

1 Identification

· **Product identifier**

This product is not meant for direct consumption; industrial flavor additive use only. Review this SDS in its entirety before handling this product.

· **Trade name: BANANA**

· **Product code: 805.0127U**

· **Relevant identified uses of the substance or mixture and uses advised against**

· **Sector of Use SU4** Manufacture of food products

· **Product category PC19** Intermediate

· **Process category**

PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

· **Environmental release category**

ERC6a Industrial use resulting in manufacture of another substance (use of intermediates)

· **Article category AC30** Other articles with intended release of substances

· **Application of the substance / the mixture** Food additive

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

FLAVORx, Inc.
9475 Gerwig Lane
Columbia, MD 21046
info@flavorx.com

· **Information department:** Regulatory Affairs

· **Emergency telephone number:**

During normal operation hours: 630-578-8600

Chemtrec (24-hour HAZMAT Communications Center): 1-800-262-8200 Account Number: 8554

2 Hazard(s) identification

· **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

· **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS08

· **Signal word** Danger

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

ethyl alcohol

· **Hazard statements**

H226 Flammable liquid and vapour.

H350 May cause cancer.

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Precautionary statements

- P210 *Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*
- P241 *Use explosion-proof electrical/ventilating/lighting/equipment.*
- P280 *Wear protective gloves / eye protection / face protection.*
- P240 *Ground/bond container and receiving equipment.*
- P233 *Keep container tightly closed.*
- P242 *Use only non-sparking tools.*
- P243 *Take precautionary measures against static discharge.*
- P201 *Obtain special instructions before use.*
- P202 *Do not handle until all safety precautions have been read and understood.*
- P303+P361+P353 *IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*
- P308+P313 *IF exposed or concerned: Get medical advice/attention.*
- P370+P378 *In case of fire: Use for extinction: CO2, powder or water spray.*
- P405 *Store locked up.*
- P403+P235 *Store in a well-ventilated place. Keep cool.*
- P501 *Contact a certified hazardous material waste disposal company. Dispose of contents/ container in accordance with local/regional/national/international regulations.*

Classification system:

NFPA ratings (scale 0 - 4)



HMIS-ratings (scale 0 - 4)



Other hazards

Results of PBT and vPvB assessment

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

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

Mixture.

Exact percentage concentration information is being withheld as confidential under trade secret provisions in 29 CFR 1910.1200(i)

Dangerous components:

64-17-5	ethyl alcohol ⚠ Flam. Liq. 2, H225; ⚠ Carc. 1A, H350	10-<25%
123-92-2	isoamyl acetate ⚠ Flam. Liq. 3, H226; H402	5-<10%
98-01-1	furfural ⚠ Acute Tox. 3, H301; Acute Tox. 3, H331; ⚠ Carc. 2, H351; ⚠ Acute Tox. 4, H312; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; H227	<2%

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4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **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.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
See Section 8 for full details on personal protective equipment.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure local 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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Unless otherwise stated on the specification, store this product at ambient temperatures (50-75°F).
- **Information about storage in one common storage facility:**
If flammable, consult NFPA guidelines for proper storage requirements.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

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

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** See section 7.

· **Control parameters**

· **Components with established workplace exposure limits:**

57-55-6 propane-1,2-diol (50-<75%)

WEEL Long-term value: 10 mg/m³

64-17-5 ethyl alcohol (10-<25%)

PEL Long-term value: 1900 mg/m³, 1000 ppm

REL Long-term value: 1900 mg/m³, 1000 ppm

TLV Short-term value: 1880 mg/m³, 1000 ppm

123-92-2 isoamyl acetate (5-<10%)

PEL Long-term value: 525 mg/m³, 100 ppm

REL Long-term value: 525 mg/m³, 100 ppm

TLV Short-term value: 532 mg/m³, 100 ppm

Long-term value: 266 mg/m³, 50 ppm

98-01-1 furfural (<2%)

PEL Long-term value: 20 mg/m³, 5 ppm

Skin

TLV Long-term value: 7.9 mg/m³, 2 ppm

Skin; BEI

· **Ingredients with biological limit values:**

98-01-1 furfural (<2%)

BEI 200 mg/L

Medium: urine

Time: end of shift

Parameter: Furoic acid with hydrolysis (nonspecific)

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

· **Breathing equipment:**

In case of insufficient ventilation, the employer should select a respirator that provides both particulate air filtration and also provides protection against organic vapors.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Full head, face and neck protection

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· Form:	Fluid
· Color:	According to product specification
· Odor:	Characteristic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· **Boiling point/Boiling range:** Undetermined.

· **Flash point:** 31 °C (88 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 371 °C (700 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

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

· **Explosion limits:**

· Lower:	2.6 Vol %
· Upper:	15.0 Vol %

· **Vapor pressure at 20 °C (68 °F):** 59 hPa (44 mm Hg)

· **Density at 20 °C (68 °F):** 0.99 g/cm³ (8.262 lbs/gal)

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· **Dynamic:** Not determined.

· **Kinematic:** Not determined.

· **Solvent content:**

· **Organic solvents:** 86.4 %

· **Water:** 1.0 %

· **VOC content:** 86.4 %

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Other information No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **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:**

64-17-5 ethyl alcohol

Oral	LD50	7060 mg/kg (rat)
Inhalative	LC50/4 h	20000 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

· **Carcinogenic categories**

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

64-17-5	ethyl alcohol	1
98-01-1	furfural	3
97-53-0	Eugenol	3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is 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 known to be hazardous to water.

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- **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:**
Do not allow product to reach sewage system.
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:**
Disposal must be made according to official regulations on hazardous materials.
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN1197
· UN proper shipping name	
· DOT	Extracts, flavoring, liquid
· ADR	1197 Extracts, flavoring, liquid
· IMDG, IATA	EXTRACTS, FLAVOURING, LIQUID
· Transport hazard class(es)	
· DOT	
	
· Class	3 Flammable liquids
· Label	3
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	30

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· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· DOT	
· Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· 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":	UN1197, Extracts, flavoring, liquid, 3, III

15 Regulatory information

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

· Section 355 (extremely hazardous substances):	None of the ingredients is listed.	
· Section 313 (Specific toxic chemical listings):	None of the ingredients is listed.	
· TSCA (Toxic Substances Control Act):	All ingredients are listed.	
· Proposition 65		
· Chemicals known to cause cancer:	None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for females:	None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	64-17-5 ethyl alcohol	
· Carcinogenic categories		
· EPA (Environmental Protection Agency)	None of the ingredients is listed.	
· TLV (Threshold Limit Value established by ACGIH)		
64-17-5 ethyl alcohol		A3
98-01-1 furfural		A3

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

None of the ingredients is listed.

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

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