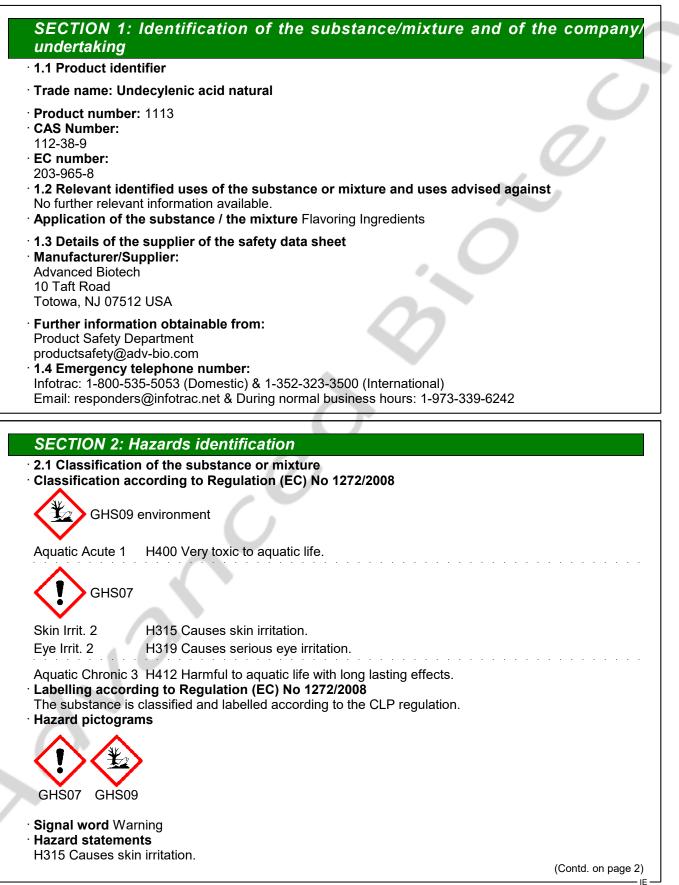


according to Regulation (EC) No 1907/2006, Article 31

Printing date 24.01.2025

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Revision: 08.01.2025





according to Regulation (EC) No 1907/2006, Article 31

Printing date 24.01.2025

Version number 1

Revision: 08.01.2025

#### Trade name: Undecylenic acid natural

	(Contd. of page 1)		
H319 Causes se	prious eye irritation.		
H400 Very toxic			
H412 Harmful to	aquatic life with long lasting effects.		
<ul> <li>Precautionary s</li> </ul>	statements		
P273	Avoid release to the environment.		
P280	Wear protective gloves / eye protection / face protection.		
P305+P351+P33	305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact		
	lenses, if present and easy to do. Continue rinsing.		
P332+P313	If skin irritation occurs: Get medical advice/attention.		
P337+P313	If eye irritation persists: Get medical advice/attention.		
P501	Dispose of contents/container in accordance with local/regional/national/international		
	regulations.		
<sup>·</sup> 2.3 Other hazar	ds		
· 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: 112-38-9 10-Undecenoic acid
- Identification number(s)
- · EC number: 203-965-8

#### **SECTION 4: First aid measures**

- · 4.1 Description of first aid measures
- · General information: Immediately remove any clothing soiled by the product.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Immediately rinse with water.
- · After eve contact: Rinse opened eye for several minutes under running water. If symptoms persist, 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 alcohol resistant foam.
- CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Use fire extinguishing methods suitable to surrounding conditions.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- · Protective equipment: No special measures required.
- · Additional information
- Cool endangered receptacles with water spray.

(Contd. on page 3)



according to Regulation (EC) No 1907/2006, Article 31

Printing date 24.01.2025

Version number 1

Revision: 08.01.2025

(Contd. of page 2)

#### Trade name: Undecylenic acid natural

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 Not required.
- 6.2 Environmental precautions:
- Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system. 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). Dispose contaminated material as waste according to section 13.
- 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.

### SECTION 7: Handling and storage

• **7.1 Precautions for safe handling** No special precautions are necessary if used correctly. • **Information about fire - and explosion protection:** No special measures required.

- · 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: Not required.
- · Hand protection



Protective gloves

(Contd. on page 4)



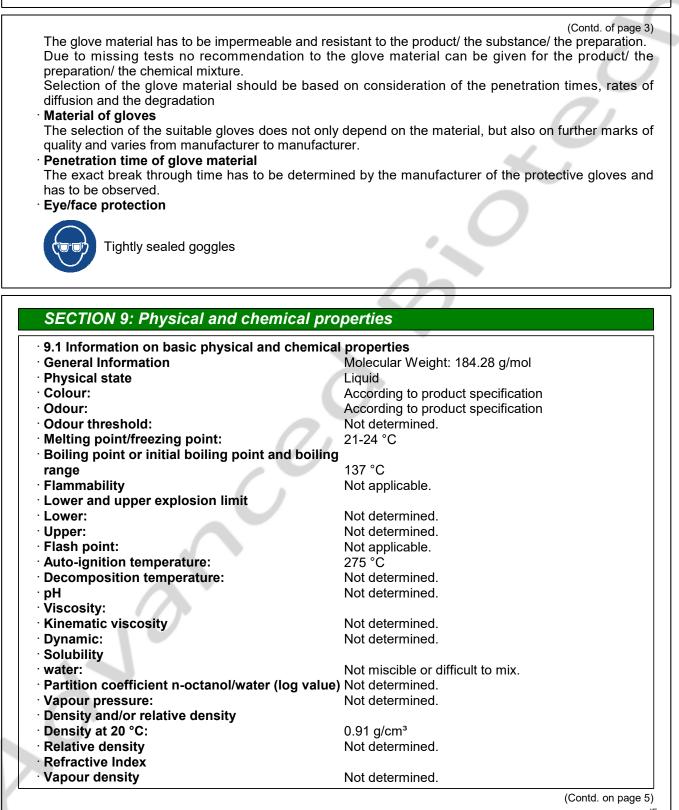
#### Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 24.01.2025

