



Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 1 of 11

FR3r™

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product Name: FR3r™

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

Relevant identified uses: Dielectric coolant

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

1.3 Details of the manufacturer/supplier of the safety data sheet

Supplier:

Bioindustrial

Cargill N.V.

Bedrijvenlaan 9

2800 Mechelen, Belgium

+32 (0) 15 400 411

1.4 Emergency telephone number:

WORLD (Including UK and Germany)

VelocityEHS (formerly ChemTel, Inc)

+1-813-248-0585 (International)

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008 (CLP): The substance is not classified as hazardous according to the Globally Harmonized System (GHS).

Hazard-determining components of labeling: None

Additional Information: None

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms: None

Signal Word: None

Hazard statements: None

Precautionary statements: None

2.3 Other hazards:

Component(s) do not meet the criteria for PBT and vPvB at levels of 0.1% or higher.

Component(s) do not have toxicological or environmental endocrine disrupting properties at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substance: Not applicable.

3.2 Mixture:

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 2 of 11

FR3r™

Identification	EU REACH Registration No.	Name	Classification according to Regulation (EC) No. 1272/2008 (CLP)	Weight %
CAS number: Trade Secret EC number: Not Applicable	-	Proprietary vegetable oil	Not classified;	>98

Additional information:

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Full Text of H and EUH statements: See section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes:

First responders should wear gloves and other self-protection when performing treatment.

Following inhalation:

If inhaled, remove to fresh air.

Get medical advice if you feel unwell.

Following skin contact:

Wash with plenty of water / soap and rinse thoroughly.

Get medical advice if skin irritation occurs or if you feel unwell.

Following eye contact:

Rinse cautiously with water for several minutes.

Get medical advice/attention.

Following ingestion:

Rinse mouth and do not induce vomiting.

Get medical advice if you feel unwell or concerned.

Self-Protection of the first aider:

See Section 8.2

4.2 Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Any additional important symptoms and effects are described in Section 11: Toxicological Information

Delayed symptoms and effects:

Not determined or not available.

4.3 Indication of any immediate medical attention and special treatment needed

Specific treatment:

Preexisting skin conditions and/or respiratory disorders may be aggravated by exposure to this product.

Notes for the doctor:

Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Use Water (fog only), dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing media:

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 3 of 11

FR3r™

Do not use water stream as an extinguisher, as this may spread fire.

5.2 Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters

Personal protection equipment:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit.

Special precautions:

Rags, steel wool, or waste contaminated with this product may spontaneously catch fire if improperly discarded.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear recommended personal protective equipment.

Ensure adequate ventilation.

Ensure air handling systems are operational.

Spilled material may cause a slipping hazard. Use appropriate safety equipment.

6.2 Environmental precautions:

Should not be released into the environment.

Prevent from reaching drains, sewer, or waterway.

6.3 Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing.

Small spills: Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders). Remove with shovel. Collect in suitable and properly labeled containers.

Large spills: Dike area to contain spill. Knock down and dilute vapors with water fog or spray. Collect with vacuum equipment or inert materials. Approach release upwind.

Used rags or other cleaning materials should be soaked with water and placed in a sealed container to prevent spontaneous combustion.

Dispose of contents / container in accordance with local regulations.

6.4 Reference to other sections:

Sections 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Use appropriate personal protective equipment (see Section 8).

Surfaces of porous or fibrous materials saturated with this material can self-heat and auto-ignite when exposed to air. Thin films of material on non-porous surfaces in contact with air will polymerize over time making it increasingly more difficult to clean.

Wash thoroughly after handling.

Use only with adequate ventilation.

Avoid breathing mist or vapor.

Do not eat, drink, smoke or use personal products when handling chemical substances.

7.2 Conditions for safe storage, including any incompatibilities:

Protect from freezing and physical damage.

Keep container tightly sealed.

Protect material from extreme temperatures, humidity, and water prior to use.

Store away from incompatible materials (See Section 10).

Used rags or other cleaning materials should be soaked with water and placed in a sealed container to prevent spontaneous combustion.

