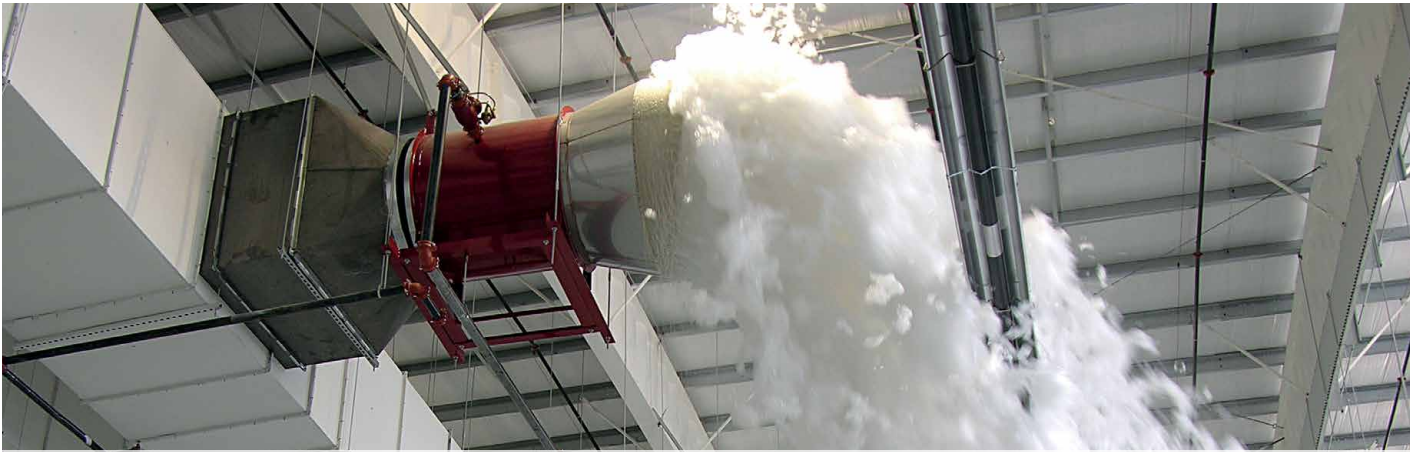


Firefighting Foam Suppression Technology



Performance Foam Concentrates



High-Performance Foam Concentrates

Since 1946, SABO FOAM concentrates have provided fire protection for life and property around the globe. Our new, state-of-the-art manufacturing and testing facility in Cologno Al Serio (Bergamo), Italy, builds on this seven decade legacy of high-performance fire suppression.

Advanced research, experienced technical service, unmatched customer support, 24-hour global logistics and exacting test services, in combination with manufacturing excellence, make SABO FOAM concentrates the industry choice for firefighting foams. Our existing range of concentrate products are designed to meet the most challenging fire hazards in civil, municipal, marine, industrial and military applications.

Applications and Environments

The SABO FOAM product line includes AFFF, AR-AFFF, Class A wetting agents, high-expansion, protein, fluoroprotein, and training foam concentrates.

With this wide array of product types, SABO FOAM concentrates offer fire suppression for a broad range of applications and environments.

- Petrochemical plants
- Refineries
- Tank farms
- LNG facilities
- Offshore platforms
- FPSO
- Airports
- Helistations
- Marine vessels
- Jetties
- Powerplants
- Industrial plants
- Military land base and naval applications
- Civil defense and municipal fire services
- Warehouses
- Training centers





AFFF

SABO FOAM Aqueous Film-Forming Foam (AFFF) Concentrates combine fluoro- and hydrocarbon-surfactant technologies to provide superior fire and vapor suppression for Class B hydrocarbon fuel fires. The aqueous film at the fuel/air interface provides an oxygen barrier, while the foam blanket cools the fuel and adjacent heat sources.

AR-AFFF

SABO FOAM Alcohol Resistant Aqueous Film-Forming Foam (AR-AFFF) Concentrates combine a water soluble polymer (polysaccharide) with AFFF surfactant technology to provide superior fire and vapor suppression for both Class B polar solvent as well as hydrocarbon fuel fires.

High-Expansion

SABO FOAM High-Expansion Foam Concentrates are flexible firefighting agents used in fighting Class A, Class B, and LNG fires both indoors and outdoors. Expansion ratios from 50:1 up to 1000:1 make them suitable for a multitude of applications including aircraft hangars, flammable liquid storage areas, and LNG facilities.

