainless Steel	1 1/2	(40)	Nozzle without shutoff only.
HL-120	Handline Nozzle	77981	3%	For use with Ansul Inc. bladder tanks and proportioners as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	94-140	(356-530)	50-135	(3-9.3)	NH Threaded	Stainless Steel	1 1/2	(40)	Nozzle without shutoff only.
FLR-30	Foam Maker	75615	3%	For use with Ansul Inc. bladder tanks and proportioners as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol	9.6-71	(36-269)	50-150	(3-10)	NPT Threaded	Stainless Steel	1 1/2	(40)	Min/max orifice sizes as noted in FLR technical datasheet.
FLR-90	Foam Maker	75633	3%	For use with Ansul Inc. bladder tanks and proportioners as appear in the FM Approval Guide only.	Heptane, Hexane, Gasoline, Jet-A, Ethanol, IPA, Acetone	40-178	(151-674)	50-150	(3-10)	NPT Threaded	Stainless Steel	2 1/2	(65)	Min/max orifice sizes as noted in FLR technical datasheet.



Foam Water Sprinkler Discharge Devices

Foam water sprinklers are Approved with the concentrate specified in this listing and at the application rates specified in the table below. The use of foam water sprinklers with other concentrates or at other application rates may result in foam of significantly different fire extinguishing capabilities and burn back (reignition) resistance.

Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft²	(mm/min)	gpm/ft²	(mm/min)	ft	(m)	ft	(m)				
TY313, TY3151	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Heptane,	0.2	(8.0)	0.3	(12.22)	6	(1.8)	36 1/12	(11.0)	1/2"	Upright	5.6	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY313, TY3151	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Hexane, Gasoline, Jet-A	0.3	(12.0)	0.3	(12.22)	6	(1.8)	37 1/3	(11.4)	1/2"	Upright	5.6	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY313, TY3151	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Ethanol, IPA, Acetone	0.3	(12.0)	N/A		6	(1.8)	37 1/3	(11.4)	1/2"	Upright	5.6	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY323, TY3251	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Heptane	0.2	(8.0)	0.3	(12.22)	6	(1.8)	36	(11.0)	1/2"	Pendent	5.6	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY323, TY3251	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Hexane, Gasoline, Jet-A	0.3	(12.0)	0.3	(12.22)	6	(1.8)	36	(11.0)	1/2"	Pendent	5.6	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY323, TY3251	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Ethanol, IPA, Acetone	0.3	(12.0)	N/A		6	(1.8)	36	(11.0)	1/2"	Pendent	5.6	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY4131, TY4151	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Heptane, Hexane, Gasoline	0.3	(12.0)	0.3	(12.22)	6	(1.8)	37 1/3	(11.4)	3/4"	Upright	8.0	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY4131, TY4151	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Ethanol, Acetone	0.3	(12.0)	N/A		6	(1.8)	37 1/3	(11.4)	3/4"	Upright	8.0	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY4131, TY4151	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	IPA	0.4	(16.0)	N/A		6	(1.8)	37 1/3	(11.4)	3/4"	Upright	8.0	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY4231, TY4251	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Heptane, Hexane, Gasoline	0.3	(12.0)	0.3	(12.22)	6	(1.8)	36	(11.0)	3/4"	Pendent	8.0	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY4231, TY4251	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Ethanol, IPA, Acetone	0.3	(12.0)	N/A		6	(1.8)	36	(11.0)	3/4"	Pendent	8.0	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY5111, TY5130, TY5150	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Heptane, Hexane, Gasoline	0.4	(16.0)	0.4	(16.30)	6	(1.8)	37 1/3	(11.4)	3/4"	Upright	11.2	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY5111, TY5130, TY5150	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Ethanol, Acetone	0.4	(16.0)	N/A		6	(1.8)	37 1/3	(11.4)	3/4"	Upright	11.2	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY5111, TY5130, TY5150	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	IPA	0.5	(20.0)	N/A		6	(1.8)	37 1/3	(11.4)	3/4"	Upright	11.2	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY5211, TY5231, TY5251	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Heptane, Hexane, Gasoline	0.4	(16.0)	0.4	(16.30)	6	(1.8)	35 11/12	(10.9)	3/4"	Pendent	11.2	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY5211, TY5231, TY5251	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Ethanol, Acetone	0.4	(16.0)	N/A		6	(1.8)	35 11/12	(10.9)	3/4"	Pendent	11.2	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY5211, TY5231, TY5251	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	IPA	0.5	(20.0)	N/A		6	(1.8)	35 11/12	(10.9)	3/4"	Pendent	11.2	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY7151	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Heptane	0.5	(20.0)	0.5	(20.37)	6	(1.8)	37 1/4	(11.4)	3/4"	Upright	16.8	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY7151	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Acetone	0.5	(20.0)	N/A		6	(1.8)	37 1/3	(11.4)	3/4"	Upright	16.8	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY7151	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Heptane	0.5	(20.0)	0.5	(20.37)	6	(1.8)	35 11/12	(10.9)	3/4"	Pendent	16.8	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
TY7151	Automatic Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Acetone	0.5	(20.0)	N/A		6	(1.8)	35 11/12	(10.9)	3/4"	Pendent	16.8	



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft ²	(mm/min)	gpm/ft ²	(mm/min)	ft	(m)	ft	(m)				
B1 (upright)	Air-Aspirating Deluge Type Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Heptane	0.2	(8.0)	0.3	(12.22)	6	(1.8)	37 7/12	(11.5)	1/2"	Upright	2.8	K-factor is 3.0.



Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Min Solution Application Rate		Max Subsequent Water Application Rate		Min Installation Height		Max Installation Height		Connection	Orientation	K-Factor	Footnote
					gpm/ft²	(mm/min)	gpm/ft²	(mm/min)	ft	(m)	ft	(m)				
B1 (pendent)	Air-Aspirating Deluge Type Foam Water Sprinkler	3%	For use with proportioners specifically tested with this concentrate, pre-mixed solution, or FM Approved variable viscosity proportioners within acceptable viscosity range.	Heptane	0.2	(8.0)	0.3	(12.22)	6	(1.8)	35 7/12	(10.8)	1/2"	Pendent	2.8	K-factor is 3.0.

Details

Category	Foam Extinguishing Systems, Low Expansion
Class of Work	5135 - Low Expansion Foam Systems
Approval Standard	FM 5130 - Foam Extinguishing Systems
Certification Type	FM Approved

Company

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 Approvals

Concentrate Type	AR-SFFF
Listing Country	United States of America