



## Protein foam concentrate at 3% for Hydrocarbons Fires

### Product description

**FOAMIN P3** Protein Foam Concentrate is formulated from hydrolyzed protein, foam stabilizers (metal salts), bactericide, corrosion inhibitors, freezing point depressants and solvents. It is transported and stored as a concentrate to provide ease of use and considerable savings in weight and space.

It is intended for use as a 3% proportioned solution either in fresh, salt or hard water. The correct proportioning ratio is 3 parts of concentrate to 97 parts of water.

Two fire extinguishing mechanisms are in effect when using **FOAMIN P3**. First, a foam blanket is formed which works to prevent the release of fuel vapor. Second, the water content of the foam provides a cooling effect.

### Performances

**FOAMIN P3** is measured against specifications and standards such as Underwriters Laboratories Standard UL 162, latest edition.

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 8 to 1 to 12 to 1 depending primarily on type and flow rate. In general, the higher the flow rate the higher the expansion ratio. Thus, monitors and foam chambers normally produce higher expansion ratios than foam water sprinkler heads and hand held type nozzles.

Typical expansion ratios for foam chambers are in the range of 5 to 1 to 7 to 1, and for foam water sprinkler heads in the range of 3 to 1 to 6 to 1.

### Application

**FOAMIN P3** Protein Foam Concentrate is intended for use on Class B hydrocarbon fuels having low water solubility such as various crude oils, gasolines, diesel fuels, aviation fuels, etc. It is not suitable for use on fuels having appreciable water solubility (polar solvents), i.e., methyl and ethyl alcohol, acetone and methyl ethyl ketone. 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.

**FOAMIN P3** 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 inductor
- Fixed or handline nozzles or Monitors with fixed induction/pick up tubes



### Approvals

**FOAMIN P3** is approved or listed according to:  
UL-162  
IMO Msc / Circ. 582  
UK Defence Standard 42/40

### Storage and shelf life

**FOAMIN P3** Protein foam has an operational temperature range of  $-10^{\circ}\text{C}$  and  $+60^{\circ}\text{C}$ . Limited exposure to temperatures above  $+60^{\circ}\text{C}$  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 **FOAMIN P3** Protein Foam Concentrate is generally in excess of 10 years.

If the product is frozen during storage or transportation, thawing will render the product completely usable.

The factors affecting shelf life and stability for **FOAMIN Protein** Agents are discussed in detail in our Technical Bulletin for storage recommendation.

### 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 protein 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 fluoro-protein base should not be mixed under any circumstances.

### Quality insurance

**FOAMIN P3** – as with all TYCO Products – is subject to a very stringent quality controls throughout all stages of production, from incoming raw to the complete product and is manufactured in an ISO 9001:2000 controlled facility. Quality assurance is therefore guaranteed.

### Typical properties

|  |                               |
|--|-------------------------------|
| <b>FOAMIN P3</b>                             | P                             |
| <b>Fire Classes</b>                          | A and B                       |
| <b>Shape and color</b>                       | Brown clear liquid            |
| <b>Smell</b>                                 | Characteristic, Protein       |
| <b>Density (20°C)</b>                        | 1,16 ±0.02 [g/ml]             |
| <b>pH (concentrate, 20°C)</b>                | 7,0 ±0.5                      |
| <b>Viscosity 20°C</b>                        | 8,0 ±2,0 [mm <sup>2</sup> /s] |
| <b>Sediment (EN 1568)</b>                    | ≤ 0,25 [%]                    |
| <b>Admixing ratio</b>                        | 3 [% Vol.]                    |
| <b>Expansion Ratio (EN 1568-3)</b>           | ≥ 7,0                         |
| <b>Drain Time 25%, (20°C, EN 1568-3)</b>     | ≥ 5:00                        |
| <b>Drain Time 50%, (20°C, EN 1568-3)</b>     | ≥ 9:00                        |
| <b>Expansion</b>                             | Low, (Medium)                 |
| <b>Freezing Point</b>                        | ≤ -15[°C]                     |
| <b>Pour Point</b>                            | ≤ -12 [°C]                    |
| <b>Recommended storage/Usage temperature</b> | -10 to +60 [°C]               |

### Ordering information

**FOAMIN P3** can be supplied in cans, drums, totes or Bulk (contact us for Bulk delivery details).

|                    |                 |
|--------------------|-----------------|
| Part No. F603321C1 | 25 Liter can    |
| Part No. F603321D1 | 200 Liter drum  |
| Part No. F603321T1 | 1000 Liter tote |
| Part No. F603321B1 | Bulk (Liter)    |