



Firefighting Foam Concentrates

Protecting what matters



Protecting lives, the environment and critical assets



Petro-chemical Processing

High-risk facilities such as refineries, pharmaceutical plants, process areas, warehouses and rail/loading racks require very specific solutions depending on the chemicals on site. UL and EN1568 are the most applicable standards in this sector. Best suited foams are:

Alcoseal^{C6} (AR-FFFP)
Tridol^{C6} ATF (AR-AFFF)
Respondol ATF (AR-FF)



Storage Tank Farms

Lightning strikes within a tank farm can result in catastrophic consequences. Also boil-overs in crude oil storage tanks can develop rapidly into multi-tank fires. EN, LASTFIRE and UL approved foams and devices offer the best protection.

Tridol^{C6} Ultra 1-3% (AR-AFFF)
FP70^{C6} (FP)
Tankmaster^{C6} (FP)
Respondol ATF (AR-FF).



Off-shore & FPSO

Many off-shore installations are found in hostile environments dominated by extreme temperatures. In addition, space and weight are always at a premium on off-shore facilities. That is why a foam concentrate with a low induction rate is essential to minimise storage space. For Off-shore and FPSO Angus Fire offers

Tridol^{C6} S1 (AFFF)
Niagara^{C6} (AR-FFFP)



Municipal Fire and Rescue & Civil Defence

Local fire and rescue services face a broad range of risks and therefore require high performance foams, that not only rapidly extinguish fires but also prevent reignition. For municipal fires UL and EN 1568 approved foams are recommended.

Respondol ATF (AR-FF)
Niagara^{C6} (AR-FFFP)
 For training purposes Angus Fire offers
Trainol (synthetic based)
TF (protein based).



Aviation

Airport fires can rapidly escalate into major incidents as jet fuels are highly combustible and release tremendous amounts of heat. To create a survivable environment firefighters need high performance foams, which are also film-forming.

Angus Fire's **JetFoam ICAO - C** (FF) is the world's first film-forming, fluorine free, 100% biodegradable ICAO Level C foam. Others with ICAO Level B or C listing are:
JetFoam (FF)
Tridol^{C6} ICAO - C (AFFF)



Liquefied Natural Gas (LNG)

The production of LNG is on the rise and with that the storage and processing facilities of LNG are growing in their size and complexity. Accidental release into collecting ponds presents a serious risk of violent ignition. The operating temperatures can range from -161 to +1300°C. For this highly challenging risk use a slow draining, high expansion foam in total flooding applications.

Expandol (Hi-Ex)

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Respondol ATF

- Highest performing fluorine free foam for use on hydrocarbon & polar solvent risks.
- Lower viscosity than other fluorine free foams to ensure easy induction.
- Ideal for use in fire trucks, mobile equipment and engineered systems.
- 3% induction on both hydrocarbon and polar solvent risks.



EN1568:2008
Parts 3 & 4



JetFoam ICAO Level B & C

- World's first film-forming, fluorine free foam for extinguishing JetA and JetA1 fuels.
- ICAO Level B and C certified.
- Fast knock-down and extinguishment.
- True Newtonian, flows like water to ensure accurate, easy induction and airport crash vehicle compatibility.
- 100% biodegradable.



Tankmaster^{C6}

- Highest quality FluoroProtein foam for extinguishing particularly deep seated tank fires.
- Highly fluid foam for rapid fire knockdown and extinguishment.
- Extraordinary burnback resistance and post-fire security.
- Detergent-free for high resistance to fuel pick-up.



EN1568:2008
Part 3



Expandol

- Superior quality high expansion foam for extinguishing flammable hydrocarbon liquid fires.
- Expandol produces large volumes of foam, which totally seals off and extinguishes any remaining fires.
- The high water content of medium expansion foam produces a valuable cooling effect.
- Especially suited for marine and LNG applications.

EN1568:2008
Parts 1 & 2



Niagara^{C6}

- A superior quality Alcohol Resistant Film-Forming FluoroProtein (AR-FFFP) foam for extinguishing and securing both flammable hydrocarbon and polar solvent liquid fires.
- Easy pouring and induction, even at -18°C (0°F).
- Extremely low environmental impact.
- Detergent-free for high resistance to fuel pick-up.
- Film-forming foam with fast knockdown.



