Approvals

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

Low Expansion Foam System Using HD AR-AFFF 3x3-C6 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 below is compatible with both fresh and sea water.

Product	Concentrate Type	Concentrate % in Water	Configuration	Approved Fuel Hazards
HD AR-AFFF 3x3-C6 3%	AR-AFFF 3x3 C6	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.	Hydrocarbon, IPA, Ethanol

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 Tank	Bladder Tank	3%	Vertical	Hydrocarbon, IPA, Ethanol	Model CV	1, 1 1/2, 2	(25, 40, 50)	30	(2.1)	175	(12)	ASME Section VIII Division 1	175	(12)	36-2000	(136-7571)
Horizontal Bladder Tank	Bladder Tank	3%	Horizontal	Hydrocarbon, IPA, Ethanol	Model CV	1, 1 1/2, 2	(25, 40, 50)	30	(2.1)	175	(12)	ASME Section VIII Division 1	175	(12)	36-4000	(136-15142)

Proportioners

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

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Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Approved Flow Range		Approved Pressure Range		Connection	Construction Material	Sizes	
					gpm	(Lpm)	psi	(bar)			in	(mm)
ModelRCW-B, RCW-S, RCF-B, RCF-S Ratio Controllers	Ratio Controller	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	132-272	(500-1030)	30-175	(2-12)	Wafer (RCW) or Flanged (RCF)	Bronze (B) or Stainless Steel (S)	2 1/2	(65)
ModelRCW-B, RCW-S, RCF-B, RCF-S Ratio Controllers	Ratio Controller	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	478-11622	(1810-6140)	30-175	(2-12)	Wafer (RCW) or Flanged (RCF)	Bronze (B) or Stainless Steel (S)	4	(100)
ModelRCW-B, RCW-S, RCF-B, RCF-S Ratio Controllers	Ratio Controller	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	1321-3249	(5000-12300)	30-175	(2-12)	Wafer (RCW) or Flanged (RCF)	Bronze (B) or Stainless Steel (S)	6	(150)
ModelRCW-BM, RCW-SM, RCF-BM, RCF-SM Ratio Controllers	Ratio Controller	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	44-139	(165-528)	30-175	(2-12)	Wafer (RCW) or Flanged (RCF)	Bronze (B) or Stainless Steel (S)	2 1/2	(65)
ModelRCW-BM, RCW-SM, RCF-BM, RCF-SM Ratio Controllers	Ratio Controller	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	217-814	(820-3080)	30-175	(2-12)	Wafer (RCW) or Flanged (RCF)	Bronze (B) or Stainless Steel (S)	3	(80)
ModelIE225-7B, IE225-7S, IE225-12B, IE225-12S Portable Inline Inductors	Inline Inductor	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	59	(225)	100 or 175	(7 or 12)	Hose Coupling	Bronze (B) or Stainless Steel (S)	2 1/2	(65)
ModelIE450-12B, IE450-12S Portable Inline Inductors	Inline Inductor	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	119	(450)	175	(12)	Hose Coupling	Bronze (B) or Stainless Steel (S)	2 1/2	(65)

Note: Maximum static pressure is 200 psi (13.8 bar)

