SDS No.: EE0076 4539 **SAFETY DATA SHEET** **FLAMMABLE STORAGE CODE RED**

Section 1 Chemical Product and Company Identification

KM00009
KM00603

Nasco
901 Janesville Ave.
P.O. Box 901
Fort Atkinson, WI 53538-0901

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300
For laboratory use only
Not for drug, food or household use

Product	**ETHYL ALCOHOL, DENATURED, 95% SOLUTION**
Synonyms	Ethanol, Denatured, 95%

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS02 / GHS07 / GHS08 / GHS06
Target organs: Eyes, Central nervous system, Liver, Kidneys.

GHS Classification:
Flammable liquid (Category 2)
Acute toxicity, inhalation (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2B)
STOT-SE (Category 2)
STOT-SE (Category 3)

GHS Label information: Hazard statement:
H225: Highly flammable liquid and vapour.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H336: May cause drowsiness or dizziness
H371: May cause damage to organs.

Precautionary statement:
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
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.
P260: Do not breathe mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTER or doctor if you feel unwell.
P332+P313: If skin irritation occurs: Get medical attention.
P337+P313: If eye irritation persists: Get medical attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations

Ca Prop 65: This product contains a chemical known to the State of California to cause reproductive toxicity (Methanol, developmental).

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Ethyl alcohol	64-17-5	85.9%	200-578-6
Water	7732-18-5	5.0%	231-791-2
Isopropyl alcohol (denaturant)	67-63-0	4.8%	200-661-7
Methanol (denaturant)	67-56-1	4.3%	200-659-6

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Ethanol	STEL: 1000 ppm / 1880 mg/m^3(A3)	TWA: 1000 ppm / 1900 mg/m^3	TWA: 1000 ppm / 1900 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid
Odor: Mild characteristic odor.
Odor threshold: Data not available
pH: Data not available.
Melting / Freezing point: -114°C (-173°F)*
Boiling point: 78°C (163-174°F)*
Flash point: 13°C (55°F) TCC

Evaporation rate (Butyl acetate = 1): 4.1*
Flammability (solid/gas): Data not available
Explosion limits: Lower / Upper: 3.3%(V) / 19%(V)*
Vapor pressure (mm Hg): 44.6 mm @ 20°C*
Vapor density (Air = 1): 1.59*
Relative density (Specific gravity): 0.794°C @ 60°F*
Solubility(ies): Soluble in water

Partition coefficient: (n-octanol / water): Low Pow: -.32*
Auto-ignition temperature: 363°C (685°F)
Decomposition temperature: Data not available
Viscosity: Data not available.
Molecular formula: Mixture
Molecular weight: Mixture

*[Pure Ethanol]

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur
Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.
Incompatible materials: Strong oxidizers, inorganic acids and halogens
Hazardous decomposition products: Oxides of carbon

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 7060 mg/kg ; Inhalation-rat LC50: 124.7 mg/l/4hours [Ethanol]
Skin corrosion/irritation: Skin-rabbit - Slight irritant.
Serious eye damage/irritation: Eyes-rabbit - Severe irritant
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenicity: Data not available
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
IARC classified: Group 3: Not classifiable as to its carcinogenicity to humans. [Isopropanol]
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: Data not available
STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Inhalation may cause dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat.
Ingestion: Ingestion causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait and coma.
Skin: Contact with skin causes irritation defatting on prolonged contact.
Eyes: Contact with eyes may cause blindness.
Signs and symptoms of exposure: See Potential health effects above
Additional information: RTECS #: KQ6300000 [Ethanol]

Section 12 Ecological Information

Toxicity to fish: Oncorhynchus mykiss (fish, fresh water), LC50 = 11,200 mg/l/24 hours [Ethanol]
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacia), EC50 = 10,800 mg/l/24 hours [Ethanol, 99.8% pure]
Toxicity to algae: Chlorella pyrenoidosa (Algae), EC50 = 9,310 mg/l/growth rate [Ethanol, absolute]
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN1170
Shipping name: Ethanol
Hazard class: 3
Packing group: II
Reportable Quantity: 5,000 lbs (2270 kg)
Marine pollutant: No
Exceptions: Limited quantity equal to or less than 1 L
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Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL
Ethanol	Listed	Not listed	D001	Listed	Not listed
Methanol	Listed	5,000 lbs.	U154	Listed	Not listed
Isopropanol	Listed	Not listed	Not listed	Listed	Not listed

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program; IARC: International Agency for Research on Cancer; OSHA: Occupational Safety and Health Administration; STOT: Specific Target Organ Toxicity; SE: Single Exposure; RE: Repeated Exposure; ERG: Emergency Response Guidebook.

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