

MATERIAL SAFETY DATA SHEET

FIRE-TROL HOLDINGS, L.L.C.

FIRE-TROL® FIREFOAM® 104

Fire-Trol Holdings, L.L.C.
2620 N. 37th Dr.
Phoenix, AZ 85009
(602) 262-5401
(530) 865-4932 (24 hr. number)

CAUTION

Avoid eye contact; may be irritating. Avoid unprotected exposure of the skin. Work in a well-ventilated area to avoid possible irritation of respiratory tract.

CLASSIFICATION: NON-HAZARDOUS

A. MATERIAL IDENTIFICATION AND INFORMATION

GENERAL INFORMATION

FIRE-TROL® FIREFOAM® 104 is a mixture of foaming and wetting agents in a non-flammable solvent. The active ingredients are commonly used in hair shampoo and dish washing liquid formulas.

DOT Proper Shipping Name: This product is not classified as a hazardous material by the U.S. Department of Transportation.

DOT Hazard Classification/I.D.: Not applicable.

Label(s): Product Label.

U.S. Surface Freight Classification: Adjuvant spreader or sticker

**SARA Hazard Notification:
Hazardous Categories Under
Criteria of SARA Title III
Rules (40 CFR Part 370)**

SECTION 313 TOXIC CHEMICAL(S)

Butanol (CAS 71-36-3) 2-3%

HAZARDOUS CHEMICAL(S) UNDER OSHA HAZARD COMMUNICATION STANDARD

Permissible Concentration (air):

Hexylene Glycol (CAS 107-41-5): 25 ppm, 125 mg/m³, ceiling (OSHA).

n-Butyl Alcohol (CAS 71-36-3): C 50 ppm, 150 mg/m³ (OSHA).

HEALTH HAZARD CLASSIFICATION: An immediate health hazard.

WARNING STATEMENTS:

WARNING! May cause respiratory tract irritation. May cause eye and skin irritation.

PRECAUTIONARY MEASURES:

Avoid breathing fumes.

Use with adequate ventilation.

Avoid unnecessary contact with eyes and skin.

CALIFORNIA PROPOSITION 65

None

B. OCCUPATIONAL CONTROL PROCEDURES**For handling concentrates**

Avoid eye contact with concentrate. Wear goggles when handling concentrate.

Avoid skin contact with concentrate. Use rubber or plastic solvent resistant gloves to avoid prolonged skin contact with concentrate.

Avoid excessive inhalation of concentrate vapor.

Ventilation. Handle concentrate in a well-ventilated area. Permissible concentration in air of:

hexylene glycol solvent (CAS 107-41-5) is 25 ppm, 125 mg/m³, ceiling(OSHA) .

n-butyl alcohol (CAS 71-36-3) is C 50 ppm, 150 mg/m³ (OSHA).

Avoid ingestion of concentrate.

For handling diluted product

Avoid unnecessary eye and skin contact.

Minimal effects expected from contact if it occurs.

C. FIRE PROTECTION INFORMATION FOR CONCENTRATES**Flash Point**

Flash point is greater than 200°F by Pensky Martens Closed Cup Test.

Extinguishing Media for Concentrates

Carbon dioxide, dry chemical, foam, or water spray. Class A, BC, or ABC fire extinguishers, sand/earth.

Special Fire Fighting Procedures in Enclosed Areas

There are no special hazards associated with diluted product as used for fire fighting. In case of an accident or fire involving concentrate, fire fighters must be equipped to prevent breathing of vapors or products of combustion. Wear an approved self-contained breathing apparatus and protective clothing.

Unusual Fire or Explosion Hazards

None

D. PHYSIOLOGICAL EFFECTS AND HEALTH INFORMATION (Toxicological Data)

Note: All animal tests reported in this section for both the concentrate and diluted mixtures were done in accordance with "USDA Interim Requirements and Manufacturer Submission Procedures for Wild land Fire Foam, 5100-Fire, August, 1986", through the U.S. Forest Service, by an independent laboratory. The results which follow are all acceptable under those requirements.

