

Bachman Drilling & Production Specialties, Inc.

2220 S. Prospect
Oklahoma City, OK 73143

Emergency Response: 800-535-5053
Information: 405-677-8296

MATERIAL SAFETY DATA SHEET

1. Chemical Identification

Product: F-485
General Description: Foaming Agent
Chemical Family: Blend
Revision Date: March 16, 2005
Primary Hazard: Combustible Liquid

Hazard Rating		Rating Scale
Health	2	4 = Extreme
Fire	2	3 = High
Reactivity	0	2 = Moderate
Personal Protection	B	1 = Slight
		0 = Insignificant

2. Hazardous Ingredients

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous. One or more component is being claimed as a trade secret under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult section 14 for the nature of the hazard(s).

Ingredient(s)	CAS Number	Approximate Wt. %
Isopropanol	67-63-0	10

3. Handling Precautions

DANGER! Combustible Liquid. May cause irritation to skin and eyes. Prolonged inhalation of vapor may be harmful. Do not use, store, spill or pour near heat, sparks or open flame. Keep container closed when not in use. Use with adequate ventilation. Do not take internally. Avoid prolonged or repeated breathing of vapor. Avoid contact with skin, eyes or clothing. Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

4. First Aid Information

EYES: Remove victim from exposure and into fresh air. Immediately flush with water for at least 15 minutes while holding eyelids open. Call a physician at once.

SKIN: Remove contaminated clothing. Immediately wash exposed area with soap and water for at least 15 minutes. For a large splash flood body under a shower. Call a physician at once. Launder clothes before reuse.

INGESTION: Do not induce vomiting. Give water. Call a physician at once. If possible, do not leave victim unattended.

INHALATION: Remove to fresh air. If breathing is difficult, administer oxygen. Treat symptoms. Keep victim warm and quiet. Seek immediate medical attention.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

Note To Physicians

Based on individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

5. Health Effects Information

Primary Route(s) Of Exposure: Eye, Inhalation, Skin

Eye Contact: Irritating to the eyes with possible permanent damage depending on the length of exposure and on the first aid action given. Symptoms may include stinging, tearing, redness and swelling.

Skin Contact: Can cause mild to severe skin irritation depending on the length of exposure and on the first aid action given. Symptoms may include redness and burning. Can cause allergic contact dermatitis in susceptible individuals.

Ingestion: Ingestion of this product may cause central nervous system depression, abdominal distress, with nausea, vomiting and diarrhea probable depending on the first aid action given.

Inhalation: Prolonged inhalation of mist or vapor in excess of the recommended exposure limits can be harmful, causing nausea, irritation, dizziness, light-headedness, vomiting, fatigue, headache or unconsciousness depending on the length of exposure and the first aid action given.

Symptoms

Of Exposure: **ACUTE:** A review of available data does not identify any symptoms from exposure not previously mentioned.

CHRONIC: Prolonged skin contact can cause dry skin and defatting resulting in irritation and dermatitis. See Section 6 for additional information.

Aggravation Of Existing Conditions: A review of available data does not identify any worsening of existing conditions.

6. Toxicological Information

Toxicity Studies

This product contains isopropanol. In concentrated form, this chemical has been reported in one animal study to be fetotoxic at levels of 2.5% in drinking water. No teratogenic effects were, or have been reported. There are no reports of adverse reproductive effects in humans exposed to this chemical.

7. Physical & Chemical Properties

Appearance:	Clear, Amber Liquid	Pour Point:	0°F
Odor:	Alcohol	Initial	
Specific Gravity:	1.020	Boiling Point:	180°F
Density:	8.50	Flash Point:	53°F TCC
pH (neat):	8.0 - 8.5	Vapor Pressure:	31.2 mm HG @ 100°F
Viscosity:	~25 cst @ 100°F	Vapor Density:	> 1.0 (Air = 1.0)
Solubility:	Water Soluble	Evaporation Rate:	1.7 (Butyl Acetate = 1.0)

Note: These physical properties are typical values for this product and not specifications.

8. Fire & Explosion Information

Flash Point: 53°F
Lower Explosive Limit: 2.0%
Upper Explosive Limit: 12.0%

Extinguishing Media: Based on NFPA guide, use water fog, dry chemical, foam, carbon dioxide or other extinguishing agent suitable for Class B fires. Use water to cool containers exposed to fire. For large fires, use water spray or fog, thoroughly drench the burning material.

Unusual Fire And Explosion Hazards: May evolve CO, CO₂ and/or NO_x under fire conditions. Containers exposed in a fire should be cooled with water to prevent vapor pressure buildup leading to rupture.

9. Reactivity Information

Incompatibility: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

Thermal Decomposition Products: In the event of combustion CO, CO₂ and/or NO_x may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

10. Personal Protection Equipment

Respiratory Protection: Respiratory protection is not normally needed under typical use and handling conditions. If it is possible to generate significant levels of vapors, mists or smoke, a NIOSH approved or equivalent respirator is recommended. For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

Ventilation: General ventilation is recommended. Additionally, local exhaust ventilation is recommended where vapors, mists or aerosols may be released.