EN1568:2008
Parts 3 & 4



Tridol Ultra^{C6}

- High performing, cost-effective Alcohol Resistant Aqueous Film-Forming Foam (AR-AFFF) for extinguishing flammable hydrocarbon and polar solvent liquid fires.
- Film-forming on hydrocarbons & polar solvents for fast flame knockdown and extinguishment.
- Superior burnback resistance and post-fire security as foam blanket and film re-seals when ruptured by personnel or equipment.



EN1568:2008
Parts 3 & 4



		Induction rate %	Core Chemistry Synthetic / Protein	Hydrocarbon and/or polar solvents HC & PS
Fluorine Free Foam	FF & AR-FF - Fluorine Free (for Class A & B fires)			
	Respondol ATF	3 x 3	S	HC & PS
	Respondol ATF	3 x 6	S	HC & PS
	JetFoam ICAO-C	3 or 6	S	HC
	JetFoam	1 or 3 or 6	S	HC
	Syndura	6	S	HC
	Class A			
	Forexpan	0.1 - 3	S	Class A
	Hi-Combat A	0.1 - 1	S	Class A
	Hi-Ex - High Expansion			
Expandol	1 - 6	S	Hi-Ex	
Expandol LT	1 - 6	S	Hi-Ex	
C6 Fluorinated Foam	FP - Fluoroprotein			
	Tankmaster ^{C6}	3	P	HC
	FP70 ^{C6}	3	P	HC
	FP350 ^{C6}	3	P	HC
	FP600 ^{C6}	6	P	HC
	FFFP - Film Forming Fluoroprotein			
	Petroseal ^{C6}	3	P	HC
	Petroseal ^{C6}	6	P	HC
	AR-FFFP - Alcohol Resistant Film Forming Fluoroprotein			
	Niagara ^{C6}	3 x 3	P	HC & PS
	Alcoseal ^{C6}	3 x 3	P	HC & PS
	Alcoseal ^{C6}	3 x 6	P	HC & PS
	Alcoseal ^{C6} LT	3 x 6	P	HC & PS
	AFFF - Aqueous Film Forming Foam			
	Tridol ^{C6} S1 Zero	1	S	HC
	Tridol ^{C6} S1	1	S	HC
	Tridol ^{C6} ICAO-C	3	S	HC
	Tridol ^{C6} S3	3	S	HC
	Tridol ^{C6} S3 LT	3	S	HC
	Tridol ^{C6} C3	3	S	HC
	Tridol ^{C6} S6	6	S	HC
	Tridol ^{C6} S6 LT	6	S	HC
	Tridol ^{C6} C6	6	S	HC
	AR-AFFF - Alcohol Resistant Aqueous Film Forming Foam			
	Tridol ^{C6} ATF Ultra	1 x 3	S	HC & PS
	Tridol ^{C6} ATF C 3 x 3	3 x 3	S	HC & PS
	Tridol ^{C6} ATF 3 x 3 LT	3 x 3	S	HC & PS
Tridol ^{C6} ATF C 3 x 6	3 x 6	S	HC & PS	
Tridol ^{C6} ATF 3 x 6 LT	3 x 6	S	HC & PS	
Fluorine Free	TF - Training Foam			
	Trainol	1 or 3 or 6	S	Training foam
	TF	3 or 6	P	Training foam



Hi-Combat Low Expansion Foam Branchpipes

- Long performance branchpipes for fighting spill fires from a safe distance.
- Available in three models with flow rates of 225, 450 and 900l/min at 7 bar g.
- Self-inducing versions of F225/SI and F450/SI models supplied with foam pick-up tube and piercer.
- All models produce finished foam at nominal expansion of 10:1 with a throw of up to 24m.



Hi-Combat Turbex Foam Generator

- High expansion foam generator for fast flooding of inaccessible spaces, producing up to 200m³ of expanded foam per min.
- Water by-pass system allows performance to be maintained while working against high back pressures.
- 30m of expandable polythene ducting.
- Self-inducing facility.
- Can also be used for smoke extraction and positive pressure ventilation.



Top Pourer Sets – TPS MK4 / TPS MK5

- Used with fixed roof storage tanks for the protection of flammable liquids.
- Calibrated with the available pressure to match the specific flow demanded by the individual tank.
- Two types available with flow rates from 75lpm up to 3,300lpm at operating pressures between 3 bar and 10bar.
- MK5 is used in tanks with internal pressure below 1.5psi. MK4 is used in tanks having nitrogen or other inert gas blankets.



