High Expansion Systems

- High expansion ratio for rapid filling of voluminous enclosed spaces
- Quick extinguishment
- Efficient vapour suppression
- Lower water content for less material damage of high value items
- Multi-purpose use at low and medium expansion ratios

Overview

High and medium expansion systems are most effective in indoor spaces where they are used to submerge a fire and exclude the air needed to sustain combustion.

High expansion foam generators are typically mounted as part of a fixed system in the roof space of the protected area. Aeration for the foam either comes from within the building (inside air) as in HotFoam systems or externally (outside air) systems where the air comes from outside the building.

Performance

High expansion systems aim to create foam at an expansion ratio in excess of 600:1.

The reduced water content of the foam means that less water damage is inflicted on the items being protected within the site.

In addition speed with which the system can totally submerge the hazard in foam is a key measurement of performance and can dictate the number of foam generators required to protect the site.

High expansion foam works very well for three dimensional fires. Its functionality is based on 4 principles: smothering the insulation of the combustibles from air, penetrating effect of the water/foam solution and cooling.

Applications

High expansion foam is most effective in total flooding of spaces such as warehouses, engine rooms, transformer buildings, cable tunnels, underground storage facilities, basements, ships' holds, and aircraft hangars. As well as being used on liquid fires, it is also very effective for fires in combustible solids such as paper and wood.

The low water content of the foam means that less water damage is incurred and that goods are often still usable once the fire has been extinguished and the foam has subsided.

Although it is possible to breathe when submerged in high expansion foam, its voluminous nature means that it can impede escape from the site. For this reason high expansion systems are not recommended in areas where there are large numbers of people.

APPLICATIONS FOR HIGH EXPANSION SYSTEMS

- Aviation hangars
- Warehousing and storage facilities
- Marine
- Vapour suppression in chemical manufacturing and handling
- LNG facilities
- Municipal fire brigades

Advantages

Versatility:- can be used with a variety of hazards, providing the correct system design and foam concentrate are used.

Effectiveness:- can be used effectively indoors to quickly extinguish a fire whilst generally maintaining the integrity of the goods protected.

Approvals

SKUM is wholly committed to approving our foam hardware to the latest industry standards. SKUM foam High Expansion Foam systems hardware are tested and approved to the standards most appropriate to that industry, application and risk.

Varieties

SKUM offers a complete range of High Expansion Foam systems and types to meet most common applications. SKUM proprietary designed High Expansion Foam system equipment is manufactured at our facility in the UK and tailored to fit the needs of the customers application and system requirements.

SKUM Foam solutions

As a brand 'SKUM' is synonymous with fire-fighting foam:- SKUM literally means Foam in Swedish.

From its foundation in Sweden in the 1930's SKUM has become the global standard of foam fire suppression in high-risk, high-stake industries.

SKUM offers a complete range of foam agent concentrates designed with performance, efficiency and environmental impact in mind. Products are tested at internationally recognised facilities and approved to the standards most appropriate to that industry, usage and risk.

As a manufacturer of both foam hardware and foam agents, SKUM is able to supply single component needs as well as complete end-to-end systems. An unrivalled history of fire suppression experience and a dedicated Foam Technical Service Team mean that SKUM is happy to address and confident to meet any customer fire-fighting foam requirement.

tyco Fire Protection Products

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