established in 1981
megaloid laboratories

5515 North Service Rd. #306
Burlington, Ontario L7L 6G4

Phone: 905-337-7411
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1. IDENTIFICATION

Name: *Ethanol 190 Proof*

Synonyms: *ethyl alcohol solution, primary alkyl alcohol, 1-hydroxyethane, ethyl alcohol, absolute alcohol, ethyl hydrate*

Product Uses: *solvent in cosmetics, inks; fuel – gasoline additive/extender; etc*

Supplier Identifier:
Megaloid Laboratories Limited
5515 North Service Road # 306
Burlington, ON L7L 6G4

EMERGENCY INFORMATION: ***Call CHEMTREC - (800) 424-9300 (CCN# 693764)***

2. HAZARD INDENTIFICATION

GHS Class (category)	**Flammable liquid** (2)	**Eye irritation** (2A)	**Acute oral toxicity** (5)	**Aspiration toxicity** (2)
Signal Word	**DANGER**			
Hazard Statements	*Highly flammable liquid and vapor (H225)*	*Causes serious eye irritation (H319)*	*May be harmful if swallowed (H303)*	*May be harmful if swallowed and enters airways (H305)*

Hazardous Pictograms

GHS Precautionary Statements for Labelling	
P201	*Obtain special instructions before use.*

P202	*Do not handle until all safety precautions have been read and understood.*
P210	*Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.*
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 dust/fume/gas/mist/vapors/spray.*
P263	*Avoid contact during pregnancy/while nursing.*
P264	*Wash 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.*
P303+P361+P353	*IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin withwater/shower.*
P304+P340	*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*
P305+P351+P338	*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
P308+P311	*IF exposed or concerned: Call a POISON CENTER/doctor/physician*
P312	*Call a POISON CENTER/doctor/physician if you feel unwell.*
P321	*Specific treatment (see first aid section on this label).*
P337+P313	*If eye irritation persists: Get medical advice/attention.*
P370+P378	*In case of fire: Use appropriate method to extinguish.*
P403+P233	*Store in a well-ventilated place. Keep container tightly closed.*
P403+P235	*Store in a well-ventilated place. Keep cool.*
P405	*Store locked up.*
P501	*Dispose of contents/container in accordance with local/regional/national/international regulations.*

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	CAS No.	%	Other Identifiers
Ethanol	*64-17-5*	*80 – 94 %*	*200-578-6*
Water	*7732-18-5*	balance	*231-791-2*

4. FIRST-AID MEASURES

Inhalation
Rescuers should put on appropriate protective gear. Remove from area of exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep victim warm. Get immediate medical attention. To prevent aspiration, keep head below knees.

Skin Contact
Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately and clean shoes before reuse.

Eye Contact
Immediately flush eyes with water. Flush eyes with water for a minimum of 15 minutes, occasionally lifting and lowering upper lids. Get medical attention promptly. Remove contact lenses if worn.

Ingestion
Small amounts which accidentally enter mouth should be rinsed out until taste of it is gone. Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel.

Most important symptoms and effects, both acute and delayed
Causes serious eye irritation
May be harmful if swallowed
May be harmful if swallowed and enters airways

Notes to physician
Treat symptomatically

Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media
Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unsuitable Extinguishing Media
None known

Specific Hazards Arising from the Product
Highly flammable liquid and vapor. Vapors/dust may cause flash fire or explosion. Vapors can travel to a source of ignition and flash back. Empty containers retain product residue (liquid and/or vapor) and can be dangerous. **DO NOT** pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Also, do not reuse container without commercial cleaning or reconditioning.

Special Protective Equipment and Precautions for Fire-fighters
As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Do not use water jet (frothing possible). Water spray to cool containers or protect personnel. Use with caution. Use water spray to knock down vapors. Water runoff can cause environmental damage. Dike and collect water used to fight fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Wear appropriate personal protective equipment. (See Exposure Controls / Personal Protection Section.)Eliminate all ignition sources. Prevent additional discharge of material if able to do so safely. Do not touch or walk through spilled material. Avoid runoff into storm sewers and ditches which lead to waterways. Ventilate spill area. Stay upwind of spill. A vapor supressing foam may be used to reduce vapors.

