

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name	Caramel Furanone (Fenugreek Lactone) 1% in ETOH, Natural
Product Number	0363400
CAS-No.	28664-35-9 / 64-17-5

1.2 Product Recommended Use

Flavorings

1.3 Preparation Information

Company	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992- USA
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Telephone	845-496-6065
Fax	845-496-6248

1.4 Emergency Telephone Number

1-800-535-5053
International - 1-352-323-3500 collect

Section 2: HAZARD(s) IDENTIFICATION

2.1 Classification of substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) Flammable Liquids (Category 2), H225

2.2 GHS Label Elements, Including precautionary statements

Pictogram



Signal Statement	Danger
Hazard Statement(s)	H225 Highly Flammable liquid and vapor

Precautionary Statement(s)	P210	Keep away from heat/sparks/open flames/hot surfaces – No smoking
	P233	Keep container tightly closed
	P240	Ground/bond container and receiving equipment
	P241	Use explosion proof electrical/ventilating/lighting equipment
	P242	Use only non sparking tools
	P243	Take precautionary measures against static discharge
	P264	Wash skin thoroughly after handling
	P280	Wear protective gloves/clothing face and eye protection
	P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
	P370+P378	In case of fire: Use dry sand, dry chemical, or alcohol resistant foam

P403+P235 for extinction.
Store in a well ventilated place. Keep cool
P501 Dispose of contents/container to an approved waste disposal plant

2.3 HNOC (Hazards not otherwise classified or not covered by GHS) None

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 **Substances** Caramel Furanone 1% EtOH
Synonym Ethanol Solution
Formula
Molecular Weight
CAS-No 28664-35-9/ 64-17-5

Hazardous Components

Component	Classification	Concentration
Ethanol	Flammable liquid (2) H225	99%

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation Provide fresh air; keep at rest and at a comfortable position to breathe

Contact with skin: Remove contaminated clothing. Rinse skin with cool water then wash with mild soap and warm water.

Contact with eyes: Flush eyes with water as a precaution.

Ingestion DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Clothing contamination: Remove contaminated clothing and wash before reuse.

4.2 **Most important symptoms and effects both acute and delayed** See section 2.2 and or section 11

4.3 **Indication of any immediate medical attention and special treatment needed.** No data available

Section 5: FIREFIGHTING MEASURES

5.1 **Extinguishing Media**
Suitable Extinguishing Media Use water spray, alcohol resistant foam, dry chemical or carbon dioxide

5.2 **Special hazards arising from the substance or mixture** Nature of decomposition products not known

5.3 **Advice for fire fighters** Wear self contained breathing apparatus for firefighting if necessary. Emits toxic fumes under fire conditions.

5.4 Further information No data available

Section 6: ACCIDENTAL RELEASE MEASURES

- 6.1 **Personal precautions, protective equipment and emergency procedures** Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
- 6.2 **Environment precautions** Prevent further leakage or spillage if safe to do so. Do not allow to enter drains or sewage system.
- 6.3 **Methods and materials for containment and clean up** Contain spillage, collect with absorbent material and deposit in suitable container for disposal. Keep container closed. After sweep up, wash and ventilate area well.
- 6.4 **Specific end use(s)** Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

Section 7: HANDLING AND STORAGE

- 7.1 **Precautions for safe handling** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion proof equipment. Keep away from sources of ignition - No Smoking. Take measures to prevent the build-up of electrostatic charge. Normal measures for preventive fire protection.
- 7.2 **Conditions for Safe storage** Keep container tightly closed in a dry, cool and well-ventilated place. Containers which have been opened must be carefully resealed and kept upright to prevent leakage.
20°C Max.
Hydroscopic
Keep from extremes of temperatures and direct sunlight
- 7.3 **Specific End use(s)** Flavorings

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control Parameters	Basis
Ethanol	64-17-5	TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks: Upper Respiratory Tract Irritation				
Confirmed animal carcinogen with unknown relevance to humans				
		TWA	1,000 ppm 1,900 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m3 is approximate				
		TWA	1,000 ppm 1,900 mg/m3	USA. NIOSH Recommended Exposure Limits

8.2 Exposure Controls

Appropriate Engineering Controls Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the workday.

Personal protective equipment

These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situations of anticipated use by our customers. They should not be construed as offering an approval or any specific use scenario.