Class A

SABO FOAM Class A Foam Concentrates combine foaming and wetting agents for use in a variety of firefighting applications. They are effective in suppressing many deep-seated Class A fires, such as paper, tires, and wooden structures as well as wildland.

Protein

SABO FOAM Protein Foam Concentrates utilize hydrolyzed protein in combination with foam stabilizers, bactericides, corrosion inhibitors, freeze point depressants and solvents for suppression of Class B hydrocarbon fuel fires. The protein foam blanket helps suppress fuel vapors and cool the flammable fuel surface.

Fluoroprotein

SABO FOAM Fluoroprotein Foam Concentrates combine hydrolyzed protein foam formulations with fluorochemical surfactants for fire suppression of Class B hydrocarbon fuel fires. In addition to cooling and vapor suppression, the fluoroprotein foam blanket helps create a barrier between the oxygen in the air and the hydrocarbon fuel surface.





Approvals and Listings

SABO FOAM concentrates are approved, listed, qualified under, or meet the requirements of various industry specifications and standards, including:

EN1568:2008

IMO1312

UL-162

IMO670

ICAO level B & C

MED B and D

Periodic testing is required to check physical properties and fire suppression performance of foam concentrates. As an integral part of SABO FOAM customer support, Johnson Controls Foam Analytical Services offers concentrate sample analysis.

SABO FOAM Concentrates

SABO FOAM Concentrates		Proportioning Rate				Approvals, Listings, Standards							
		Fuel Type			Training	EN1568: 2008 Part(s)	Freezing Point °C	UL	Minimum Use Temperature °C (per UL)	GESIP l/m²/ min	ICAO Level	IMO	
		Hydrocarbon	Polar Solvent	Class A								MSC.1/ Circ.1312	MSC/ Circ.670
AFFF - Hydral	1 C	1%				1,3	-17				B		
	1 S	1%						UL-162	2				
	1 M	1%				1,3	-18				B	MED B/D	
	3 C	3%				1,3	-5			2	B		
	3 S	3%				3	-2	UL-162	2				
	3 M	3%					-18				B	MED B/D	
	3 ICAO C	3%					-3				C		
	3 FP	3%				3	-35	UL-162	-29		B		
	6 C	6%				1,3	-5			2	B		
	6 S	6%						UL-162	2				
6 ICAO C	6%					-6				C			
AR-AFFF Hydral AR	1-1 FP	1%	1%			3,4	-20	UL-162	-18				
	1-3 S	1%	3%			1,3,4	-4	UL-162	2	2			
	3-3 S+	3%	3%			3,4	-5	UL-162	2				
	3-3 XS	3%	3%			1,3,4	-4	UL-162	2	2			
	3-3 C	3%	3%			1,2,3,4	-15				B	MED B/D	
	3-6 S	3%	6%						2				
Protein Foamin	P3	3%					-12	UL-162	-7				
	P6	6%					-12						
Fluoroprotein													
Apirol	FX3 C	3%				1,3	-12	UL-162	-7	2.5		MED B/D	
	FX6 C	6%				1,3	-12	UL-162	-7				
Univex	3-3 M	3%	3%			1,3,4	-15				B	MED B/D	
High-Expansion													
Plurex	M	3%				1,2	-10						MED B/D
	MD3	3%				1,2,3	-15						
Class A													
Plurex	A			0.1% to 1%			-10						
Training - for training purposes only - not intended for actual firefighting application													
Plurex	TF3				3% or 6%		-2						

Available through SABO FOAM local production in Italy

	Proportioning Rate	Approvals, Listings, Standards	Minimum Use Temperature °C
Class A			
ANSUL® Silv-Ex Plus	0.1% to 1%	USDA/USFS Spec 307a listed	-1

Refer to the latest product technical data sheet for additional physiochemical properties and application information.

About Johnson Controls' Building Technologies and Solutions

Johnson Controls' Building Technologies & Solutions is making the world safer, smarter and more sustainable – one building at a time. Our technology portfolio integrates every aspect of a building – whether security systems, energy management, fire suppression or HVACR – to ensure that we exceed customer expectations at all times. We operate in more than 150 countries through our unmatched network of branches and distribution channels, helping building owners, operators, engineers and contractors enhance the full lifecycle of any facility. Our arsenal of brands includes some of the most trusted names in the industry, such as Tyco®, YORK®, Metasys®, Ruskin®, Frick®, PENN®, Sabroe®, Simplex®, Grinnell® and SABO FOAM.

SaboFoam

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**For more information, contact your regional SABO FOAM
product representative or visit www.sabofoam.com**