Bipod & Titan Foam Monitors

- Self-inducing, portable, low expansion foam monitors for small tank farms.
- Available in three models with flows of 1800l, 2700l and 4500l /min at 7 bar inlet pressure respectively.
- Each inlet has a integral non return valve to ensure continuous operation in the event of a hose failure.



Hi-Combat AF120

- Self-contained mobile foam unit, developed for fast response by a single person.
- Standard unit comprises a 120 litre foam tank, UNI-225 inductor, F225/ HU low expansion foam branchpipe and two lengths of Duraline firehose.
- GRP foam tank suitable to contain all foam types.



Foam Water Nozzles

- Open, air aspirating discharge heads made from stainless steel designed for installation as part of an engineered fire protection system.
- Used in high risk situations where mixed risk flammable liquids are stored.
- Suitable for low expansion foam applications as well as water cooling application.

Firefighting foams you can rely on.

Firefighting foam is an incredibly complex mixture of chemicals. It is tasked with being stored for many years, then instantly proportioned and diluted with water at up to 99 times, and still required to create 'the perfect bubble'. This bubble then needs to cope with high temperatures, fuel contamination and vapours trying to push their way through to the surface.

The environmental impact of fire-water runoff has made headlines throughout the world. Firefighting operations, training and testing continue to be the focus of intense scrutiny throughout Europe, the USA and Canada as well as Australia and New Zealand. Responsible manufacturers are going further to consider the environmental impact of their products, as much as their performance and reliability.

As the responsible foam manufacturer, Angus Fire is committed to meeting our customers' varied requirements and exceeding the latest test standards. We continue to develop the highest performing foam concentrates with a wide range of approvals whilst considering increased environmental demands. Our fluorine free foams are composed of 100% biodegradable materials and will not persist in the environment. Angus Fire's technology-leading foams and our wealth of experience in firefighting industry, ensure our customers have the best selection, when choosing their foam concentrate. Whatever the application rate, the expansion required (low, medium or high) and whatever the preferred chemistry, fluorine free or C6, Angus fire has the solution for you.



Services from Angus Fire

Supporting firefighting professionals every day

Monnex

Monnex™ is the world's most trusted high performance dry chemical powder for Class B, C and E flammable materials. It is used in high risk situations where flammable liquids are stored, processed or transported. Monnex™ is particularly effective against fires involving LNG, alcohols, ketones and esters, which are more difficult for conventional firefighting agents. That is why petrochemical facilities prefer to use Monnex™. The aviation industry requires rapid knockdown of the critical area, where passengers and fire crews are present. Monnex™ is especially effective on aviation fuel and achieves a very rapid knockdown. Monnex™ can be used in hand-held fire extinguishers, in trolley units or on fire trucks.



Foam Testing Service

Angus Fire's independent foam testing service includes a suite of tests and delivers a comprehensive, unbiased and reliable test result. For many flammable liquid risks, fire fighting foam is the preferred extinguishing medium; therefore it is vital that it performs when called upon during any stage of its operational life. Regardless of how thoroughly they were developed and tested, foam concentrates can be subjected to harsh climatic conditions outside their intended design criteria or be accidentally spoiled due to contamination or by dilution with water. That is why annual testing is vital and is recommended by many international standards. To find out more about testing service visit our website, www.angusfire.co.uk

Emergency Foam Service

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Angus Fire has a long-standing history of providing a global emergency service for the dispatch of firefighting foam concentrates. The emergency foam service operates 24 hours a day, every day. When an emergency call is received, Angus Fire directs its complete foam plant at the incident – foam stocks, orders awaiting dispatch and work in progress are assessed. At the same time, the logistics to deliver the foam are actioned. This may involve a fleet of road tankers and/or aircraft depending on the severity and location of the fire. Angus Fire can mobilise foam from 7 countries, and 4 factories.



Angus Fire Profile

Angus Fire is a global leader in firefighting technology. In more than 100 countries Angus Fire supplies fire safety products and services to customers operating in a wide range of industries such as oil and gas, international airports, harbours, ports, military bases, power stations, and fire and rescue services. Angus Fire is a global name with an impressive history of over 220 years in the firefighting industry. It is this rich heritage and associated expertise, which makes Angus Fire the preferred partner with firefighters worldwide.

