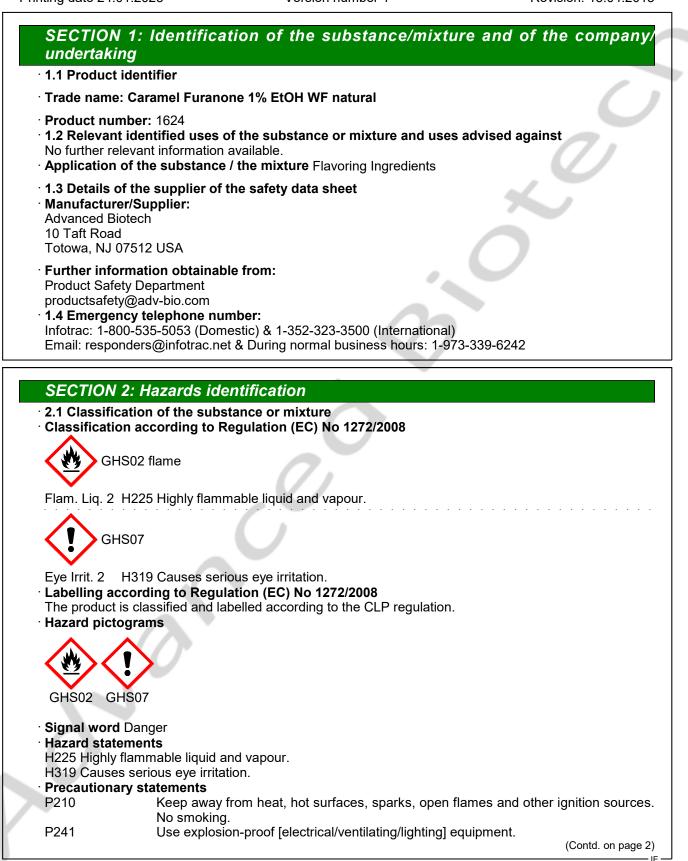


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(Contd. of page 1) P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P403+P235 Store in a well-ventilated place. Keep cool. 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

3.2 Mixtures

• **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:				
CAS: 64-17-5 EINECS: 200-578-6		substance with a Community workplace exposure limit	50-100%	
• Additional information: For the wording of the listed hazard phrases refer to section 16.				

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 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: No special measures required.
- · Additional information

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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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). 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.

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:
- 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: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions:

Keep container tightly sealed.

- Store in cool, dry conditions in well sealed receptacles.
- 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:

CAS: 64-17-5 Ethanol

OEL Short-term value: 1000 ppm

• 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.

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· Hand protection

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μ.				
Protective gloves				
	resistant to the product/ the substance/ the preparation			
Due to missing tests no recommendation to the glove material can be given for the product/ th				
preparation/ the chemical mixture.				
election of the glove material should be based on consideration of the penetration times, rates of				
iffusion and the degradation				
aterial of gloves				
	election of the suitable gloves does not only depend on the material, but also on further marks of			
ality and varies from manufacturer to manufacturer. As the product is a preparation of sever ostances, the resistance of the glove material can not be calculated in advance and has therefore t				
	al can not be calculated in advance and has therefore			
be checked prior to the application.				
Penetration time of glove material	ningel by the menufactures of the protective slaves a			
	nined by the manufacturer of the protective gloves a			
has to be observed.				
Eye/face protection				
Tightly sealed goggles				
SECTION 9. Physical and chemical n	ronartias			
SECTION 9: Physical and chemical p	roperties			
SECTION 9: Physical and chemical p 9.1 Information on basic physical and chemi General Information				
9.1 Information on basic physical and chemi General Information	cal properties			
9.1 Information on basic physical and chemi General Information Physical state	cal properties			
9.1 Information on basic physical and chemi General Information Physical state Colour:	cal properties Liquid According to product specification			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour:	cal properties Liquid According to product specification According to product specification			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold:	cal properties Liquid According to product specification According to product specification Not determined.			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point:	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C			
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9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range Flammability Lower and upper explosion limit	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable.			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range Flammability Lower and upper explosion limit Lower:	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol %			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range Flammability Lower and upper explosion limit Lower: Upper:	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol % 15 Vol %			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range Flammability Lower and upper explosion limit Lower: Upper: Flash point:	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol % 15 Vol % 16 °C			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range Flammability Lower and upper explosion limit Lower: Upper: Flash point: Auto-ignition temperature:	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol % 15 Vol % 16 °C 425 °C			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range Flammability Lower and upper explosion limit Lower: Upper: Flash point: Auto-ignition temperature: Decomposition temperature:	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol % 15 Vol % 16 °C 425 °C Not determined.			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range Flammability Lower and upper explosion limit Lower: Upper: Flash point: Auto-ignition temperature: Decomposition temperature: pH	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol % 15 Vol % 16 °C 425 °C			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range Flammability Lower and upper explosion limit Lower: Upper: Flash point: Auto-ignition temperature: Decomposition temperature: pH Viscosity:	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol % 15 Vol % 16 °C 425 °C Not determined. Not determined.			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range Flammability Lower and upper explosion limit Lower: Upper: Flash point: Auto-ignition temperature: Decomposition temperature: pH	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol % 15 Vol % 16 °C 425 °C Not determined.			
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9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boili range Flammability Lower and upper explosion limit Lower: Upper: Flash point: Auto-ignition temperature: Decomposition temperature: pH Viscosity: Kinematic viscosity	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol % 15 Vol % 16 °C 425 °C Not determined. Not determined. Not determined.			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boiling range Flammability Lower and upper explosion limit Lower: Upper: Flash point: Auto-ignition temperature: Decomposition temperature: pH Viscosity: Kinematic viscosity Dynamic:	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol % 15 Vol % 16 °C 425 °C Not determined. Not determined. Not determined. Not determined.			
9.1 Information on basic physical and chemi General Information Physical state Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and boiling range Flammability Lower and upper explosion limit Lower: Upper: Flash point: Auto-ignition temperature: Decomposition temperature: pH Viscosity: Kinematic viscosity Dynamic: Solubility	cal properties Liquid According to product specification According to product specification Not determined. -114.5 °C ng 78 °C Highly flammable. 3.5 Vol % 15 Vol % 16 °C 425 °C Not determined. Not determined. Not determined. Not determined. 1,000 g/l			