Protective Equipment: Wear impermeable gloves, boots, apron and face shield with chemical splash goggles. A full slicker suit is recommended if gross exposure is possible.

The availability of an eye wash fountain and safety shower are recommended. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

11. Spill & Disposal Information

In case of transportation accident, call the emergency response phone number: 800-535-5053

Spill Control And Recovery:

Small Spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 14.

11. Spill & Disposal Information (continued)

Large Spills: Dike and prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 14.

For large indoor spills, evacuate employees and ventilate area. Eliminate all sources of spark or flame. Those responsible for control and recovery should wear the protective equipment specified in Section 10. Ventilate area and evacuate employees from exposure if the airborne concentration exceeds the TLV. Refer to Section 14.

Prevent flow/discharge into lakes, ponds, streams, waterways or public water supplies.

Disposal: If this product becomes a waste, it meets the criteria of a hazardous waste as defined under the Resources Conservation and Recovery Act (RCRA) 40 CFR 261. Hazardous Waste D001.

As a hazardous liquid waste, it must be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to a licensed industrial waste landfill (Hazardous Waste Treatment, Storage and Disposal facility). A hazardous liquid waste can also be incinerated in accordance with local, state and federal regulations.

12. Environmental Information

If released into the environment, see CERCLA in Section 14.

13. Transportation Information

The proper shipping name and/or hazard class for this product may vary according to packaging, properties and mode of transportation. Typical proper shipping names for this product are:

Drums & Pails:	Not D.O.T. Regulated
Totes & Bulk:	Combustible Liquid, N.O.S.
UN/ID Number:	NA-1993
Hazard Class:	3, Combustible Liquid
Packing Group:	III
Flash Point:	53°F
Hazardous Components:	Isopropanol
RQ lbs:	None
RQ Component(s):	None

14. Regulatory Information

The following regulations apply to this product:

Federal Regulations:

OSHA's Hazard Communication Rule, 29 CFR 1910.1200:

Based on our hazard evaluation, the following ingredients in this product are hazardous and the reasons are shown below.

Isopropanol – Flammable

14. Regulatory Information (continued from page 4)

Isopropanol = TWA 400 ppm, STEL 500 ppm ACGIH/TLV

Isopropanol = TWA 400 ppm, STEL 500 ppm OSHA/PEL

CERCLA/Superfund, 40 CFR 117, 302:

This product does not contain any Reportable Quantity (RQ) substance.

SARA/Superfund Amendments And Reauthorization Act Of 1986
(Title III) – Sections 302, 311, 312 and 313:

Section 302 – Extremely Hazardous Substance (40 CFR 355):

This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance

Section 311 and 312 – Material Safety Data Sheet Requirements (40 CFR 370):

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories.

***** Immediate (acute) health hazard
 Delayed (chronic) health hazard
***** Fire hazard
 Sudden release of pressure hazard
 Reactive hazard

***** Indicates Primary Hazards

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of a hazardous chemical. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

Section 313 – List Of Toxic Chemicals (40 CFR 372):

This product contains the following ingredient(s), (with CAS# and % range) which appear(s) on the List Of Toxic Chemicals:

None

Toxic Substance Control Act (TSCA) (40 CFR 710):

The chemical ingredients in this product are on the 8 (b) inventory list.

Resource Conservation Recovery Act (RCRA), 40 CFR 261 Subpart C & D:
Consult Section 11 for RCRA classification.

Federal Water Pollution Control Act, Clean Water Act, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116, (formerly Sec. 311):

None of the ingredients of this product are specifically listed.

14. Regulatory Information (continued from page 5)

Clean Air Act, Sec 111 (40 CFR60), Sec 112 (40 CFR 61, 1990 Amendments), Sec 611 (40 CFR 82, Class I and II Ozone Depleting Substances):

This product contains the following ingredients covered by the Clean Air Act:

Isopropanol – Section 111

State Regulations:

California Proposition 65:

This product does not contain any chemicals which require warning under California Proposition 65.

Michigan Critical Materials:

This product does not contain any ingredients listed on the Michigan Critical Materials Register.

State Right To Know Laws:

This product is regulated in those states using the TLV for isopropanol as a criteria for listing.

15. User's Responsibility

The information accumulated herein is believed to be accurate based on the information provided, although no guarantee or warranty, either expressed or implied is made as to the accuracy or completeness of this information, whether originating with this company or not. Recipients are advised to confirm in advance of need that the information is correct, applicable and suitable to their circumstances. The conditions or methods of handling, storage, use and disposal of the product and container are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage or use of this information or product. If the product is used as a component in another product, this information may not be applicable.

Prepared By: L.V. Robertson
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