

TOWALEX UNIVERSAL 3x3 Fluoroprotein Alcohol Resistant 3% Foam

Features

- 3% alcohol resistant concentrate
- Newtonian viscosity
- IMO approved
- Freeze protected to -15°C
- For use on both hydrocarbon and polar solvents
- For use with aspirating discharge devices
- Suitable for use with fresh, salt or hard water
- Supplied ready to use in 20, 25, 200 or 1000 litres packaging

Description

TOWALEX UNIVERSAL 3x3 is a totally new formulated universal foam for severe and diversified Marine applications especially on chemical tankers. It is a superior alcohol resistant fluoroprotein foam concentrate for extinguishing flammable hydrocarbon and polar solvent liquid fires at a unique 3% induction ratio.

TOWALEX UNIVERSAL 3x3 protein base provides highly stable foams with drainage times that do not suffer from extreme heat conditions in large tank fires. Unlike other alcohol resistant like AR-AFFF foam concentrates, it has the fluidity and low viscosity of a regular protein foam concentrate.

TOWALEX UNIVERSAL 3x3 is the right choice for maximum safety and cost-effectiveness for hydrocarbons and polar solvent fires.

Performance

TOWALEX UNIVERSAL 3x3 is measured against specifications and standards such as latest Marine IMO circular 1312 on Heptane, Acetone and Isopropanol.

When used with fresh or salt water or water of any hardness at the correct dilution and with most conventional foam making equipment, the expansion ratio will vary depending on the performance characteristics of the equipment. Air aspirating discharge devices produce expansion ratios from 6:1 to 12:1 depending primarily on type and flow rate. In general, the higher the flow rate the higher the expansion ratio.

Typical expansion ratios for air aspirating foam nozzles are in the range of 5:1 to 7:1, and for foam water monitors in the range of 4:1 to 8:1.



Application

TOWALEX UNIVERSAL 3x3 AR-Fluoroprotein Foam concentrate is intended for use on any Class B flammable liquids both on hydrocarbon fuels having low water solubility (crude oils, gasoline, diesel fuels, aviation fuels, etc.) and is also suitable for use on Polar solvent fuels having water solubility (Acetone, Isopropanol, MTBE, etc.). This concentrate can be used only with air aspirating type discharge devices.

It can also be used with foam compatible dry chemical extinguishing agents without regard to the order of application, to provide even greater fire protection capability.

Sea water can be used without an increase in the application rate.

TOWALEX UNIVERSAL 3x3 can be used by most conventional foam equipment such as:

- Balance pressure pump proportioning equipment
- Bladder tank and related proportioners
- Around-the-pump proportioners
- Fixed and portable In-line venturi type inductors
- Fixed or handline nozzles with fixed induction/pick up tubes

Approvals

The fire performance of TOWALEX UNIVERSAL 3x3 is measured and approved according to:

- IMO Msc Circ.1312 (Marine)
- MED B-D (Marine Equipment Directive)



Storage and Shelf Life

TOWALEX UNIVERSAL 3x3 has an operational temperature range of -13°C and +60°C. Limited exposure to temperatures above +60°C does not affect the firefighting performance.

When stored in the packaging supplied (polyethylene drums or pails) within the temperature limits specified, or in equipment recommended by the manufacturer as part of the foam system, the shelf life of TOWALEX UNIVERSAL 3x3 Fluoroprotein Foam Concentrate is generally in excess of 10 years.

The factors affecting shelf life and stability for SKUM foam agents are discussed in detail in our Technical Bulletin for storage recommendation.

If the product is frozen during storage or transportation, the concentrate should be thawed and used without any degeneration of the performance.

Safety and Handling

See our corresponding "Material Safety data sheet".

Compatibility

There are no specifications or standards which address the subject of compatibility of different manufacturer's brands of fluoroprotein foam concentrates. In an emergency or if the manufacturer has supporting test data to substantiate that the mixture meets the same requirements as the individual component concentrates, they may be mixed together in the same storage vessel.

Different types of foam concentrates, i.e., AFFF and fluoroprotein base should not be mixed under any circumstances.

For more information regarding specific guidelines about construction materials, please email info@skum.com

Quality Assurance

TOWALEX UNIVERSAL 3x3 – as with all TYCO Products – is subject to very stringent quality controls throughout all stages of production, from incoming raw to the complete product and is manufactured in an ISO 9001:2008 controlled facility. Quality assurance is therefore guaranteed.

Typical Properties at 20°C

■ TOWALEX UNIVERSAL 3x3	FP AR 3x3
■ Fire Classes	B
■ Shape and colour	Brown clear liquid
■ Smell	Characteristic, Protein
■ Density (20°C)	1.13 ±0.02 [g/ml]
■ pH (concentrate, 20°C - IMO 3.5)	6.0 - 8.0
■ Viscosity 20°C (IMO 3.4)	9.0 ±4.0 [mm ² /s]
■ Sediment (IMO 3.3)	≤ 0.25 [%]
■ Admixing ratio	3 [% Vol.]
■ Expansion Ratio (IMO 3.7)	≥ 7.0
■ Drain Time 25%, (20°C, IMO 3.8)	≥ 5:00 [min:s]
■ Drain Time 50%, (20°C, IMO 3.8)	≥ 9:00 [min:s]
■ Expansion	Low, (Medium)
■ Freezing Point	≤ -18 [°C]
■ Pour Point	≤ -15 [°C]
■ Recommended storage/ Usage temperature	-13 to +60 [°C]

Ordering Information

TOWALEX UNIVERSAL 3x3 can be supplied in cans, drums, totes or Bulk (contact us for Bulk delivery).

<u>Part No.</u>	<u>Description</u>
■ F513148C2	20 Litre can
■ F513148C1	25 Litre can
■ F513148D1	200 Litre drum
■ F513148T1	1000 Litre tote

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