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Trade name: Caramel Furanone 1% EtOH WF natural (Contd. of page 4) · Vapour pressure at 20 °C: 59 hPa Density and/or relative density · Density at 20 °C: 0.82 g/cm³ Relative density Not determined. · 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: Product is not selfigniting. Product is not explosive. However, formation of · Explosive properties: explosive air/vapour mixtures are possible. · Solvent content: · Organic solvents: 99.0 % · VOC (EC) 99.00 % Change in condition · Evaporation rate Not determined. · Information with regard to physical hazard classes Void · Explosives Void · Flammable gases · Aerosols Void · Oxidising gases Void · Gases under pressure Void Flammable liquids Highly 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.

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(Contd. of page 5) • **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.
- · Primary irritant effect:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · 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

None of the ingredients is 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) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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.

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· Recommended cleansing agents: Water, if necessary together with cleansing agents.

· 14.1 UN number or ID number	
· ADR, IMDG, IATA	UN1170
14.2 UN proper shipping name	
ADR	1170 ETHANOL SOLUTION (ETHYL ALCOHO SOLUTION)
·IMDG	ETHANOL SOLUTION (ETHYL ALCOHO SOLUTION)
·IATA	ETHANOL SOLUTION
· 14.3 Transport hazard class(es)	
ADR	
· Class · Label	3 (F1) Flammable liquids. 3
· IMDG, IATA	
· Class · Label	3 Flammable liquids. 3
· 14.4 Packing group · ADR, IMDG, IATA	11
· 14.5 Environmental hazards:	
· Marine pollutant:	No
 14.6 Special precautions for user Hazard identification number (Kemler code) 	Warning: Flammable liquids.
· 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)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
· Transport category	Maximum net quantity per outer packaging: 500 ml 2



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· Tunnel restriction code	D/E
 IMDG Limited quantities (LQ) Excepted quantities (EQ) 	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

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 product is classified and labelled according to the CLP regulation.				
· Hazard pictograms				
GHS02 GHS07				
GH302 GH307				
· Signal word Danger				
· Hazard statements				
H225 Highly flammable liquid and vapour.				
H319 Causes serious eye irritation.				
· Precautionary statements				
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.				
No smoking.				
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.				
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.				
P403+P235 Store in a well-ventilated place. Keep cool.				
P501 Dispose of contents/container in accordance with local/regional/national/international				
regulations.				
· Directive 2012/18/EU				
• Named dangerous substances - ANNEX I None of the ingredients is 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				
None of the ingredients is listed.				
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· REGULATION (EU) 2019/1148

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• Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

 Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is 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 ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society)

- VOC: Volatile Organic Compounds (USA, EU)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation Category 2