



Safety Data Sheet
According to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Guaiacol, 0.5% in 55% Ethyl Alcohol	
NCL Catalog Number	G-95	
Product Description	Laboratory chemical.	
Supplier	NCL of Wisconsin, Inc. Telephone: 1-800-648-7836 Email: nclabs@nclabs.com	PO Box 8, Birnamwood, WI 54414 Fax: 715-449-2454 Emergency Contact: 1-800-424-9300 (Chemtrec)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification

Flammable Liquids
Specific Target Organ Toxicity

Category 3
Single Exposure Category 1



Signal Word Danger

Hazard Statements

H226 Flammable liquid and vapor.
H370 Causes damage to organs.

Precautionary Statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P260 Do not breathe mist/vapors/spray.

P264 Wash exposed skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.

P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container to comply with local, state and federal regulations.

Other Hazards Not Contributing to the Classification

None under normal conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity	Not applicable
Common Name	Not applicable

Mixture

Name	CAS #	Approximate %
Ethyl Alcohol	64-17-5	<50
Water	7732-18-5	>50
Guaiacol	90-05-1	0.5

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General First Aid Measures	Never give anything by mouth to an unconscious person. Seek medical advice if you feel unwell.
If Inhaled	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor if you feel unwell.
In Case of Skin Contact	Remove all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor if you feel unwell.
In Case of Eye Contact	Rinse carefully with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician if you feel unwell.
If Swallowed	Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell. Ingestion of large quantities: immediately take to the hospital.

Most Important Symptoms/Effects Acute and Delayed

After Inhalation	Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respirator difficulties. Central nervous system depression. Symptoms similar to those listed under ingestion.
After Skin Contact	Slight irritation.
After Eye Contact	Redness of the eye tissue. Lacrimation. Irritation of the eye tissue on continuous exposure/contact.
After Ingestion	Risk of aspiration pneumonia. Red skin. Body temperature rise. Damp/clammy skin. Excited/restless. Accelerated heart action. Central nervous system depression. Dizziness. Narcosis. Headache. Drunkenness. Nausea. Vomiting. Disturbed motor response. Coordination disorders. Visual disturbances. Impaired concentration. Delusions. Disturbed sensation of pain. Disturbances of heart rate. Disturbances of consciousness. Tremor. Cramps/uncontrolled muscular contractions. Dilated pupils.
Chronic Symptoms	Repeated exposure/contact: Dry skin. Gastrointestinal complaints. Enlargement/affection of the liver. Change in the haemogramme/blood composition. Cardiac and blood circulation effects. High arterial pressure. Impairment of the nervous system. Behavioral disturbances. Mental confusion. Disturbed tactile sensibility. Tremor. Affection of the bone marrow. Affection of the endocrine system. Weakening of the immune system.

Indication of Immediate Medical Attention and Special Treatment Needed

Seek medical attention if exposed.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media	Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable Extinguishing Media	Do not use a heavy water stream.

Special Hazards Arising from the Chemical

Reactivity	Highly flammable. Gas/vapor flammable with air within explosion limits. May be ignited by sparks. Gas/vapors spreads at floor level. Upon combustion: CO and CO ₂ are formed. Reacts violently with many compounds; strong oxidizers. Violent to explosive reaction with some acids.
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Special Protective Actions for Fire-Fighters

Wear self-contained breathing apparatus and protective clothing. Cool tanks/drums with water spray/remove them to safety. Do not move the load if exposed to heat.

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment and Emergency Procedures**

Personal Precautions	Use personal protective equipment (see section 8). Evacuate area of non-essential personnel. Eliminate ignition sources.
Environmental Precautions	Prevent entry to sewers and public waters. Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark and explosion proof appliances and lighting equipment. Keep containers closed. Wash contaminated clothing before reuse.
Methods and Materials for Containment and Cleaning Up	Collect spillage with inert absorbent material. Store away from other materials. Wash clothing/equipment after handling. Ensure compliance with local, state and federal regulations.

SECTION 7: HANDLING AND STORAGE**Handling and Storage**

Precautions for Safe Handling	Avoid contact with eyes and skin. Avoid breathing vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
Conditions for Safe Storage Including any Incompatibilities	Keep in original container tightly closed, stored in a cool, dry, ventilated area. Store away from sunlight, which can contribute to instability. Store away from; heat sources, ignition sources, oxidizing agents, strong acids, water and moisture. Fireproof storeroom. Meet legal requirements.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**Control Parameters**

Ethyl Alcohol, Denatured (64-17-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1900 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

Appropriate Engineering Controls

Material should be handled or transferred in a fume hood or with equivalent ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

Individual Protection Measures

Skin Protection	Avoid all unnecessary exposure.
Eye Protection	Protective gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.
Respiratory Protection	Use chemical safety goggles and /or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye-wash fountain and quick-drench facilities in work area.
Other Information	Wear appropriate mask.
	Do not eat, drink, or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Color	Colorless
Odor	Slight alcohol odor
Odor Threshold	Not determined
pH	Not determined
Melting Point/Freezing Point	Not determined
Initial Boiling Point and Boiling Range	Not determined