Version number 1

Revision: 08.01.2025

#### Trade name: Undecylenic acid natural





according to Regulation (EC) No 1907/2006, Article 31

Printing date 24.01.2025

Version number 1

Revision: 08.01.2025

Trade name: Undecylenic acid natural (Contd. of page 4) 9.2 Other information · Appearance: · Form: Liquid · Important information on protection of health and environment, and on safety. · Ignition temperature: Not determined. Product does not present an explosion hazard. · Explosive properties: Solvent content: · VOC (EC) 0.00 % Solids content: 100.0 % · 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 Void 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 Void

Void

· Corrosive to metals · Desensitised explosives

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

(Contd. on page 6)

IE



according to Regulation (EC) No 1907/2006, Article 31

Printing date 24.01.2025

#### Version number 1

Revision: 08.01.2025

#### Trade name: Undecylenic acid natural

(Contd. of page 5)

#### · LD/LC50 values relevant for classification:

#### CAS: 112-38-9 10-Undecenoic acid

Oral LD50 2,500 mg/kg (rat)

· Primary irritant effect:

- Skin corrosion/irritation Causes skin irritation.
- Serious eye damage/irritation Causes serious eye irritation.
- · 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 Based on available data, the classification criteria are not met.
- 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
- Remark:

Very toxic for fish

- Harmful to fish
- · 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.

Very toxic for aquatic organisms Harmful to aquatic organisms

## 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.

(Contd. on page 7)



according to Regulation (EC) No 1907/2006, Article 31

Printing date 24.01.2025

Version number 1

Revision: 08.01.2025

(Contd. of page 6)

Trade name: Undecylenic acid natural

• Uncleaned packaging:
 • Recommendation: Disposal must be made according to official regulations.

<sup>·</sup> 14.1 UN number or ID number	
· ADR, IMDG, IATA	UN3082
· 14.2 UN proper shipping name	
ADR	3082 ENVIRONMENTALLY HAZARDOU
· IMDG, IATA	SUBSTANCE, LIQUID, N.O.S. (10-Undecenoic acid) ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (10-Undecenoic acid)
· 14.3 Transport hazard class(es)	
· ADR	
· Class	9 (M6) Miscellaneous dangerous substances an articles.
· Label	9
· IMDG, IATA	
	$\mathcal{O}$
· Class	9 Miscellaneous dangerous substances and articles.
· Label	9
14.4 Packing group	
· ADR, IMDG, IATA	III
14.5 Environmental hazards:	
· Marine pollutant:	Yes Symbol (fish and trac)
· Special marking (ADR):	Symbol (fish and tree) Symbol (fish and tree)
· Special marking (IATA):	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Miscellaneous dangerous substances an articles.
· Hazard identification number (Kemler c	
EMS Number:	F-A,S-F
· Stowage Category	A
<ul> <li>14.7 Maritime transport in bulk according IMO instruments</li> </ul>	ng to Not applicable.



according to Regulation (EC) No 1907/2006, Article 31

Printing date 24.01.2025

Version number 1

Revision: 08.01.2025

Trade name: Undecylenic acid natural

	(Contd. of page 7)
· Transport/Additional information:	
ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
<ul> <li>Tunnel restriction code</li> </ul>	(-)
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS
-	SUBSTANCE, LIQUID, N.O.S. (10-UNDECENOIC
	ACID), 9, III

#### 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



#### · Signal word Warning

- Hazard statements
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H400 Very toxic to aquatic life.
- H412 Harmful to aquatic life with long lasting effects.

#### · Precautionary statements

P273Avoid release to the environment.P280Wear protective gloves / eye protection / face protection.P305+P351+P338IF IN EYES: Rinse cautiously with water for several minutes. Remove contact<br/>lenses, if present and easy to do. Continue rinsing.P332+P313If skin irritation occurs: Get medical advice/attention.P337+P313If eye irritation persists: Get medical advice/attention.P501Dispose of contents/container in accordance with local/regional/national/international<br/>regulations.• Directive 2012/18/EU

- · Named dangerous substances ANNEX I Substance is not listed.
- · Seveso category E1 Hazardous to the Aquatic Environment

(Contd. on page 9)

IE



according to Regulation (EC) No 1907/2006, Article 31

Printing date 24.01.2025

Version number 1

Revision: 08.01.2025

Trade name: Undecylenic acid natural

(Contd. of page 8)

- $^{\rm c}$  Qualifying quantity (tonnes) for the application of lower-tier requirements 100~t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 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.

 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

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
- Skin Irrit. 2: Skin corrosion/irritation Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation Category 2
- Aquatic Acute 1: Hazardous to the aquatic environment acute aquatic hazard Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3