

Safety Data Sheet

OSHA Hazard Communication Standard (29 CFR 1910.1200 - GHS Rev 3)

Regulation (EC) No.1907/2006 (REACH)

Trade name: Engineered Fluids ElectroCool Dielectric Coolants / Heat Transfer Fluids

Product. Identification: EC-110

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SDS Revision: 20200904



**ENGINEERED
FLUIDS**

Revision Date: 9/04/2020

1. Identification

GHS Product Identifier

Engineered Fluids ElectroCool Dielectric Coolants / Heat Transfer Fluids
EC-110

Relevant identified uses of the substance or mixture and uses advised against

Product Use: Dielectric heat transfer fluid.
Uses advised against: Applications that require the creation of a mist of the product (liquid particles suspended in air).

Supplier Details

Company Name: ChemFoundry, Inc.
Company Address: 4548 Cantina Drive
Tyler, TX 75708
Telephone: +1-725-281-1957
Emergency Telephone: Call Infotrac, Inc., 1-352-323-3500
Email: support@engineeredfluids.com
Company Contact Name: Dr. David Sundin

2. Hazards Identification

Classification of the substance or mixture

H304 ASPIRATION HAZARD – CATEGORY 1

(Important see NOTE #1, below, regarding Hazard Statement clarification)

Label elements



Hazard Statements

H304: May be fatal if swallowed AND enters airways.

(Important see NOTE #1, below, regarding Hazard Statement clarification)

Precautionary Statements

P314: Get medical advice/attention if you feel unwell.

P301: +P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P501: Dispose of contents / container or recycle in accordance with local regulations.

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*www.engineeredfluids.com
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NOTE #1: Hazard Statement Clarification

To provide practical and compliant health safety warnings under the GHS Communications and REACH Standards, Engineered Fluids has provided these additional clarifying statements to assist our users in fully understanding the safety risks posed by our products.

The *GHS Communication Standard* ([29 CFR 1910.1200 Appendix A Table A.10.a.](#)) requires that all hydrocarbon based chemicals, including synthetics like our ElectroCool Dielectric Coolants, regardless of all other characteristics (including their biodegradation, non-toxicity, and food grade certification by NSF) be designated a Category 1 Aspiration Hazard if they have a kinematic viscosity ≤ 20.5 mm²/s, measured at 40 C.

ElectroCool has a kinematic viscosity ≤ 20.5 mm²/s, measured at 40 C, and therefore must be labeled as a Aspiration Hazard to comply with GHS Communications standards, even though this safety statement does not correctly describe the risk posed by ElectroCool.

ElectroCool does not pose a toxicity risk if swallowed or ingested. However, the GHS standardized wording H304 does not make this differentiation clear and requires the statement “swallowed and enters airways,” even though there is no health risk posed by ingestion.

ElectroCool has a very low vapor pressure, thus there is no inhalation hazard for fumes or vapors within their operating temperature range.

The most probable hazard related to aspiration posed by ElectroCool, outside of drowning, is the inhalation of a “mist” of the product. The definition of a “mist” for the purposes of this SDS is the creation of product particles suspended in air which are created by spraying the product at high pressure through an orifice of sufficiently small size. Except when used as a hydraulic power transfer fluid in high-pressure applications, there is no risk of misting of ElectroCool in normal recommend applications, where the pressures applied are well below 7 Bar / 100PSI.

In all applications where “misting” of ElectroCool is a possibility (generally where the fluid pressure will exceed 7 Bar / 100PSI on a continuous basis), users should take appropriate precautionary measures such as eye protection, respirators and sufficient ventilation to clear the workspace.

3. Composition / information on ingredients

Substance

ElectroCool products may contain the following: synthetic hydrocarbons, natural hydrocarbons, polyalkyl glycols, alkyl naphthalenes, antioxidants, synthetic adipate esters, synthetic pentaerythritol esters, natural triglyceride esters, flow modifiers, antioxidants

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4. First Aid Measures

Description of first aid measures

Inhalation of mist: Remove person to fresh air and keep comfortable for breathing.

Skin: Wash with soap and water. Obtain medical attention if irritation develops.

Eyes: Irrigate water. Obtain medical attention if irritation develops.

Ingestion: Do not induce vomiting, rinse mouth and obtain medical attention if irritation develops.

Most important symptoms and effects, both acute and delayed

No adverse effects expected under normal use.

Indication of any immediate medical attention and special treatment needed

No special treatment required.

5. Fire Fighting Measures

NFPA Hazard Class

Health: 0 / Flammability: 1 / Instability: 0

Extinguishing media

Carbon dioxide, dry powder, foam or water fog. Do not use water jets.

Special hazards arising from the substance or mixture

In the event of a fire, or if heated, a pressure increase may occur and the container may burst, or the HPDE plastic container may melt releasing the product.

Hazardous combustion products - combustion may yield smoke, carbon oxides, and other products of incomplete combustion.

Advice for fire fighters

Self-contained breathing apparatus may be required.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Spilt product constitutes a slip hazard.

Avoid prolonged contact with skin. Avoid contact with eyes.

