



TECHNICAL DATA

**3% AFFF
MILITARY SPECIFICATION
FOAM CONCENTRATE
C-301 MS**

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

1. DESCRIPTION

C-301 MS 3% AFFF Military Specification Foam Concentrate is a specially formulated, synthetic, aqueous film forming foam concentrate. A vapor suppressing aqueous film is formed by the foam solution draining from the expanded foam blanket. It is intended for use at a proportioning rate of 3% (3 parts AFFF concentrate to 97 parts water) on Class B hydrocarbon type fuels such as gasoline, kerosene, diesel, etc. C-301 MS is not intended for use on fuels which are polar solvent/water miscible such as alcohols, ketones, esters, etc.

Features

- Suitable for use with fresh or sea water
- Military products are characterized by extinguishment speed
- Suitable for use with siliconized dry chemical extinguishing agents
- U.L. recommended application rate on hydrocarbon type fuels is .10/gpm ft².
- Excellent wetting characteristics when used in combating Class A fuel type fires
- Suitable for use with both air-aspirating foam and standard water fog nozzles
- Suitable for use with deluge or closed head foam water sprinkler systems
- If inadvertently frozen, thawing will render product completely serviceable again
- Suitable for use with carbon steel, fiberglass, polyethylene or stainless steel. Chemguard Military Spec AFFF is not compatible with galvanized pipe or fittings in an undiluted form.



2. LISTINGS AND APPROVALS

FM Approved - Low Expansion Foam Systems
UL Listed - Guide GFGV
QPL - MIL-F-24385F

3. TECHNICAL DATA

A. Typical Properties

(Not for specification purposes)

| | |
|---------------------------------|------------------------|
| NOMINAL USE CONCENTRATION: | 3% |
| SPECIFIC GRAVITY @ 77°F (25°C): | 1.079 |
| VISCOSITY @ 77°F (25°C): | 7 cps |
| MINIMUM STORAGE TEMPERATURE: | 35°F (2°C) |
| MAXIMUM STORAGE TEMPERATURE: | 120°F (49°C) |
| PH @ 77°F (25°C): | 7.9 |
| APPEARANCE: | Clear, Slightly Yellow |

Viking Technical Data may be found on The Viking Corporation's Web site at <http://www.vikinggroupinc.com>. The Web site may include a more recent edition of this Technical Data Page.

Aspirating type discharge devices typically generate expansion ratios between 6-10 to 1 when Military Spec AFFF is mixed with water at the correct ratio. Nonaspirating type devices will typically generate expansion ratios of between 2-4 to 1. Expansion ratios are dictated by the type of discharge device, flow rate and discharge pressure.

B. Ordering Information

| | | |
|-------------------------------|---------------------|---------------------|
| 5-Gallon Pails (19 liters) | 47 lb. (21.49 kg) | Part No. F14971/5 |
| 55-Gallon Drums (208 liters) | 509 lb. (231.4 kg) | Part No. F14971/55 |
| 275-Gallon Tote (1249 Liters) | 2600 lbs. (1179 kg) | Part No. F14971/275 |

4. APPLICATIONS, STORAGE, ENVIRONMENTAL, PROPORTIONING AND DISCHARGE DEVICES

- Crash Fire Rescue
- Storage tanks (non-polar solvent type fuels only)
- Truck/Rail loading or unloading facilities
- Processing/Storage facilities
- Docks/Marine tankers
- Flammable liquid containment areas
- Mobile equipment



TECHNICAL DATA

**3% AFFF
MILITARY SPECIFICATION
FOAM CONCENTRATE
C-301 MS**

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

A. Compatability

Chemguard 3% AFFF Military Spec., is compatible with any other comparable AFFF manufactured in accordance with and conforming to all performance requirements of U.S. Military Spec Mil-F-24385F or any preceding version of this specification.

B. Storage And Shelf Life

If kept in the original unopened and airtight Chemguard supplied container and stored within the temperature range of 35°F-120°F (2°C - 49°C) a shelf life of between 20-25 years can be expected. When stored in other than the manufacturers supplied container, please check with Chemguard for storage guidelines.

The shelf life of any foam concentrate is maximized by proper storage conditions and maintenance. Factors affecting shelf life are wide temperature changes, extreme high or low temperatures, evaporation, dilution, and contamination by foreign materials. Properly stored AFFF foam concentrates have been tested and shown no significant loss of fire fighting performance, even after 15 years. Annual testing of all fire fighting foam is recommended by the National Fire Protection Association (NFPA).

C. Environmental And Toxicological Information

C-301 MS is biodegradable, low in toxicity and with advance notice, C-301 MS can be treated by local sewage treatment systems. However, as with any substance, care should be taken to prevent discharge from entering ground water, surface water, or storm drains. Since facilities vary widely by location, disposal or discharge of C-301 MS should be made in accordance with federal, state and local regulations.

C-301 MS is a primary skin irritant. Repeated skin contact will remove oils from the skin and cause dryness. C-301 MS is a primary eye irritant, and contact with the eyes should be avoided. Users are advised to wear protective equipment. C-301 MS enters the eyes, flush them well with water and seek immediate medical attention. For further details, see the C-301 MS Material Safety Data Sheet.

D. Proportioning Devices

- Fixed or portable in-line eductors
- In-line balanced pressure and pump pressure proportioning skid
- Bladder tank balanced pressure proportioning system
- Around the pump proportioners
- Handline, air-aspirating nozzles with fixed eductor pickup tube

E. Discharge Devices

- Foam Chambers
- Air-aspirating and non air-aspirating sprinkler heads or spray nozzles. Refer to Sprinkler Listing for application rate.
- Standard water fog nozzles for handlines and monitors
- Air-aspirating foam nozzles
- Foam makers for use with either Floating Roof storage tanks or Dike/Bund protection systems
- High back pressure foam makers for subsurface base injection system (hydrocarbon type fuels only)

5. INSPECTIONS, TESTS AND MAINTENANCE

NOTICE: The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to recognized standards such as those produced by NFPA, LPC, and VdS which describe care and maintenance of sprinkler systems. In addition, the "Authority Having Jurisdiction" may have additional maintenance, testing and inspection requirements which must be followed.

WARNING: Any system maintenance or testing which involves placing a control valve or detection system out of service may eliminate the Fire Protection of that system. Prior to proceeding, notify all Authorities Having Jurisdiction. Consideration should be given to employment of a Fire Patrol in the affected area.

6. AVAILABILITY

The C301 3% Military Spec AFFF Foam Concentrate is available through a network of domestic and international distributors. See the Viking Corp. web site for closest distributor or contact The Viking Corporation.

7. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.