# Safety data sheet
**according to Regulation (EC) No 1907/2006, Article 31**

Printing date 23.06.2026 Version number 1 Revision: 29.01.2026

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

· **1.1 Product identifier**

· **Trade name: Grain Fusel Oil Natural**

· **Product number:** 3007
· **CAS Number:**
8013-75-0
· **EC number:**
232-395-2
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Flavoring Ingredients

· **1.3 Details of the supplier of the safety data sheet**
DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. Advanced Biotech makes NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the Advanced Biotech product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of an Advanced Biotech product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the Advanced Biotech product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.
· **Manufacturer/Supplier:**
Advanced Biotech
10 Taft Road
Totowa, NJ 07512 USA

· **Further information obtainable from:**
Product Safety Department
productsafety@adv-bio.com
· **1.4 Emergency telephone number:**
Infotrac: 1-800-535-5053 (Domestic) & 1-352-323-3500 (International) Contract 72941
Email: responders@infotrac.net & During normal business hours: 1-973-339-6242

## SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Acute Tox. 4 H332 Harmful if inhaled.

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**Trade name: Grain Fusel Oil Natural**

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Skin Irrit. 2 H315 Causes skin irritation.
STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

GHS02 GHS05 GHS07

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Fusel oil

· **Hazard statements**
H226 Flammable liquid and vapour.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

· **Precautionary statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable

## *SECTION 3: Composition/information on ingredients*

· **3.1 Substances**
· **CAS No. Description**
CAS: 8013-75-0 Fusel oil
· **Identification number(s)**
· **EC number:** 232-395-2
· **Acute toxicity estimate (ATE) values**
LD50 oral: 4,959 mg/kg
LD50 dermal: 4,116 mg/kg
LC50/4 h inhalative: 15 mg/l



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## SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately rinse with water.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

## SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.
· **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

## SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.



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## SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Please refer to the product specification and/or Certificate of Analysis for product storage requirements.
· **Information about storage in one common storage facility:** Not required
· **Further information about storage conditions:** Keep container tightly sealed.
· **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:** Not required.
· **Additional information:** The lists valid during the making were used as a basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· **Hand protection**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· **Penetration time of glove material**
The exact break through time has to be determined by the manufacturer of the protective gloves and has to be observed.

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· **Eye/face protection**

Tightly sealed goggles

## SECTION 9: Physical and chemical properties

| | |
|---|---|
| · **9.1 Information on basic physical and chemical properties** | |
| · **General Information** | |
| · **Physical state** | Liquid |
| · **Colour:** | According to product specification |
| · **Odour:** | According to product specification |
| · **Odour threshold:** | Not determined |
| · **Melting point/freezing point:** | Undetermined |
| · **Boiling point or initial boiling point and boiling range** | 162 °C (CAS: 8013-75-0 Fusel oil) |
| · **Flammability** | Flammable. |
| · **Lower and upper explosion limit** | |
| · **Lower:** | Not determined |
| · **Upper:** | Not determined |
| · **Flash point:** | 45.2 °C |
| · **Decomposition temperature:** | Not determined |
| · **pH** | Not determined |
| · **Viscosity:** | |
| · **Kinematic viscosity** | Not determined |
| · **Dynamic:** | Not determined |
| · **Solubility** | |
| · **water:** | Fully miscible. |
| · **Partition coefficient n-octanol/water (log value)** | Not determined |
| · **Vapour pressure:** | Not determined |
| · **Density and/or relative density** | |
| · **Density at 20 °C:** | 0.785-0.86 g/cm³ |
| · **Relative density** | Not determined |
| · **Specific Gravity** | 0.789-0.860 @ 20 °C |
| · **Refractive Index** | |
| · **Vapour density** | Not determined |

| | |
|---|---|
| · **9.2 Other information** | |
| · **Appearance:** | |
| · **Form:** | Liquid |
| · **Important information on protection of health and environment, and on safety.** | |
| · **Ignition temperature:** | Not determined |
| · **Explosive properties:** | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| · **Solvent content:** | |
| · **VOC (EC)** | 0.00 % |