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 4 of 11

FR3r™

7.3 Specific end use(s):

Not determined or not applicable.

SECTION 8: Exposure controls/personal protection



8.1 Control parameters

Only those substances with limit values have been included below.

Occupational Exposure limit values:

No occupational exposure limits noted for the ingredient(s).

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Derived No Effect Level (DNEL):

Not determined or not applicable.

Predicted No Effect Concentration (PNEC):

Not determined or not applicable.

Information on monitoring procedures:

Monitoring procedures should be chosen according to the indications set by national authorities or recognized standards.

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Use of local exhaust ventilation should be determined based on operations and if vapors or mist can be generated from heating or spray applications.

Personal protection equipment

Eye and face protection:

Safety glasses with side shields. Safety goggles or face shield recommended when eye and face contact is possible due to splashing or spraying of material.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Gloves must be periodically inspected and changed in case of wear, perforations or contamination.

Suitable glove barrier materials include: Nitrile/butadiene rubber ("nitrile" or "NBR"); 0.11 mm coating thickness, permeation level 6, >480 minutes breakthrough time.

Wear protective clothing as necessary to minimize prolonged skin contact. Selection of specific items will depend on task.

Respiratory protection:

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 5 of 11

FR3r™

approved particulate respirator.

Suitable respiratory protection used for aerosol/mist formation: Organic vapour cartridge, filter type A (brown for organic gases and vapours with a boiling point of > 65 °C).

General hygienic measures:

Handle in accordance with good industrial hygiene and safety practice.

Avoid contact with skin, eyes and clothing.

Wash hands before breaks and at the end of work.

Wash contaminated clothing before reuse.

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Product (substance / mixture) related measures to prevent exposure:	Select controls based on risk assessment of local conditions.
Instruction measures to prevent exposure:	See Section 6 for information on accidental release measures.
Organisational measures to prevent exposure:	Not determined or not applicable.
Technical measures to prevent exposure:	Not determined or not applicable.

Risk management measures to control exposure:

Not determined or not applicable.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Color	Light green
Odor/Odor threshold	Slight
pH	Not applicable. Not soluble in water.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	>300°C / >572°F (decomposes)
Flash point (closed cup)	>250°C / >482°F (closed cup)
Flammability	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Relative vapor density	Not determined or not available.
Density	0.92 gm/cm ³ (7.677 lb/gal)
Relative density	Not determined or not available.
Solubilities	Insoluble in water.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	424°C / 795°F
Decomposition temperature	Not determined or not available.
Kinematic viscosity	78 mm ² /s at 20°C
Particle characteristics	Not determined or not available.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 6 of 11

FR3r™

Explosives	No data available
Flammable gases	No data available
Aerosols	No data available
Oxidizing gases	No data available
Gases under pressure	No data available
Flammable liquids	No data available
Flammable solids	No data available
Self-reactive substances and mixtures	No data available
Pyrophoric liquids	No data available
Pyrophoric solids	No data available
Self-heating substances and mixtures	No data available
Substances and mixtures, which emit flammable gases in contact with water	No data available
Oxidizing liquids	No data available
Oxidizing solids	No data available
Organic peroxides	No data available
Corrosive to metals	No data available
Desensitized explosives	No data available

9.2.2 Other safety characteristics

None.

SECTION 10: Stability and reactivity

10.1 Reactivity:

Does not react under normal conditions of use and storage.

10.2 Chemical stability:

Stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions:

None under normal conditions of use and storage.

10.4 Conditions to avoid:

Excessive heat. Avoid temperatures exceeding the flash point.

10.5 Incompatible materials:

Strong alkali.

10.6 Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

Route	Result
Oral	LD50 Rat: >5000 mg/kg

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 7 of 11

FR3r™

Route	Result
Dermal	LD50 Rabbit: >2000 mg/kg

Substance data: No data available.

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

Based on data for similar materials or components: Prolong contact may cause slight skin irritation, with local redness.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

Based on data for similar materials or components: May cause slight temporary eye irritation.

Substance data: No data available.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data:

For Respiratory Sensitization: No relative data found.

