SAFETY DATA SHEET

ST01-SE (Category 2)contact lenses, if present and easy to do. Continue rinsing.STOT-SE (Category 3)P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.GHS Label information: Hazard statement: H225: Highly flammable liquid and vapour.P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.H301: Toxic if swallowed. H311: Toxic in contact with skin.P308+P311: IF exposed or concerned: Call a POISON CENTER or doctor.H319: Causes serious eye irritation. H331: Toxic if inhaled. H336: May cause drowsiness or dizziness. H371: May cause damage to organs.P308+P311: IF exposed or concerned: Call a POISON CENTER or doctor.H371: May cause damage to organs.P308+P311: IF exposed or concerned: Call a POISON CENTER or doctor.H371: May cause damage to organs.P308+P311: IF exposed or concerned: Call a POISON CENTER or doctor.H371: May cause damage to organs.P308+P311: IF exposed or concerned: Call a POISON CENTER or doctor.H371: May cause damage to organs.P308+P311: IF exposed or concerned: Call a POISON centerned clothing and wash it before reuse spray to extinguish.P301: Dispose of contents/container to a licensed chemical disposal agency in	Section 1	Identification	Page E1 of E2
Synonyms Ethyl Alcohol Fuel Section 2 Hazards identification Signal word: DANGER Pictograms: GHS02 / GHS08 / GHS08 Target organs: Eyes, Central nervous system, Liver, Kidneys. P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Image: Stress Contral nervous system, Liver, Kidneys. P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Image: Stress Contral nervous system, Liver, Kidneys. P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Image: Stress Contral nervous system, Liver, Kidneys. P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Image: Stress Contral nervous system, Liver, Kidneys. P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Image: Stress Contral nervous system, Liver, Kidneys. P230: F323: Keep Container tightly closed. Keep cool. P240: Ground/bond container and receiving equipment. P242: Use only non-sparking tools. P241: Use explosion-proof electrical/ventilating/lighting equipment. P242: Use only non-sparking tools. P242: Use only non-sparking tools. P242: Use only non-sparking tools. P242: Use only non-sparking tools. P242: Wash hands thoroughy after handling. P250: Edegory 2) P261: Wear protective gloves/protective clothing/eye protection/face protection. P210: Keep away from heat/sparks/ope		Nasco 901 Janesville Ave. Fort Atkinson, WI 53538-0901 Phone: 920-563-2446	Phone Number (800) 424-9300 For laboratory and industrial use only.
Section 2 Hazards identification Signal word: DANGER Pictograms: GHS02 / GHS06 / GHS08 Target organs: Eyes, Central nervous system, Liver, Kidneys. P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233 + P235: Keep container tightly closed. Keep cool. GHS Classification: P241: Use explosion-proof electrical/ventilating/lighting equipment. Flammable liquid (Category 2) Acute toxicity, oral (Category 3) Acute toxicity, inhalation (Category 3) P270: Do not breathe mistivapours/spray. Fyei rintation (Category 2) P270: Use only onot-sparking tools. STOT-SE (Category 2) P270: Do not eat, drink or smoke when using this product. STOT-SE (Category 3) P260: Do not breather mistivapours/spray. GHS Label information: Hazard statement: P270: Use only outdoors or in a well-ventilated area. P225: Highly flammable liquid and vapour. P303+P361+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304: P301: Toxic if swallowed. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P331: Toxic if inhaled. P336+P311: If exposed or concerned: Call a POISON CENTER or doctor. P331: Toxic if inhaled. P370+P378: In case of fine: Use dry chemical, alcohol foam, carbon dioxide or water spray	Product	ETHANOL , BURNER FUEL	
Signal word: DANGER Pictograms: GHS02 / GHS06 / GHS08 Target organs: Eyes, Central nervous system, Liver, Kidneys. View View View View GHS Classification: Flarmable liquid (Category 2) Acute toxicity, oral (Category 3) Acute toxicity, inhalation (Category 3) Acute toxicity, inhalation (Category 3) STOT-SE (Category 2) STOT-SE (Category 3) GHS Label information: Hazard statement: H225: Highly flammable liquid and vapour. H311: Toxic in contact with skin. H311: Toxic if inhaled. H312: Toxic of inhaled.	Synonyms	Ethyl Alcohol Fuel	
Pictograms: GHS02 / GHS06 / GHS08 Target organs: Eyes, Central nervous system, Liver, Kidneys. View View View View GHS Classification: Flammable liquid (Category 2) Flammable liquid (Category 3) Cate toxicity, ornal (Category 3) Acute toxicity, ornal (Category 3) P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233-P235: Keep container tightly closed. Keep cool. P240: Ground/bond container and receiving equipment. 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. P260: Use only outdoors or in a well-ventilated area. P270: Do not eat, drink tor smoke when using this product. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P301: IF SWALLOWED: Immediately all POISON CENTER or doctor. P303+P361+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact with skin. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. H331: Toxic if inhaled. P303+P361+P361: IF exposed or concerned: Call	Section 2	Hazards identification	
Hazards not otherwise classified:	Pictograms: Target organs GHS Classifit Flammable liq Acute toxicity, Acute toxicity, Acute toxicity, Acute toxicity, Acute toxicity, CFOT-SE (Ca STOT-SE (Ca GHS Label in H225: Highly t H301: Toxic if H311: Toxic if H311: Toxic if H312: Toxic if H336: May ca H371: May ca	GHS02 / GHS06 / GHS08 s: Eyes, Central nervous system, Liver, Kidneys.	 P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233+P235: Keep container tightly closed. Keep cool. 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. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor. P303+P361+P353: IF IN EYES: Rinse cautiously with water for 15 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. P308+P311: IF exposed or concerned: Call a POISON CENTER or doctor. P337+P313: If eye irritation persists: Get medical attention. P361+P364: Take off immediately all contaminated clothing and wash it before reuse. P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish. P403+P405: Store in a well-ventilated place. Store locked up.

