SECTION 1. IDENTIFICATION

Product Identifier: Foamer ES
Recommended Use: DRILLING ADDITIVE - FORAGE ADDITIF - PERFORACIÓN ADITIVO.
Emergency Phone No.: Control Chemical (1989) Corporation, 403-720-7044, 24 Hours
Date of Preparation: November 18, 2015

SECTION 2. HAZARD IDENTIFICATION

Label Elements
No label elements assigned.

Other Hazards
Product is classified as a IIIB combustible liquid (Flash Point >93.3 degrees Celsius).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>%</th>
<th>Other Identifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium olefin sulphonate</td>
<td>68439-57-6</td>
<td>30 - 40</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation
Move to fresh air. Keep at rest in a position comfortable for breathing. Get medical advice or attention if you feel unwell or are concerned.

Skin Contact
Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Get medical advice or attention if you feel unwell or are concerned.

Eye Contact
Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion
Rinse mouth with water. Do not induce vomiting, contact physician.

First-aid Comments
Flush eyes with water. Wash skin with soap and water. In case of ingestion, do not induce vomiting. Call a physician immediately.

Most Important Symptoms and Effects, Acute and Delayed
If on skin: may cause irritation, redness, swelling or dermatitis. If swallowed: may cause gastrointestinal irritation, cramps or diarrhea. If in eyes: will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.
SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Foam, Carbon dioxide, and Dry chemical.

Specific Hazards Arising from the Product


Special Protective Equipment and Precautions for Fire-fighters

No special precautions are necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Follow proper industrial hygiene and safety practices.

Environmental Precautions

Do not allow product to enter sewers, drains, waterways, or confined spaces.

Methods and Materials for Containment and Cleaning Up

Spills should be contained and cleaned up properly. For small amounts, flush with water. For large amounts, contain and collect into waste container for appropriate disposal. Soak up spill with and absorbent material. E.g. sand, vermiculite, or diatomaceous earth. Flush area with water.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Wear personal protective equipment to avoid direct contact with product. Caution: water contact with product will cause slippery conditions.

Conditions for Safe Storage

Store in a tightly sealed container. Keep containers tightly closed when not in use or when empty. Store in a cool, dry, well ventilated area. Keep separate from incompatible materials (see section 10).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Not available.

Appropriate Engineering Controls

General ventilation is usually adequate. Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

Individual Protection Measures

Eye/Face Protection

Wear safety goggles or face shield.

Skin Protection

Wear chemical resistant gloves. Wear clothing as required to protect against contact.

Respiratory Protection

If vapour or dusts are present, use a NIOSH-approved air-purifying respirator as needed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance

Clear yellow liquid.
Odour: Soapy

pH: 8.0 (10% solution)

Melting Point/Freezing Point: -3 °C (27 °F) (melting)

Initial Boiling Point/Range: 106 °C (223 °F)

Flash Point: > 93.3 °C (199.9 °F) (closed cup)

Evaporation Rate: Not available

Upper/Lower Flammability or Explosive Limit: Not available (upper); Not available (lower)

Vapour Pressure: 759.90 mm Hg (101.32 kPa)

Vapour Density (air = 1): Not available

Relative Density (water = 1): 1.05

Solubility: Not available in water

Auto-ignition Temperature: Not available

Other Information: Bulk Density: 66 lb/ft³ (1050 kg/m³)

SECTION 10. STABILITY AND REACTIVITY

Reactivity
None known.

Chemical Stability
Normally stable.

Possibility of Hazardous Reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Avoid contamination with reactive substances.

Incompatible Materials
Oxidizing agents (e.g. peroxides), reducing agents (e.g. hydroquinone).

Hazardous Decomposition Products
None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LC50</th>
<th>LD50 (oral)</th>
<th>LD50 (dermal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium olefin sulphonate</td>
<td></td>
<td>3,900 mg/kg (rabbit)</td>
<td></td>
</tr>
</tbody>
</table>

LC50: No information was located.

Skin Corrosion/Irritation
Contact may cause irritation, redness and swelling. Frequent or prolonged contact may cause dermatitis.

Serious Eye Damage/Irritation
Will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

Carcinogenicity
Not known to cause cancer.

Reproductive Toxicity
Development of Offspring
Possible teratogen.

Germ Cell Mutagenicity

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No information was located.

Other Information
Chlorosultones have a toxicologically synergistic effect with product.

SECTION 12. ECOLOGICAL INFORMATION

Persistence and Degradability
Biodegradable.

Bioaccumulative Potential
No information was located.

Mobility in Soil
Studies are not available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of in accordance with all applicable Federal/Provincial and Local regulations.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under IATA Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations
Product is classified as IIIB combustible liquid (Flash Point >93.3 degrees Celsius).

Canada
Internal Substances List (DSL) / Non-Domestic Substances List (NDTSL)
All ingredients are listed on the DSL/NDSL.

USA
Toxic Substances Control Act (TSCA) Section 8(b)
All ingredients are listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating Health - 1 Flammability - 1 Instability - 0

SDS Prepared By Control Chemical (1989) Corporation

Date of Preparation November 18, 2015

Disclaimer To the best of our knowledge the information contained herein is accurate. However neither the above named supplier, nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

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Material Safety Data Sheet
FOAMER ES

Material Identification and Use

MANUFACTURER’S NAME ............................................... CONTROL CHEMICAL (1989) CORPORATION
MANUFACTURER’S ADDRESS ......................................... 7016 30 Street SE Calgary, Alberta T2C 1N9
EMERGENCY PHONE NUMBER ...................................... (403) 720-7044
SUPPLIER IDENTIFIER ....................................................
SUPPLIER’S ADDRESS ....................................................
SUPPLIER EMERGENCY PHONE NUMBER ....................
PRODUCT IDENTIFIER .................................................... FOAMER ES
PRODUCT USE ..............................................................