Eye/face protection	Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Skin protection	Wear chemically resistant Nitrile gloves. Use proper glove removal techniques (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use. Wash and dry hands.
Body protection	Complete flame retardant antistatic suit protecting against chemicals should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a back up to engineering controls. If the respirator is the sole means of protection, use a full faced supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a Appearance	Clear, pale yellow liquid
b Odor	Alcoholic/Caramel; maple
c Odor Threshold	No data available
d pH	No data available
e Melting Point /Freezing Point	37-43°C
f Boiling Point	78°C
g Flash Point	16.0°C closed cup
h Evaporation Rate	No data available
i Flammability (Solid, Gas)	No data available
j Upper/lower Flammability Limit	Upper explosion limit: 19.% (V) Lower explosion limit: 3.3% (V)

k	Vapor pressure	59.5 hPa (44.6 mmHg) at 20°C
l	Vapor density	No data available
m	Relative density @25°C	0.805-0.825
n	Solubility	Soluble in water and most organic solvents
o	Partition coefficient: n-octanol/water	No data available
p	Auto-ignition Temp.	363.0°C
q	Decomposition Temp,	No data available
r	Viscosity	No data available
s	Explosive properties	No data available
t	Oxidizing properties	No data available

9.2 Other Safety Information No data available

Section 10: STABILITY AND REACTIVITY

10.1	Reactivity	No data available
10.2	Chemical Stability	Stable under recommended storage conditions
10.3	Possibility of Hazardous reactions	Vapors may form explosive mixture with air
10.4	Conditions to avoid	Heat, flames and sparks. Extremes of temperature and direct sunlight
10.5	Incompatible materials	Alkali metals, Ammonia, Oxidizing agents, Peroxides
10.6	Hazardous decomposition products	No data available
10.7	Further Information	No data available

Section 11: TOXICOLOGICAL INFORMATION

11.1	Information on toxicological effects	
	Acute Toxicity	
	LD50-Oral - RAT	7,060 mg/kg
	LC50-Inhalation- RAT	Remarks: Lungs, Thorax, or Respiration: Other changes 20,000 ppm 10hr
	Skin corrosion/irritation	Rabbit: No skin irritation - 24 hr (OECD Test Guideline 404)

Serious eye damage/eye irritation	Rabbit: Mild eye irritation -24 hr (OECD Test Guideline 405)
Respiratory or skin sensitization	No data available
Germ Cell mutagenicity	No data available
Carcinogenicity	Carcinogenicity-Mouse Tumorigenic: Equivocal tumorigenic agent by RTECS criteria: Liver: Tumors Blood: Lymphomas including Hodgkin's disease
	IARC No component of this product, present levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
	NTP No component of this product, present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
	OSHA No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	Human: Female, Oral Effects on Newborn: Apgar score (human only); other neonatal measures or effects on newborn: Drug dependence
Teratogenicity	No data available
Specific target organ toxicity-single exposure (GHS)	No data available
Specific target organ toxicity-repeated exposures (GHS)	No data available
Aspiration Hazards	No data available
Signs and Symptoms of Exposure	Central nervous system depression, narcosis, damage to the heart. Heart irregularities - Based on Human Evidence Stomach irregularities - Based on Human Evidence To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated
Synergistic effects	No data available
RTECS:	Not available

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required / not conducted
12.6 Other adverse effects	No data available

Section 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product:	According to local regulations
Packaging	According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US)	UN Number 1170 Class 3 Packing Group II
Proper Shipping Name	Ethanol Solution (Ethyl Alcohol Solution)
Marine Pollutant	No
Poison Inhalation hazard	No
IMDG	UN Number 1170 Class 3 Packing Group II
Proper Shipping Name	Ethanol Solution (Ethyl Alcohol Solution)
Marine Pollutant	No
IATA	UN Number 1170 Class 3 Packing Group II Ethanol Solution (Ethyl Alcohol Solution)

Section 15: REGULATORY INFORMATION

SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.		
SARA 313 Components	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.		
SARA 311/312 Hazards	Fire Hazard, Chronic Health Hazard		
Massachusetts Right to Know components	Ethanol	CAS# 64-17-5	Rev. Date: 3/01/2007
Pennsylvania Right to Know components	Ethanol	CAS# 64-17-5	Rev. Date: 3/01/2007
New Jersey Right to Know components	Ethanol	CAS# 64-17-5	Rev. Date: 3/01/2007
California Prop. 65 components	This product does not contain any chemical known to the State of California to cause cancer, birth defects, or any other reproductive harm.		

Section 16: OTHER INFORMATION

HMIS Rating

Health hazard	2
Chronic Health Hazard*	
Flammability	2
Physical Hazard	0

Safety Data Sheet

Further Information

Aurochemicals provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Aurochemicals makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Aurochemicals will not be responsible, nor held liable, for damages resulting from use of or reliance upon this information.

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