



vaPUREx[®] AR 3/3 F-5 #8342

ALCOHOL RESISTANT FOAM CONCENTRATE

Description

vaPUREx[®] AR 3/3 F-5 is a fluorine-free¹, synthetic, alcohol-resistant firefighting foam agent which is designed to yield a particularly high-performing firefighting foam. It is based on special surface-active ingredients, polymer film formers, foam stabilisers and antifreeze additives, which largely derive from renewable raw materials.

vaPUREx[®] AR 3/3 F-5 is made without any adding of fluorine, silicon organic compounds or preservatives meeting the highest standards² in terms of environmental performance.

Properties

vaPUREx[®] AR 3/3 F-5 is certified according to EN1568:2018 for all foam-types (low-, medium- and high expansion foam). It can be used with fresh water, salt water, brackish water and treated industrial water (without anti-foam additives). The low expansion foam shows reduced crust-formation and provides an exceptionally high water retention capacity making the foam blanket of vaPUREx[®] AR 3/3 F-5 particularly heat-stable, resistant to air movements and gastight.

Another unique feature are special viscoelastic properties of vaPUREx[®] AR 3/3 F-5-low expansion foam blankets enabling excellent spreading and self-sealing of openings (e.g. caused by stepping into the foam). This effectively suppresses the re-ignition of areas which have been already extinguished, and consequently refreshing or topping up the foam blanket becomes less frequent.

Application

vaPUREx[®] AR 3/3 F-5 can be expanded to give low-, medium- or high-expansion foam using any commercially available foaming equipment. Since fluorine free foams do require a certain minimum foam quality, make sure the expansion ratio is sufficient (>5ltr/kg). Application of non-expanded foam solution is only effective on Class A-fires under certain conditions but will not be so on class B-fires.

The proportioning ratio is 3 % v/v for fires of non-polar and polar hydrocarbons.

vaPUREx[®] AR 3/3 F-5 may require a forced admixture. The suitability of the proportioning technique and/or device should be checked beforehand. Please contact us for advice on suitable equipment or a corresponding test. The use in fixed extinguishing systems requires a preliminary in-depth-review of the system and the entire concept. We would be glad to assist – please contact us for more details.

vaPUREx[®] AR 3/3 F-5 foam is very stable and resistant to many chemicals and is therefore ideal for vapour-tight coverage of spills and leakages. This makes it

particularly suitable for direct application on liquid hydrocarbons which are not miscible with water (e.g. mineral oils, petrol and diesel fuels).

A strong polymer film forms on polar hydrocarbons as a safe protection of the foam blanket against the destructive effect of the fuel. Fires of polar liquids should be extinguished with gentle foam application, e.g. via pourers or foam deflectors pointing to the tank wall, in order to achieve best extinguishing performance (see Technical Bulletin TM 037 "Extinguishing alcohol fires").

For use as a wetting agent on class A-fires, vaPUREx[®] AR 3/3 F-5 can be proportioned from 0.5 % onwards.

For extinguishing applications in electrical systems, please consider the DIN/VDE- 0132 standard.

Environment

All of the raw materials used in our products are fully bio-degradable, non-persistent and free of halogenated organic compounds or silicon organic compounds.

Compatibility with other foam concentrates

Mixing for immediate use:

vaPUREx[®] AR 3/3 F-5 as a concentrate must not be mixed with other foam extinguishing concentrates. Even the smallest quantities may render both the products and the resulting mixture unusable. We recommend to thoroughly rinse admixing units before changing the product.

Mixing for long term storage:

See above

Mixing with synthetic concentrates:

See above

Mixing with other expanded foams:

vaPUREx[®] AR 3/3 F-5 foam is compatible in use with all other ready-made extinguishing foams.

Compatibility with powder

Data on compatibility with extinguishing powders are usually generated by the manufacturers of the extinguishing powders. Test data on the compatibility of vaPUREx[®] AR 3/3 F-5 are not yet available.

Packaging

vaPUREx[®] AR 3/3 F-5 is available in plastic cans, and -drums, IBC (totes) and in bulk.

¹ We define fluorine-free products as being manufactured without the intentional addition of fluoro-organic compounds for the purpose of improving performance in such a way that they do not contain any PFAS

in excess of the ubiquitous regional background contamination (e.g. in the drinking water used for manufacture).

² Extensive toxicology testing of vaPUREx[®] AR 3/3 F-5 proves an exceptionally low toxicity for aquatic life and life in soil

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Storage

vaPUREx® AR 3/3 F-5 can be stored long term in the originally sealed containers as well as in suitable storage tanks. If stored according to our recommendations, a life expectancy of >10 years is possible.

The efficacy of vaPUREx® AR 3/3 F-5 is neither affected by high ambient temperatures up to +50°C nor by temporary freezing below the indicated frost resistance limit (see technical information TI 014 'Storage of synthetic foam concentrates').

Prior to replenishment we recommend a quality check by our laboratory of the existing stock of vaPUREx® AR 3/3 F-5.

Shelf Life

vaPUREx® AR 3/3 F-5 has an expected shelf life of >10 years, if stored according to our recommendations (see technical info leaflet TM014 'Storage of Synthetic Fire Extinguishing Foam Concentrates').

Conformity/Listings

vaPUREx® AR 3/3 F-5 is type tested and certified as fire extinguishing agent for class A + B fires according to the following standards:

DIN EN
1568

EN 1568:2018 - Certificate No.: 20201429/Sth 307

Part 1: Medium ex.

Part 2: High ex.

Part 3 (Heptane): IA/IA

Part 4 (Aceton): IA/IA --- (IPA): IA/IA

Physical properties and technical data		vaPUREx® AR 3/3 F-5	
Recommended induction rate	3%	low expansion foam	solid materials + non-polar liquids
	3%	medium expansion foam	solid materials + non-polar liquids
	3%	high expansion foam	solid materials + non-polar liquids
	3%	low expansion foam	polar liquids
Foam expansion* (according to EN 1568)	5-10	low expansion foam	
	50-100	medium expansion foam	
	500-1000	high expansion foam	
25%/50% water drainage time* (according to EN 1568)	> 60min	> 90min	low expansion foam
	> 50min	> 80min	medium expansion foam
	> 60min	> 90min	high expansion foam
Colour	blue		
pH value	at 20°C	6,0 - 9,5	
Density	at 20°C	1,040 ± 0,02 g/ml	
Sediments	none		
Frost resistance	-5°C		
Viscosity	at 20°C	< 1100 (400)	mPa*s bei 75(375) 1/s
	at 0°C	< 1400 (600)	mPa*s bei 75(375) 1/s
	at -5°C	< 1600 (700)	mPa*s bei 75(375) 1/s
Environmental acceptability	vaPUREx® AR 3/3 F-5 is fully biodegradable. See material safety data sheet for further information.		
Special notes	vaPUREx® AR 3/3 F-5 poses no health risk upon its intended use as fire extinguishing foam. Firefighting training and testing may require prior permit by local authorities. When spraying persons with foam consider that they will not be able to breathe whilst covered with foam. See material safety data sheet for more information.		



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