Hazardous Ingredients of Materials

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Concentration</th>
<th>CAS#/NA#/UN#</th>
<th>LD(50)</th>
<th>LC(50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Olefin Sulphonate</td>
<td>30-40%</td>
<td>CAS 68439-57-6</td>
<td>3,900 mg/kg (Oral, Rabbit)</td>
<td></td>
</tr>
</tbody>
</table>

Physical Data For Product

PHYSICAL STATE ......................................................... Liquid
ODOUR AND APPEARANCE ............................................. Clear, pale yellow liquid, bland odour
ODOUR THRESHOLD ...................................................... Not Available
SPECIFIC GRAVITY .................................................... 1.05
VAPOUR PRESSURE .................................................... Same as water
VAPOUR DENSITY (air=1) ............................................. Same as water
EVAPORATION RATE ................................................... Same as water
BOILING POINT ......................................................... 106 degrees C
FREEZING POINT ...................................................... -3 degrees C
pH ................................................................. 8.0 (10% in D.W.)
DENSITY (g/ml) ....................................................... 1.05
COEFFICIENT OF WATER/OIL DISTRIBUTION .................

Fire and Explosion Hazard of Product

CONDITIONS OF FLAMMABILITY .................................. Will burn after drying
MEANS OF EXTINCTION ............................................. Water fog, Foam, CO2, Dry Chemical
FLASHPOINT AND METHOD OF DETERMINATION ............... >93.3 degrees C (PM/CC)
UPPER EXPLOSION LIMIT (% BY VOL) ......................... Not Applicable
LOWER EXPLOSION LIMIT (% BY VOL) .......................... Not Applicable
AUTO-IGNITION TEMPERATURE .................................. Not Applicable
FLAMMABILITY CLASSIFICATION .................................
HAZARDOUS COMBUSTION PRODUCTS ......................... Oxides of carbon and sulphur and products of incomplete combustion
EXPLOSION DATA .................................................... Not sensitive.
SENSITIVITY TO STATIC DISCHARGE ......................... Not sensitive.

Reactivity Data

CHEMICAL STABILITY .................................................. Stable under normal conditions. Hazardous polymerization will not occur.
INCOMPATIBLE MATERIALS ......................................... Avoid strong oxidizing and reducing agents.
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CONDITIONS OF REACTIVITY ......................................Avoid contamination with reactive substances.
HAZARDOUS DECOMPOSITION PRODUCTS ...............Not available.

Toxicological Properties of Product

ROUTEs OF ENTRY
SKIN CONTACT..................................................................No effects of exposure expected due to contact.
Prolonged contact may cause skin irritation or dermatitis in some individuals.
SKIN ABSORPTION ..........................................................Not available
EYE...............................................................................Will cause painful burning or stinging of eyes and lids, watering of eyes, and inflammation of conjunctiva.
INHALATION.................................................................Not available
INGESTION......................................................................May cause nausea and vomiting.
ACUTE OVER EXPOSURE EFFECTS .........................Skin irritation or dermatitis may occur upon frequent or prolonged contact.
CHRONIC OVER EXPOSURE EFFECTS..........................Skin irritation or dermatitis may occur upon frequent or prolonged contact.
EXPOSURE LIMITS..........................................................Not established.
IRRITANCY OF PRODUCT............................................Skin: mild irritant Eye: severe irritant.
SENSITIZATION TO MATERIAL .....................................Repeated or prolonged contact may cause sensitization in some individuals.
CARCINOGENICITY, REPRODUCTIVE EFFECTS............Product has not been listed as a carcinogen or potential carcinogen by either the ACGIH or the IARC.
TERATOGENICITY, MUTAGENICITY..............................Possible teratogen, Mutagenicity: Not available
TOXICOLOGICALLY SYNERGISTIC PRODUCTS ..........Chlorosultones

Preventive Measures

PERSONAL PROTECTIVE EQUIPMENT..........................Chemical goggles, rubber or plastic gloves, and clothing as required to protect against contact. If mist and/or hot vapors are present, use air-purifying respirator or self-contained breathing apparatus as required.
SPECIFIC ENGINEERING CONTROLS..........................Use with adequate ventilation for misting operations.
LEAK AND SPILL PROCEDURES ..................................Small amounts - Flush with water. Large amounts - contain spill and collect into waste container. Absorb remaining product with earth or sand and dispose of with solid waste. Flush area with water.
WASTE DISPOSAL.........................................................Dispose of waste according to federal, provincial, and local regulations.
HANDLING PROCEDURES AND EQUIPMENT.............Avoid prolonged or frequent contact when handling material. Avoid breathing mists or vapor. Handle only in adequately ventilated areas.
STORAGE REQUIREMENTS..........................................Store at room temperature 20 - 30 degrees C.
SPECIAL SHIPPING INFORMATION............................Not Regulated.

First Aid Measures

SPECIFIC FIRST AID PROCEDURES.......................Flush eyes with abundant water. Wash skin with soap and water. If ingested, give water. DO NOT induce vomiting. Call a physician.

Preparation Date of Material Safety Data Sheet
Material Safety Data Sheet
FOAMER ES

PREPARED BY..............................................................Safety Committee
PHONE NUMBER OF PREPARER ................................ (403) 720-7044
DATE PREPARED.......................................................January 2, 2010

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