Flash Point	Not determined
Evaporation Rate	Not determined
Flammability (Solid, Gas)	Not determined
Upper/Lower Flammability/Explosive Limits	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Relative Density	Not determined
Density	Not determined
Solubility	Soluble in water
Partition Coefficient: n-octanol/water	Not determined
Auto-Ignition Temperature	Not determined
Decomposition Temperature	Not determined
Viscosity	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Upon combustion: CO and CO ₂ are formed. Reacts violently with many compounds. Strong oxidizers: increased risk of fire/explosion. Violent explosive reaction with some acids.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	No data available
Conditions to Avoid	Extremely high or low temperatures. Heat and sunlight can contribute to instability. Open flame.
Incompatible Materials	Strong acids, strong bases, and strong oxidizers.
Hazardous Decomposition Products	When heated to decomposition, can emit toxic gases, carbon dioxide, and carbon monoxide. May release flammable gases.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity	Not classified
Ethyl Alcohol, Denatured (64-17-5)	
LD50 oral rat	10740 mg/kg
LD50 dermal rabbit	>16000 mg/kg
Guaiacol (90-05-1)	
LD50 oral rat	520 mg/kg
LD50 dermal rabbit	4600 mg/kg

Skin Corrosion/Irritation	Not classified
Serious Eye Damage/Irritation	Not classified
Respiratory or Skin Sensitization	Not classified
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified
Specific Target Organ Toxicity (Single Exposure)	Causes damage to organs (central nervous system, optic nerve).
Specific Target Organ Toxicity (Repeated Exposure)	Not classified
Aspiration Hazard	Not classified
Potential Adverse Human Health Effects and Symptoms	No data available
Symptoms/Injuries After Inhalation	Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respirator difficulties. Central nervous system depression. Symptoms similar to those listed under ingestion.

Symptoms/Injuries After Skin Contact

Slight irritation.

Symptoms/Injuries After Eye Contact

Redness of the eye tissue. Lacrimation. Irritation of the eye tissue on continuous exposure/contact.

Symptoms/Injuries After Ingestion

Risk of aspiration pneumonia. Red skin. Body temperature rise. Damp/clammy skin. Excited/restless. Accelerated heart action. Central nervous system depression. Dizziness. Narcosis. Headache. Drunkenness. Nausea. Vomiting. Disturbed motor response. Coordination disorders. Visual disturbances. Impaired concentration. Delusions. Disturbed sensation of pain. Disturbances of heart rate. Disturbances of consciousness. Tremor. Cramps/uncontrolled muscular contractions. Dilated pupils.

Chronic Symptoms

Repeated exposure/contact: Dry skin. Gastrointestinal complaints. Enlargement/affection of the liver. Change in the haemogramme/blood composition. Cardiac and blood circulation effects. High arterial pressure. Impairment of the nervous system. Behavioral disturbances. Mental confusion. Disturbed tactile sensibility. Tremor. Affection of the bone marrow. Affection of the endocrine system. Weakening of the immune system.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology – Water: Not harmful to fishes (LC50 96h >1000 mg/l). Not harmful to invertebrates (Daphnia). Slightly harmful to algae (EC50 72h 100-1000 mg/l). Not harmful to bacteria (EC50 >1000 mg/l). Inhibition of activated sludge.

Ethyl Alcohol, Denatured (64-17-5)	
LC50 fishes 1	14200 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	9300 mg/l (48h; Daphnia magna)
LC50 fish 2	13000 mg/l (96h; Salmo gairdneri, Oncorhynchus mykiss)
EC50 Daphnia 2	10800 mg/l (24; Daphnia magna)
Threshold limit other aquatic organisms 1	65 mg/l (72h; Protozoa)
Threshold limit algae 1	1450 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2	5000 mg/l (168 h; Scenedesmus quadricauda)
Guaiacol (90-05-1)	
EC50 daphnia and other aquatic invertebrates	25.9 mg/l

Persistence and Degradability

Ethyl Alcohol, Denatured (64-17-5)	
Persistence and Degradability	Readily biodegradable in water. Biodegradable in the soil. No data on the mobility of the substance available.
Biochemical oxygen demand (BOD)	0.8-0.967 g O ₂ /g substance
Chemical oxygen demand (COD)	1.70 g O ₂ /g substance
ThOD	2.10 g O ₂ /g substance
BOD (% of ThOD)	0.43 % ThOD

Bioaccumulative Potential

Log Pow: -0.31
Bioaccumulative potential: Low potential for bioaccumulation (Log Kow < 4)

Mobility in Soil

Surface tension: 0.022 N/m (20°C)

Other Adverse Effects

Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of Disposal

Disposal Recommendations

Dispose of contents/containers in accordance with local, state and federal regulations.

Ecology-Waste Materials

Avoid release to the surrounding environment.

SECTION 14: TRANSPORT INFORMATION

UN Number

UN1170

UN Shipping Name	Ethyl Alcohol
Transport Hazard Class(es)	3
Packing Group	II
Environmental Hazards	Not applicable
Transport in Bulk	Not applicable
Special Precautions	Not applicable

SECTION 15: REGULATORY INFORMATION

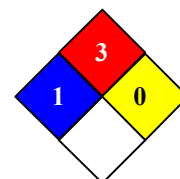
Ethyl Alcohol (64-17-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Guaiacol (90-05-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

SECTION 16: OTHER INFORMATION

Revision Date: 04/07/2015

NFPA Hazards

Health Hazard	1: Exposure would cause irritation with only minor residual injury.
Fire Hazard	3: Liquids and solids that can be ignited under almost all ambient temperature conditions.
Reactivity/Instability	0: Normally stable, even under fir exposure conditions, and is not reactive with water.



HMIS III Rating

Health	1: Irritation or minor reversible injury possible.
Flammability	3: Materials capable of ignition under almost all normal temperature conditions.
Physical Hazard	0: Materials that are normally stable, even under fire conditions.
Personal Protection	H

G-95	
Health	1
Flammability	3
Physical Hazard	0
Personal Protection	H

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END OF SAFETY DATA SHEET