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| | |
|---|---|
| · **Change in condition** | |
| · **Evaporation rate** | Not determined |
| · **Information with regard to physical hazard classes** | |
| · **Explosives** | Void |
| · **Flammable gases** | Void |
| · **Aerosols** | Void |
| · **Oxidising gases** | Void |
| · **Gases under pressure** | Void |
| · **Flammable liquids** | Flammable liquid and vapour. |
| · **Flammable solids** | Void |
| · **Self-reactive substances and mixtures** | Void |
| · **Pyrophoric liquids** | Void |
| · **Pyrophoric solids** | Void |
| · **Self-heating substances and mixtures** | Void |
| · **Substances and mixtures, which emit flammable gases in contact with water** | Void |
| · **Oxidising liquids** | Void |
| · **Oxidising solids** | Void |
| · **Organic peroxides** | Void |
| · **Corrosive to metals** | Void |
| · **Desensitised explosives** | Void |

## SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Harmful if inhaled.

| · **LD/LC50 values relevant for classification:** | | |
|---|---|---|
| **ATE (Acute Toxicity Estimates)** | | |
| Inhalative | LC50/4 h | 15 mg/l (ATE) |

| **CAS: 8013-75-0 Fusel oil** | | |
|---|---|---|
| Oral | LD50 | 4,959 mg/kg (ATE) |
| Dermal | LD50 | 4,116 mg/kg (ATE) |
| Inhalative | LC50/4 h | 15 mg/l (ATE) |

· **Primary irritant effect:**
· **Skin corrosion/irritation** Causes skin irritation.

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· **Serious eye damage/irritation** Causes serious eye damage.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** May cause respiratory irritation. May cause drowsiness or dizziness.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **11.2 Information on other hazards**
· **Endocrine disrupting properties** Substance is not listed.

## SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.

## SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## SECTION 14: Transport information

| | |
|---|---|
| · **14.1 UN number or ID number** | |
| · **ADR, IMDG, IATA** | UN1201 |
| · **14.2 UN proper shipping name** | |
| · **ADR** | 1201 FUSEL OIL |
| · **IMDG, IATA** | FUSEL OIL |

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· **14.3 Transport hazard class(es)**

· **ADR**

| | |
|---|---|
| · **Class** | 3 (F1) Flammable liquids. |
| · **Label** | 3 |

· **IMDG, IATA**

| | |
|---|---|
| · **Class** | 3 Flammable liquids. |
| · **Label** | 3 |
| · **14.4 Packing group** | |
| · **ADR, IMDG, IATA** | III |
| · **14.5 Environmental hazards:** | Not applicable |
| · **14.6 Special precautions for user** | Warning: Flammable liquids. |
| · **Hazard identification number (Kemler code):** | 30 |
| · **EMS Number:** | F-E,S-D |
| · **Stowage Category** | A |
| · **14.7 Maritime transport in bulk according to IMO instruments** | Not applicable |
| · **Transport/Additional information:** | |
| · **ADR** | |
| · **Limited quantities (LQ)** | 5L |
| · **Excepted quantities (EQ)** | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · **Transport category** | 3 |
| · **Tunnel restriction code** | D/E |
| · **IMDG** | |
| · **Limited quantities (LQ)** | 5L |
| · **Excepted quantities (EQ)** | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · **UN "Model Regulation":** | UN 1201 FUSEL OIL, 3, III |

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## SECTION 15: Regulatory information

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

· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

GHS02 GHS05 GHS07

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Fusel oil

· **Hazard statements**

| | |
|---|---|
| H226 | Flammable liquid and vapour. |
| H332 | Harmful if inhaled. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H335-H336 | May cause respiratory irritation. May cause drowsiness or dizziness. |

· **Precautionary statements**

| | |
|---|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER/doctor. |
| P321 | Specific treatment (see on this label). |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** Substance is not listed.
· **Seveso category** P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
· **REGULATION (EU) 2019/1148**
· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
· **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.

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· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## *SECTION 16: Other information*

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Product safety department
· **Contact:**
Product Safety Department
productsafety@adv-bio.com
· **Date of previous version:** 25.01.2025
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3



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