Topside Discharge Devices

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

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Product	Type of Equipment	Concentrate % in Water	Configuration	Approved Fuel Hazards	Approved Flow Range		Approved Pressure Range		Connection	Construction Material	Sizes	
					gpm	(Lpm)	psi	(bar)			in	(mm)
ModelFCA 65 and FCA-S 65 Foam Chambers	Foam Chamber	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	42-152	(158-575)	50-100	(3.5-7)	Flanged	Carbon Steel or Stainless Steel (S)	2 1/2	(65)
ModelFCA 80 and FCA-S 80 Foam Chambers	Foam Chamber	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	83-277	(314-1048)	50-100	(3.5-7)	Flanged	Carbon Steel or Stainless Steel (S)	3	(80)
ModelFCA 100 and FCA-S 100 Foam Chambers	Foam Chamber	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	159-666	(600-2520)	50-100	(3.5-7)	Flanged	Carbon Steel or Stainless Steel (S)	4	(100)
ModelFCA 150 and FCA-S 150 Foam Chambers	Foam Chamber	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	387-872	(1465-3300)	50-100	(3.5-7)	Flanged	Carbon Steel or Stainless Steel (S)	6	(150)
ModelFMA 50 and FMA-S 50 Foam Maker	Foam Maker	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	60-96	(227-365)	75-100	(5.2-7)	Flanged	Carbon Steel or Stainless Steel (S)	2	(50)
ModelFMA 65 and FMA-S 65 Foam Maker	Foam Maker	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	41-148	(155-560)	50-100	(3.5-7)	Flanged	Carbon Steel or Stainless Steel (S)	2 1/2	(65)
ModelRPA 65 and RPA-S 65 Rimseal Foam Pourers	Rimseal Pourer	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	14-148	(54-560)	50-100	(3.5-7)	Flanged	Carbon Steel or Stainless Steel (S)	2 1/2	(65)
ModelBP225-4.2, BP225-7, BP450-B7 Foam Branch Pipes	Branch Pipe	3%	For use with HD Fire Protect bladder tanks and discharge devices as appear in the FM Approval Guide only.	Hydrocarbon, IPA, Ethanol	59 or 119	(225 or 450)	100	(7)	Hose Coupling	Aluminum	2 1/2	(65)

Foam Chambers are fitted with glass or graphite vapor seals designed to rupture upon system discharge. Maximum permissible back pressure is 1 psi.

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.

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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		Construction Material	Connection	Orientation	K-Factor
					gpm/ft²	(mm/min)	gpm/ft²	(mm/min)	ft	(m)	ft	(m)				
ModelF1 and H Foam Water Sprinklers	Deluge Foam Water Sprinkler	3%	For use with HD Fire Protect bladder tanks and ratio controllers as appear in the FM Approval Guide only.	Hydrocarbon	0.3	(12)	0.3	(12.22)	4 - 6	(1.4)	12 - 6	(3.8)	Stainless Steel (F1) or Bronze (H)	1/2" BSP or NPT	Pendent	2.9
ModelF1 and H Foam Water Sprinklers	Deluge Foam Water Sprinkler	3%	For use with HD Fire Protect bladder tanks and ratio controllers as appear in the FM Approval Guide only.	IPA	0.3	(12)	N/A		4 - 6	(1.4)	12 - 6	(3.8)	Stainless Steel (F1) or Bronze (H)	1/2" BSP or NPT	Pendent	2.9
ModelF1 and H Foam Water Sprinklers	Deluge Foam Water Sprinkler	3%	For use with HD Fire Protect bladder tanks and ratio controllers as appear in the FM Approval Guide only.	Ethanol	0.3	(12)	N/A		4 - 6	(1.4)	12 - 6	(3.8)	Stainless Steel (F1) or Bronze (H)	1/2" BSP or NPT	Pendent	2.9
ModelHD101 and HD201 Foam Water Sprinklers	Automatic Foam Water Sprinkler	3%	For use with HD Fire Protect bladder tanks and ratio controllers as appear in the FM Approval Guide only.	Hydrocarbon	0.3	(12)	0.3	(12.22)	9 - 1	(2.8)	12 - 11	(3.9)	Brass, Chrome, Painted, or White Painted	1/2" BSP or NPT	Pendent	5.6

Approvals

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		Construction Material	Connection	Orientation	K-Factor
					gpm/ft²	(mm/min)	gpm/ft²	(mm/min)	ft	(m)	ft	(m)				
ModelHD101 and HD201 Foam Water Sprinklers	Automatic Foam Water Sprinkler	3%	For use with HD Fire Protect bladder tanks and ratio controllers as appear in the FM Approval Guide only.	IPA	0.3	(12)	N/A		9 - 1	(2.8)	12 - 11	(3.9)	Brass, Chrome, Painted, or White Painted	1/2" BSP or NPT	Pendent	5.6
ModelHD101 and HD201 Foam Water Sprinklers	Automatic Foam Water Sprinkler	3%	For use with HD Fire Protect bladder tanks and ratio controllers as appear in the FM Approval Guide only.	Ethanol	0.3	(12)	N/A		9 - 1	(2.8)	12 - 11	(3.9)	Brass, Chrome, Painted, or White Painted	1/2" BSP or NPT	Pendent	5.6

FM Approved at a minimum spacing of 10 ft. x 10 ft.

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
Concentrate Type	AR-AFFF C6
Listing Country	India

Company

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