Suppressit™

Bio-Based 3% Firefighting Foam with Enhanced Matrix Stability

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Executive Summary

Suppressit™ is a next-generation bio-based 3% firefighting foam engineered for reliable performance on both hydrocarbon and polar solvent fuel fires. The formulation is enhanced with proprietary bio-additives that reinforce foam matrix strength, extend drain time, and improve blanket durability under thermal stress. Designed for equipment-neutral deployment, Suppressit™ delivers operational reliability without requiring apparatus modification.

1. Industry Context

Fire departments and industrial operators require environmentally responsible foam solutions that maintain high suppression reliability. Operational demands include consistent vapor suppression, burn-back resistance, compatibility with existing systems, and predictable performance at standard 3% proportioning rates.

2. Technical Design Philosophy

Suppressit™ prioritizes structural integrity over maximum expansion. Bio-based surfactants combined with matrix-strengthening bio-additives enhance lamella stability and inter-bubble cohesion. This design approach produces a dense, durable foam blanket capable of prolonged surface sealing and resistance to radiant heat exposure.

3. Performance Characteristics

- Effective at 3% proportioning on hydrocarbon fuels (gasoline, diesel, jet fuel)
- Effective at 3% on polar solvent fuels (ethanol blends, methanol, acetone)
- Extended 25% and 50% drain times for sustained vapor suppression
- Enhanced foam matrix stability through bio-additive reinforcement
- Moderate expansion optimized for durability and adhesion

- Low viscosity concentrate enabling drop-in compatibility with standard systems

4. Operational Advantages

- No apparatus retrofit required
- Reduced reapplication frequency due to extended drain time
- Improved burn-back resistance under sustained heat
- Compatible with standard 3% proportioning systems and eductors
- Supports environmental transition initiatives

5. Environmental Profile

Suppressit™ utilizes a bio-based surfactant platform enhanced with environmentally conscious bio-additives designed to strengthen foam structure while supporting reduced environmental persistence. The formulation aligns with evolving regulatory expectations and responsible transition strategies for municipal and industrial fire protection programs.