



FluoroCal

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 07/31/2020 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : FluoroCal

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For RX only

1.3. Supplier

Manufacturer

Bisco, Inc.
1100 W. Irving Park Rd.
Schaumburg, IL 60193
T 1.847.534.6000 - F 1.847.891.5049
sales@bisco.com - www.bisco.com

1.4. Emergency telephone number

Emergency number : CHEMTREC - 24-Hour Hazmat Emergency Communications Center
Domestic: 1-800-424-9300 Outside the U.S.: 1-703-527-3887, collect calls accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids, Category 2 H225 Highly flammable liquid and vapour.
Acute toxicity (oral), Category 4 H302 Harmful if swallowed.
Skin corrosion/irritation, Category 2 H315 Causes skin irritation.
Serious eye damage/eye irritation, Category 2 H319 Causes serious eye irritation.
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335 May cause respiratory irritation.
Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Hazard statements (GHS US) :

H225 - Highly flammable liquid and vapour.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

Precautionary statements (GHS US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof ventilating equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing vapours.
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P312 - If swallowed: Call a POISON CENTER, a doctor if you feel unwell
P302+P352 - If on skin: Wash with plenty of water and soap
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a poison center/a doctor if you feel unwell

FluoroCal

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P321 - Specific treatment (see First aid measures on this label)
P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use sand, alcohol resistant foam, carbon dioxide (CO2) to extinguish
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose in a safe manner in accordance with local/national regulations

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Ethanol	(CAS-No.) 64-17-5	10 - 30	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319
Spearmint Oil	(CAS-No.) 8008-79-5	5 - 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Sodium Fluoride	(CAS-No.) 7681-49-4	5 - 10	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 3, H402

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.

First-aid measures after skin contact : Wash skin with plenty of water. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Specific treatment (see First aid measures on this label).

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Rinse mouth with water. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Irritation. Causes skin irritation.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

FluoroCal

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

5.2. Specific hazards arising from the chemical

- Fire hazard : Highly flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing fume/vapours. Avoid contact with skin and eyes. Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid breathing fume/vapours. Avoid contact with skin and eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Keep in a cool, well-ventilated place away from heat. Use only non-sparking tools.
- Storage conditions : Keep only in original container. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Protect from sunlight.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

FluoroCal

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

FluoroCal	
No additional information available	
Ethanol (64-17-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethanol
ACGIH STEL (ppm)	1000 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2019
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl alcohol (Ethanol)
OSHA PEL (TWA) (mg/m³)	1900 mg/m³
OSHA PEL (TWA) (ppm)	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Sodium Fluoride (7681-49-4)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m³)	2.5 mg/m³
Spearmint Oil (8008-79-5)	
No additional information available	

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Protective gloves. Wear protective gloves/protective clothing/eye protection/face protection protective gloves

Eye protection:

Safety glasses. Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Colorless, syrupy liquid.
Colour	: Colourless or white
Odour	: Mint-like
Odour threshold	: No data available
pH	: No data available
Melting point	: Not applicable

FluoroCal

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions. Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ATE US (oral)	1040 mg/kg bodyweight
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Ethanol (64-17-5)	
LD50 oral rat	10740 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit, Literature study, Dermal)
LC50 inhalation rat (mg/l)	117 - 125 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation)

Sodium Fluoride (7681-49-4)	
LD50 oral rat	52 mg/kg (Rat, Oral)
ATE US (oral)	52 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.

FluoroCal

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Ethanol (64-17-5)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

Spearmint Oil (8008-79-5)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Irritation. Causes skin irritation.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Ethanol (64-17-5)	
LC50 fish 1	14200 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)

Sodium Fluoride (7681-49-4)	
LC50 fish 1	> 530 mg/l (96 h, Lepomis macrochirus)
EC50 Daphnia 1	98 mg/l (48 h, Daphnia magna)

12.2. Persistence and degradability

FluoroCal	
Persistence and degradability	Not established.

Ethanol (64-17-5)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O ₂ /g substance
Chemical oxygen demand (COD)	1.7 g O ₂ /g substance
ThOD	2.1 g O ₂ /g substance
BOD (% of ThOD)	0.43

Sodium Fluoride (7681-49-4)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

FluoroCal	
Bioaccumulative potential	Not established.

FluoroCal

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ethanol (64-17-5)	
BCF fish 1	1 (Other, 72 h, Cyprinus carpio, Static system, Fresh water, Read-across)
Log Pow	-0.31 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.
Sodium Fluoride (7681-49-4)	
BCF fish 1	2.3 (Salmo gairdneri)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Ethanol (64-17-5)	
Surface tension	0.022 N/m (20 °C)
Ecology - soil	Highly mobile in soil.
Sodium Fluoride (7681-49-4)	
Ecology - soil	Toxic to flora.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose in a safe manner in accordance with local/national regulations.

Additional information : Flammable vapours may accumulate in the container. Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1170 Ethyl alcohol solutions, 3, III

UN-No.(DOT) : UN1170

Proper Shipping Name (DOT) : Ethyl alcohol solutions

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

FluoroCal

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Special Provisions (49 CFR 172.102)	: 24 - Alcoholic beverages containing more than 70 percent alcohol by volume must be transported as materials in Packing Group II. Alcoholic beverages containing more than 24 percent but not more than 70 percent alcohol by volume must be transported as materials in Packing Group III. B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 4b;150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Emergency Response Guide (ERG) Number	: 127
Other information	: No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

Transport document description (IMDG)	: UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II
UN-No. (IMDG)	: 1170
Proper Shipping Name (IMDG)	: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Class (IMDG)	: 3 - Flammable liquids
Packing group (IMDG)	: II - substances presenting medium danger
Limited quantities (IMDG)	: 1 L

Air transport

Transport document description (IATA)	: UN 1170 Ethanol solution, 3, II
UN-No. (IATA)	: 1170
Proper Shipping Name (IATA)	: Ethanol solution
Class (IATA)	: 3 - Flammable Liquids
Packing group (IATA)	: II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Speamint Oil	CAS-No. 8008-79-5	5 - 10%
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This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Sodium Fluoride (7681-49-4)	
CERCLA RQ	1000 lb

FluoroCal

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.2. International regulations

CANADA

Ethanol (64-17-5)

Listed on the Canadian DSL (Domestic Substances List)

Sodium Fluoride (7681-49-4)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

National regulations

Ethanol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Ethanol(64-17-5)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Sodium Fluoride(7681-49-4)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other information : None.

Full text of H-statements:

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.