

Safety Data Sheet

acc. to OSHA HCS (29 CFR § 1910.1200)

Printing date 01/16/2024




Reviewed on 01/10/2023

1 Identification

- **Product identifier**
- **Trade name:** Horseradish Oil natural
- **Product number:** 3022
- **CAS Number:**
84775-62-2
- **EC number:**
283-891-0
- **Application of the substance / the mixture** Flavoring Ingredients
- **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
- **Information department:**
Product Safety Department
productsafety@adv-bio.com
- **Emergency telephone number:**
Infotrac: 1-800-535-5053 (Domestic) & 1-352-323-3500 (International)
Email: responders@infotrac.net & During normal business hours: 1-973-339-6242

2 Hazard(s) identification

- **Classification of the substance or mixture**

	GHS02 Flame	
	Flammable Liquids 2	H225 Highly flammable liquid and vapor.
	GHS06 Skull and crossbones	
	Acute Toxicity - Oral 2	H300 Fatal if swallowed.
	Acute Toxicity - Dermal 2	H310 Fatal in contact with skin.
	Acute Toxicity - Inhalation 2	H330 Fatal if inhaled.
	GHS07	
	Skin Irritation 2	H315 Causes skin irritation.
	Eye Irritation 2A	H319 Causes serious eye irritation.
	Specific Target Organ Toxicity - Single Exposure 3	H335 May cause respiratory irritation.

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· **GHS label elements**

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible.
 The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS06 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Horseradish Oil

· **Hazard statements**

H225 Highly flammable liquid and vapor.
 H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P301+P310 If swallowed: Immediately call a poison center/doctor.
 P330 Rinse mouth.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.
 P320 Specific treatment is urgent (see on this label).
 P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 4
 Fire = 3
 Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



HEALTH 3 Health = 3
 FIRE 3 Fire = 3
 REACTIVITY 0 Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
CAS: 84775-62-2 Horseradish Oil
- **Identification number(s)**
- **EC number: 283-891-0**

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **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.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Prevent seepage into sewage system, workpits and cellars.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.

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Ensure adequate ventilation.

· **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.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

Substance is not listed.

· **PAC-2:**

Substance is not listed.

· **PAC-3:**

Substance is not listed.

7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:** Not required.

· **Additional information:** The lists that were valid during the creation were used as a basis.

· **Exposure controls**

· **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.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

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- **Breathing equipment:**
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



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.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

- **Form:** Liquid
- **Color:** According to product specification
- **Odor:** According to product specification
- **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

· **Flash point:** 22 °C (71.6 °F)

· **Flammability (solid, gaseous):** Highly flammable.

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Not determined.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**
 Lower: Not determined.

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Upper:	Not determined.
· Vapor pressure:	Not determined.
· Density at 20 °C (68 °F):	1.01-1.06 g/cm ³ (8.42845-8.8457 lbs/gal)
· Specific Gravity	1.010 - 1.060 @ 20 °C (33.8 - 33.9 @ 68 °F)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
· Other information	No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	5 mg/kg
Dermal	LD50	50 mg/kg
Inhalative	LC50/4 h	0.5 mg/l

CAS: 84775-62-2 Horseradish Oil

Oral	LD50	5 mg/kg (ATE)
Dermal	LD50	50 mg/kg (ATE)
Inhalative	LC50/4 h	0.5 mg/l (ATE)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.

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- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number	
· DOT, IMDG, IATA	UN1545
· UN proper shipping name	
· DOT	Allyl isothiocyanate, stabilized
· IMDG	ALLYL ISOTHIOCYANATE, STABILIZED, MARINE POLLUTANT
· IATA	ALLYL ISOTHIOCYANATE, STABILIZED

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· **Transport hazard class(es)**

· **DOT**



· **Class**

6.1 Toxic substances

· **Label**

6.1, 3

· **IMDG**



· **Class**

6.1 Toxic substances

· **Label**

6.1/3

· **IATA**



· **Class**

6.1 Toxic substances

· **Label**

6.1 (3)

· **Packing group**

· **DOT, IMDG, IATA**

II

· **Environmental hazards:**

· **Marine pollutant:**

Yes

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Toxic substances

· **Hazard identification number (Kemler code):**

63

· **EMS Number:**

F-E,S-D

· **Stowage Category**

D

· **Stowage Code**

SW1 Protected from sources of heat.

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: Forbidden

On cargo aircraft only: 60 L

· **Remarks:**

Special marking with the symbol (fish and tree).

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<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	100 ml Code: E4 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN 1545 ALLYL ISOTHIOCYANATE, STABILIZED, 6.1 (3), II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

Substance is not listed.

· **Hazardous Air Pollutants**

Substance is not listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **GHS label elements**

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible.

The substance is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**



GHS02 GHS06 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Horseradish Oil

· **Hazard statements**

- H225 Highly flammable liquid and vapor.
- H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

· **Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P301+P310 If swallowed: Immediately call a poison center/doctor.
- P330 Rinse mouth.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.
- P320 Specific treatment is urgent (see on this label).
- P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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 preparation / last revision** 01/16/2024

· **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
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

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PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flammable Liquids 2: Flammable liquids – Category 2
Acute Toxicity - Oral 2: Acute toxicity – Category 2
Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

US

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