Environmental precautions

Do not contaminate any lakes, streams, ponds, groundwater or soil. Avoid flushing into drains. In the event of a large spillage contain product as thoroughly as possible and dispose of in accordance with local regulations.

Even though ElectroCool is highly biodegradable and non-toxic, Engineered Fluids never recommends disposal of any product into our environment or waterways. Please make

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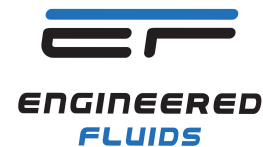
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every effort to recycle our products. Please see the [Engineered Fluids Recycling Program](#) materials for details no-cost / low-cost recycling options.

Methods and material for containment and cleaning up

Soak up spilt material with absorbent granules or sheets for disposal.

7. Handling and Storage

Precautions for safe handling

Avoid prolonged contact with skin. Avoid contact with eyes

Conditions for safe storage, including any incompatibilities

No special precautions required. No temperature limitations, product in plastic containers (HDPE) should be stored out of direct sunlight in protect the plastic storage container from UV damage.

Specific end use(s)

Exposure to air should be minimized to maintain product quality and prevent contamination. Opened containers should be properly resealed and stored away from direct sunlight.

8. Exposure Controls/ Personal Protection

Control parameters

No relevant control parameters.

Exposure controls

Respiratory protection: None required.

Skin protection: Wear protective equipment adequate to prevent prolonged skin exposure.

Hand protection: Wash hands with soap and water after use. For prolonged or repeated skin contact, gloves are recommended.

Eye protection: If splashes are likely to occur wear safety glasses. Eye washes should be available for emergency use.

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9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance:	Clear
Odor:	None
pH:	Not applicable
Freezing point:	None
Initial boiling point and boiling range (°C):	>300
Flash point (ASTM D92, °C)	193
Upper/lower flammability or explosive limits:	Data not available
Vapor pressure: (ASTM D323)	<0.7 kPa (Limit of Test = 0.7kPa)
Relative density at 20°C.:	0.79 g/cm3
Water solubility (ppm):	<80ppm
Partition coefficient:	Data not available
Auto-ignition temperature (C):	>400C (Product will decompose before auto-ignition)
Decomposition temperature:	350 – 375
Kinematic Viscosity, cSt @ 40 °C:	8.11 cSt
Explosive properties:	Non-explosive
Oxidizing properties:	Non-oxidizing

10. Stability and Reactivity

Reactivity

Product is stable under normal conditions of use.

Chemical stability

Product is stable under normal conditions of use.

Possibility of hazardous reactions

Data not available.

Conditions to avoid

Avoid temperatures >250°C.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

None.

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11. Toxicological Information

Information on toxicological effects

Likely routes of exposure: Skin and eyes are the most likely routes for exposure. Accidental ingestion may occur.

Acute oral toxicity:	Non-toxic
Acute dermal toxicity:	Non-toxic
Skin corrosion/irritation:	Not irritating
Eye corrosion/irritation:	Not irritating
Respiratory or skin sensitization:	Not sensitizing
Aspiration hazard:	Not considered an aspiration hazard for recommended use
Carcinogenicity/mutagenicity:	Not considered a mutagenic hazard or carcinogen.

When used and/or recycled / disposed of as indicated no adverse environmental effects are foreseen.

Ecotoxicological effects based on knowledge of similar substances.

12. Ecological Information

Toxicity

This substance is not considered to pose a hazard to aquatic organisms.

Persistence and degradability

Readily biodegradable,
OECD 301F % degraded in 28 days: >96%

Bioaccumulative potential

No potential for bioaccumulation.

Mobility in soil

Product has low mobility in soil.

Results of PBT and vPvB assessment

The product does not meet criteria for toxicity which requires further assessment. It is not considered PBT or vPvB.

Other adverse effects

No other adverse effects envisaged.

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13. Disposal Considerations

Waste treatment methods

Product and packaging must be disposed of in accordance with local and national regulations. May be incinerated, reclaimed by standard methods or blended with other used hydrocarbons.

Not classified as hazardous under air (ICAO/IATA), sea (IMDG), road (ADR) or rail (RID) regulations.

14. Transport Information

UN number (Harmonized Transport Code)

2710194545

UN proper shipping name

Insulating Oils

Transport hazard class

Not relevant

Packing group

Not relevant

Environmental hazards

Not relevant

Special precautions for user

None

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

This product is exempt from REACH registration.

Chemical safety assessment

A chemical safety assessment has not been carried out for this product.

Compiled according to regulations

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16. Other Information

Changes from last issue:

Version	Changes	Author
20171206	Document Creation	D. Sundin
20180208	Updated physical values for all products	D. Sundin
20191101	Modified Hazards section	D. Sundin
20191125	Modified Hazards section for GHS compliance, changed hazard icon	D. Sundin
20200312	Modified Hazards section, added Hazard clarification statement to comply with GHS wording requirements and changed hazard icon	D. Sundin
20200904	Updated product specifications to match new formulations to further reduce vapor pressure	D. Sundin

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