For Skin Sensitization: Sensitive individuals may experience dermatitis after long exposure of oil on skin.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC):

Name	Classification
Proprietary vegetable oil	Not Applicable

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

Not expected to be a germ cell mutagen. In vitro tests with similar materials were negative for mutagenic effects.

Substance data: No data available.

Reproductive Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

Not expected to cause toxic reproductive or developmental effects based on testing in animals with similar substances.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

Not expected to cause organ damage from a single exposure based on acute toxicity data for components or similar substances.

Substance data: No data available.

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 8 of 11

FR3r™

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

Not expected to cause organ damage from a repeat exposure based on acute toxicity data for components or similar substances.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

Not an aspiration hazard.

Substance data: No data available.

Information on likely routes of exposure:

Inhalation: Brief exposure (minutes) is not likely to cause adverse effects. Vapor or mist from heated material may cause respiratory irritation.

Ingestion: Low toxicity if swallowed.

Skin: Prolong skin contact is unlikely to result in absorption of harmful amounts. Sensitive individuals may experience dermatitis after long exposure of oil on skin.

Eye: May cause temporary eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics:

Skin contact may cause itching, cracking, swelling, and redness.

Eye contact may cause itching, tearing, and redness.

Inhalation may cause coughing and sneezing.

11.2 Information on other hazards

Endocrine disrupting properties:

Substance data: No data available.

Other information:

Component(s) do not have toxicological endocrine disrupting properties at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Acute (short-term) toxicity

Assessment:

This product is not expected to be harmful to aquatic organisms.

Product data: No data available.

Substance data: No data available.

Chronic (long-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

12.2 Persistence and degradability

Product data:

Readily biodegradable.

Substance data: No data available.

12.3 Bioaccumulative potential

Product data:

Based on component or similar material, not expected to bioaccumulate.

Substance data: No data available.

12.4 Mobility in soil

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 9 of 11

FR3r™

Product data:

Product has low mobility in soil.

Substance data: No data available.

12.5 Results of PBT and vPvB assessment

Product data:

PBT assessment:

This product does not contain any substances above regulatory requirements that are assessed to be a PBT.

vPvB assessment:

This product does not contain any substances above regulatory requirements that are assessed to be a vPvB.

Substance data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

12.6 Endocrine disrupting properties

Substance data: No data available.

12.7 Other adverse effects:

Component(s) do not have environmental endocrine disrupting properties at levels of 0.1% or higher.

12.8 Hazard to the ozone layer

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Product / Packaging disposal: Not determined or not available.

Waste codes / waste designations according to LoW: Not determined or not available.

13.1.2 Waste treatment-relevant information: Not determined or not available.

13.1.3 Sewage disposal-relevant information: Not determined or not available.

13.1.4 Other disposal recommendations:

Since emptied containers may retain product residue, follow label warning even after container is emptied.

SECTION 14: Transport information

International Carriage of Dangerous Goods by Road/Rail (ADR/RID)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Carriage of Dangerous Goods by Inland Waterways (ADN)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 10 of 11

FR3r™

UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Maritime Transport in Bulk according to IMO Instruments

Bulk Name	None
Ship type	None
Pollution category	None
IMO hazard class	None
Environmental hazards	None
Material hazardous only in bulk	None
Cargo Group	None

SECTION 15: Regulatory information

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

European regulations

Inventory listing (EINECS): None of the ingredients are listed.

REACH SVHC candidate list: None of the ingredients are listed.

REACH SVHC Authorizations: None of the ingredients are listed.

REACH Restriction: None of the ingredients are listed.

Water hazard class (WGK) (Product): Generally hazardous to water

Water hazard class (WGK) (Substance):

Ingredient Name	CAS	Class
Proprietary vegetable oil	Trade Secret	Generally hazardous to water

Additional information: Not determined.

15.2 Chemical Safety Assessment

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Initial preparation date: 01.12.2023

Page 11 of 11

FR3r™

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with EC No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and EC No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation, and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

Initial preparation date: 01.12.2023

End of Safety Data Sheet