

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name	Sulfurol 5% Solution in TEC, Natural
Product Number	0320405
CAS-No.	137-00-8 / 77-93-0

1.2 Product Recommended Use

Flavorings

1.3 Preparation Information

Company	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992
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: Irritant

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
 Skin irritation (Category 2), H315
 Eye irritation (Category 2A), H319
 Acute Toxicity, Inhalation (Category 4) H332
 Specific target organ toxicity-Single Exposure (Category 3), Respiratory System, H335

2.2 GHS Label Elements, Including precautionary statements

Pictogram



Warning

Signal Statement

Hazard Statement(s)

Precautionary Statement(s)

H315 Cause skin irritation
 H319 Causes serious eye irritation
 H332 Harmful if inhaled
 H335 May cause respiratory irritation
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray
 P264 Wash skin thoroughly after handling
 P271 Use only outdoors or in a well ventilated area
 P280 Wear protective gloves/eye protection/face protection
 P302+P352 IF ON SKIN: Wash with plenty of soap and water
 P302+P352 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P304+P340
 P305+P351+P338 IF IN EYES: Rinse cautiously with water to several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

- P312 Call a POISON CENTER or doctor/physician if you feel unwell
 P332+P313 If skin irritation occurs: Get medical advice/attention
 P337+P313 If eye irritation persists: Get medical advice/attention
 P362 Take off contaminated clothing and wash before reuse
 P403+P233 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 – STENCH)

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	4-Methyl-5-thiazoleethanol as 5% Solution in Triethyl citrate Sulfurool 5% Solution in TEC (Tri ethyl Citrate)
Formula	C ₆ H ₉ NOS
CAS-No	137-00-8 / 77-93-0 205-272-6 / 201-070-7

Hazardous Components

Component	Classification	Concentration
2-(4-Methylthiazol-5-yl)ethanol	Skin irritation (Category 2), H315 Eye irritation (Category 2A), H319 Specific target organ toxicity-Single Exposure (Category 3), Respiratory System, H335	5%
Tri Ethyl Citrate	Not classified as a hazardous substance	95%

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Consult 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. Consult a physician
Contact with skin:	Remove contaminated clothing. Rinse skin with cool water then wash with mild soap and warm water and contact a physician.
Contact with eyes:	Rinse thoroughly with plenty of water for at least 15 as a precaution and consult a physician.
Ingestion	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
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	For small (incipient) fires, use media such as alcohol foam, dry chemical or carbon dioxides. For larger fires, apply water from as far as possible. Use very large quantities (flooding) of water as a mist or a spray; solid streams of water may be ineffective. Cool all containers with flooding quantities of water.
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5.2	Special hazards arising from the substance or mixture	Carbon oxides, Nitrogen oxides (NOx), Sulfide Oxides
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	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surfaces

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 area.
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. Soak up with absorbent material. Sweep up with broom and shovel. Place in a suitable, closed container for disposal.
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. Normal measures for preventive fire protection.
7.2	Conditions for Safe storage	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
7.3	Specific End use(s)	Flavorings

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	Control parameters	Contains no substances with occupational exposure limit values
8.2	Exposure Controls	
	Appropriate Engineering Controls	Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practices. Wash hands immediately after handling the product; before breaks and at the end of the day.
	Personal protective equipment	These recommendations are advisory only and must be evaluated by an industrial engineer 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	Wear appropriate safety glasses with side shields. 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 rubber gloves, 0.2 mm thick, when handling this product. 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	Impervious clothing 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 face supplied air respirator. Use respirators and components tested and approved under appropriate governmental 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. Discharge into the environment must be avoided.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a	Appearance	Liquid, viscous-oily Colorless to light amber
b	Odor	Stench, beefy, nutty
c	Odor Threshold	No data available
d	pH	No data available
e	Melting Point /Freezing Point	No data available
f	Boiling Point	No data available
g	Flash Point	>110°C closed cup
h	Evaporation Rate	No data available
i	Flammability (Solid, Gas)	No data available
j	Upper/lower Flammability Limit	No data available
k	Vapor pressure	No data available
l	Vapor density	2.63 (Air=1.0)
m	Relative density at 25°C	1.138-1.139
n	Solubility	Slightly soluble in water Miscible with alcohol and ether
o	Partition coefficient: n-octanol/water	No data available
p	Auto-ignition Temp.	No data available
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	No data available
10.4	Conditions to avoid	No data available
10.5	Incompatible materials	Strong oxidizing agents
10.6	Hazardous decomposition products	No data available
10.7	Further Information	After inhalation: Irritations of the mucous membranes, coughing and Dyspnea After skin and eye contact: Irritant effect

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

This product is a mixture and has not been tested for health hazards. The health hazard information presented below is provided in accordance with 29CFR 1910.1200 and is based on the testing of individual component which have been shown to cause the following health effects when tested at higher concentrations or at full strength.

Acute Toxicity

LD50-Oral -Rat	5,900 mg/kg Remarks: Behavioral: Altered sleep time (including changes in righting reflex) Respiratory disorder: Nutritional and Gross Metabolic Changes in body temperature decrease
LD50-Dermal -Rabbit	>5,000 mg/kg
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ Cell mutagenicity	No data available
Further Toxicological Information	May be harmful if inhaled, swallowed, or if absorbed through skin

Carcinogenicity

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.
ACGIH	No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
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	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	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated
Synergistic effect	No data available
RTECS:	Not available

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity	To Fish: Mortality NOEC- Pimephales promelas (fathead minnow) 52,930 mg/l 96 hr To Daphnia and other aquatic invertebrates Mortality NOEC – Daphnia magna (water flea) 13,020 mg/l 48 hr EC-50 Daphnia magna (water flea) >10,000 mg/l 48 hr
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: 3334 Class: 9 Packing Group: III
Proper shipping name: Aviation regulated liquid, n.o.s. (2-(4-Methylthiazol-5-yl)ethanol)
Reportable Quantity (RQ): No
Marine Pollutant: No
Poison Inhalation Hazard: No
IMDG Not dangerous goods
IATA UN-Number: 3334 Class: 9 Packing Group: III
Proper shipping name: Aviation regulated liquid, n.o.s. (2-(4-Methylthiazol-5-yl)ethanol)

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 Acute health hazard

Massachusetts Right to Know components No components are subject to the Massachusetts Right to Know Act

Pennsylvania Right to Know components (2-(4-Methylthiazol-5-yl)ethanol) 5% CAS# 137-00-8 Rev. Date:
Triethyl Citrate 95% CAS# 77-93-0 Rev. Date:

New Jersey Right to Know components (2-(4-Methylthiazol-5-yl)ethanol) 5% CAS# 137-00-8 Rev. Date:
Triethyl Citrate 95% CAS# 77-93-0 Rev. Date:

California Prop. 65 components This product does not contain any chemicals known to 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 1
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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