



## TECHNICAL DATA

**1% AFFF  
FOAM CONCENTRATE  
C-103**

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

Chemguard C-103 1% AFFF is a synthetic Aqueous Film Forming Foam concentrate designed for use on non-polar, hydrocarbon hazards. Chemguard C-103 1% AFFF 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 1% (1 part AFFF concentrate to 99 parts water) on Class B hydrocarbon type fuels such as gasoline, kerosene, diesel, etc. Chemguard C-103 1% AFFF is not intended for use on fuels which are polar solvent/water miscible such as alcohols, ketones, esters, etc.

#### Features

- Low energy input AFFF - requires minimal agitation
- Excellent fluidity provides rapid "knockdown"
- Suitable for use with fresh or sea water
- Suitable for use with foam compatible dry powder extinguishing agents
- U.L. recommended application rate on hydrocarbon type fuels is .10/gpm ft<sup>2</sup>.
- 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
- Refer to Sprinkler Listing for application rate
- If inadvertently frozen, thawing will render product completely serviceable again
- Suitable for use with carbon steel, fiberglass, polyethylene or stainless steel. Chemguard 1% AFFF is not compatible with galvanized pipe or fittings in an undiluted form.



### 2. LISTINGS AND APPROVALS

UL Listed - Guide GFGV

### 3. TECHNICAL DATA

#### A. Typical Properties

(Not for specification purposes)

Nominal use concentration:.....1%  
 Specific gravity @ 77°F (25°C):.....1.037  
 Viscosity @ 77°F (25°C):.....8 cps  
 Minimum storage temperature:.....35°F (2°C)  
 Maximum storage temperature:.....120°F (49°C)  
 pH @ 77°F (25°C):.....7.7  
 Appearance:.....Slight Yellow

Aspirating type discharge devices typically generate expansion ratios between 6-10 to 1 when 1% 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. F14969/5
55-Gallon Drums (208 liters)	509 lb. (231.4 kg)	Part No. F14969/55

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.

### 4. TYPICAL APPLICATIONS

- 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

#### A. 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



## TECHNICAL DATA

**1% AFFF  
FOAM CONCENTRATE  
C-103**

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

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).

### B. Environmental And Toxicological Information

1% AFFF is biodegradable. However, as with any substance, care should be taken to prevent discharge from entering ground water, surface water, or storm drains. With advance notice, C-103 can be treated by local biological sewage treatment systems. Since facilities vary widely by location, disposal or discharge of C-103 1% concentrate or foam solution should be made in accordance with federal, state and local regulations.

1% AFFF is a primary skin irritant. Repeated skin contact will remove oils from the skin and cause dryness. C-103 1% is a primary eye irritant, and contact with the eyes should be avoided. Users are advised to wear protective equipment. If C-103 1% enters the eyes, flush them well with water and seek immediate medical attention. For further details, see the C-103 1% Material Safety Data Sheet.

### C. 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

### D. Discharging Devices

- Foam Chambers
- Air-aspirating and non air-aspirating sprinkler heads or spray nozzles
- 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

C-103 1% 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.