For concentrate before diluting with water

Eye Irritation: Moderately irritating

Skin Irritation: Moderate irritant

Acute Oral Toxicity: LD₅₀>5050 mg/kg (Practically Non-Toxic)

Acute Dermal Toxicity: LD₅₀>2020 mg/kg (No more than Slightly Toxic)

For diluted product (1.0% by volume)

Eye Irritation: Minimally irritating

Skin Irritation: Slight irritant

Acute Oral Toxicity: LD₅₀>5050 mg/kg (Practically Non-Toxic)

Acute Dermal Toxicity: LD₅₀>2010 mg/kg (No more than Slightly Toxic)

E. PHYSICAL & CHEMICAL PROPERTIES

Color:	Light amber, low viscosity liquid
Odor:	Bland
pH in 10% aqueous solution:	9.0-9.5
Specific Gravity:	1.025 or 8.5 lb./gal. (Typical, not a specification.)
Vapor Pressure (mm Hg) at 20°C:	<1

F. REACTIVITY DATA**Stability**

Concentrates have excellent long-term stability for an indefinite period. Can be used at temperatures down to the freezing point of water. Do not store above 150°F.

Corrosion Performance

Products have been tested by the USDA Forest Service according to 90-day weight loss corrosion requirements for Fire Chemicals Specification 5100-304a. There is minimal corrosion on 2024 T3 aluminum and naval brass and moderate corrosion on mild steel for both the concentrate and the diluted product (1.0% by volume). FIRE-TROL® FIREFOAM® 104 is approved for use in helicopters with buckets and ground tanks (fire engines as part of the field evaluation program).

Storage

Recommend storing concentrates in polyethylene or polyethylene-lined containers ONLY. DO NOT store concentrates in metal tanks. The concentrates are not corrosive and meet USDA Forest Service requirements for corrosion. However, metal contamination of the concentrates will degrade the foam's performance. This is typical of foaming agents, which are therefore routinely supplied in polyethylene containers.

Hazardous Decomposition of Products

There are no significant hazardous decomposition products from a fire's action on the diluted product as used in fire fighting. When a fire occurs adjacent to stored concentrates, such as in a highway accident, the concentrates will break down to give off carbon monoxide and oxides of sulfur. These gases can be harmful in enclosed areas so fire fighters must then wear an approved self-contained breathing apparatus and protective clothing.

Hazardous polymerization will not occur.

Incompatibility (Keep Away From)

Strong oxidizers such as hydrogen peroxide, bromine, and chromic acid.

G. SPILL, LEAK AND DISPOSAL INFORMATION

Spills of FIRE-TROL® FIREFOAM® 104 concentrate should be physically removed with a shovel. Sand or other absorbent material can be used to facilitate removal. Direct application of water to FIRE-TROL FIREFOAM 104 concentrate may result in excessive foaming. Water can be used for final clean-up after concentrate is removed.

H. ENVIRONMENTAL PROTECTION

FIRE-TROL® FIREFOAM® 104 is biodegradable and has minimal environmental impact. Due to the sensitivity of aquatic life to chemicals, we do not recommend the application of FIRE-TROL FIREFOAM 104 directly into streams or other bodies of water. Ninety-six hour LC₅₀ on juvenile rainbow trout is 34.6 mg/l.

I. EMERGENCY & FIRST AID PROCEDURES (For Concentrates)

Eye Contact

Flush eyes immediately with plenty of water for at least 15 minutes.

Skin Contact

Wash off with water. Remove contaminated clothing.

Inhalation

Remove person to fresh air and provide oxygen if breathing is difficult. Get medical attention.

NOTICE OF WARRANTY: Fire-Trol Holdings, L.L.C. warrants that FIRE-TROL products are reasonably fit for the purposes for which they were intended, only when used in accordance with recommended use practices under normal conditions. In no case shall Fire-Trol Holdings, L.L.C. be liable for consequential, special, or indirect damages resulting from the use or handling of these products. ALL such risks shall be assumed by the buyer. FIRE-TROL HOLDINGS,L.L.C. MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESSED OR IMPLIED WARRANTY, EXCEPT AS STATED ABOVE.