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	action 3 Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Ethyl alcohol, denatured*		64-17-5	99%	200-578-6		
Sodium chloride		7647-14-5	1%	231-598-3		
*Denaturants:						
Isopropyl alcohol		67-63-0	5%	200-661-7		
Methanol		67-56-1	4.5%	200-659-6		

Section 4 First aid measures

INGESTION: TOXIC 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: TOXIC 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 SERIOUS 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: TOXIC IN CONTACT WITH 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 and 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)		
Exposure Limits.	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/MSHAapproved respirator.

approved respirator.						
Section 9	Physical and chemical pr	operties				
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 (172.4°F)* Flash point: 72.7°C (55°F) TCC		Evaporation rate (Butyl acetate = 1): 4.1* Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: 3.3% / 19.0% 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 Etha		
Section 10	Stability and 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: Contact with acetyl chloride and a wide range of oxidizing agents may react violently. Vapors may form flammable mixtures with air. Hazardous decomposition products: Oxides of carbon.						
Section 11	Toxicological information					
Skin corrosion/irrita Serious eye damage Respiratory or skin Germ cell mutageni Carcinogenity: Dat NTP: No component IARC classified: Grou OSHA: No component CA Prop 65: A WAR Reproductive toxici STOT-single expose STOT-repeated exp Aspiration hazard: Potential health effe Inhalation: Inhalation Ingestion: Ingestion Skin: Contact with sl Eyes: Contact with sl Eyes: Contact with sl Eyes: Contact with sl Signs and symptom Additional informat Section 12 Toxicity to fish: One	ation: Skin-rabbit - Slight irritar e/irritation: Eyes-rabbit - Seve sensitization: Data not availa city: Data not available a not available of this product present at levels up 3: Not classifiable as to its ca to f this product present at level UNING! : This product can expose ty: Data not available ure: The substance or mixture osure: Data not available Data not available exts: n may cause dizziness, drowsin causes dizziness, drowsiness, kin causes irritation, defatting o exps may cause blindness. Is of exposure: See Potential ion: RTECS #: KQ6300000 [E Ecological information corhynchus mykiss (fish, fresh	ere irritant. ble s greater than or equal to 0.1% i arcinogenicity to humans. [Isopr els greater than or equal to 0.1% se you to Methanol, which is kno is classified as specific target or ess, nausea, vomiting, inability decreased reaction, euphoria, n n prolonged contact. health effects above. Ethanol] water), LC50 = 11,200 mg/l/24 h	s identified as a known or an opanol] . is identified as a carcinoger wn to the State of California gan toxicant, single exposur o concentrate and irritation o ausea, vomiting, staggering ours [Ethanol]	n or potential car to cause birth do e, category 3 wit of the throat. gait and coma.	rcinogen by OS efects or other th narcotic effec	reproductive harm.
Toxicity to algae: Ch Persistence and deg Mobility in soil: No	nlorella pyrenoidosa (Algae), E0 g radability: No data available data available	es: Daphnia magna (Crustacia) C50 = 9,310 mg/l/growth rate [Et Bioaccumulative potent PBT and vPvB assessm	hanol, absolute] al: No data available ent: No data available	•	3% pure]	
		annot be excluded in the event of		uispusal.		
regulations may be	different. Dispose of in acc	disposal of catalog-size quar ordance with all local, state a				
Section 14 Transport information						
UN/NA number: UN1170 Shipping name: Ethanol Hazard class: 3 Packing group: II Reportable Quantity: 5,000 lbs (2270 kg) Marine pollutant: No						
	ited quantity equal to or les	, i	20 ERG Guide # 127	00 103 (221 U K	9/ Wa	
Section 15	Regulatory information					
	· · ·	the anhydrous form is on the Invent	bry list.			
Compone	nt	TSCA CERLCA	RQ) RCRA code	DSL	NDSL	CA Prop 65
Ethanol Methanol Isopropanol		Listed Not list Listed 5,000 II Listed Not list	os. U154	Listed Listed Listed	Not listed Not listed Not listed	WARNING - Reproductive Harm - www.P65Warnings.ca.gov.
Section 16	Other information					
The information contained	ed herein is furnished without warra	nty of any kind. Employers should u	se this information only as a su	pplement to other i	nformation gathe	red by them and must make indepen-

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.