Methods and materials for containment and cleaning up
If leak or spill has not ignited, use water spray to disperse the vapors. Collect spilled materials for disposal. Use only non-combustible material for clean-up. Use clean, non-sparking tools to collect absorbed materials. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

Serious Fire Potential:
blanket spill with foam as a precaution against accidental ignition. Take extreme care to avoid sparks – do not operate (turn on OR off) electrical appliances near spill, unless explosion proof.

7. HANDLING & STORAGE

Precautions for Safe Handling
Use only in a well ventilated area. Avoid breathing vapor, fumes or mist. Avoid contact with eyes, skin, and clothing. Take precautionary measures against static discharge. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Always open containers slowly to allow any excess pressure to vent. Follow all MSDS/label precautions even after containers are emptied because they may retain product residues.

Conditions for Safe Storage
Keep away from heat, sparks, and flame. Containers can build up pressure if exposed to heat (fire). Store containers in a cool, well ventilated place. Keep container closed when not in use. Protect from direct sunlight.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

Chemical Name	Ontario - STEL	ACGIH - TWA	OSHA PEL - TWA	OSHA PEL - STEL	NIOSH - TWA
Ethanol	1000 ppm	ND	1000 ppm	ND	1000 ppm
Water	ND	ND	ND	ND	ND

ND = not determined

Ventilation	Wear a MSHA/NIOSH approved (or equivalent) full-face piece airline respirator in the positive pressure mode with emergency escape provisions.
Skin	Wear impervious gloves to prevent contact with the skin. Wear long sleeves when contact is likely to occur. Wear protective gear as needed - apron, suit, boots.
Eyes	Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).
Clothing	Use body protection appropriate for the task (e.g. rubber apron). If necessary, refer to the OSHA Technical Manual - Section VII: Personal Protective Equipment)

9. PHYSICAL & CHEMICAL PROPERTIES

Odour & Appearance	Sweet, ethereal, liquid
Odour threshold	For Ethanol: 49-716 ppm.
pH	Very weak acid and very weak base.
Melting point/Freezing point	Not available
Initial boiling point/boiling range	78°C / 172°F
Flash point	13°C / 55°F (closed cup)
Evaporation rate (Butyl Acetate = 1)	<4 – the bulk of this product has an evaporation rate of 2.5
Flammability (solid; gas)	no info available
Lower flammable/explosive limit	4%
Upper flammable/explosive limit	19%
Vapour pressure	Not known
Vapour density (air = 1)	>1.1 – the bulk of this product has a vapour density of 1.6
Relative density	0.794 (20/20°C)
Water Solubility	complete
Auto ignition temperature	>385°C / 725°F
Molecular Weight	46grams per mole (ethanol); 60grams per mole (2-propanol); 32grams per mole (methanol)
Decomposition temperature	1.2centipoise (20°C / 68°F)

10. STABILITY AND REACTIVITY

Chemical Stability
Stable under normal conditions of handling and use.

Possibility of Hazardous Reactions
Will not polymerize

Conditions to avoid
Avoid impact, friction, heat, sparks, flame and source of ignition.

Incompatible materials
Avoid contact with caustics. Prevent contact with combustible materials. Prevent contact with aldehydes. Avoid contact with chlorinated compounds. Avoid contact with hydrogen peroxide, chromic anhydride, nitric acid, mixed nitric/sulfuric acid, nitrosyl perchlorate, permonosulfuric acids, potassium tert-butoxide, sodium hypobromite, chlorinated melamine. Prevent contact with halogens. Prevent contact with strong oxidizing agents. Avoid contact with amines. Keep away from acids. Keep separate from alkalies.

Hazardous decomposition products
Toxic gases/fumes are given off during burning or thermal decomposition. During combustion carbon monoxide may be formed. During combustion carbon dioxide may be formed. Combustion can lead to the formation of formaldehyde. Combustion can lead to formation of formic acid.

11. TOXICOLOGICAL INFORMATION

EFFECTS OF OVEREXPOSURE - INHALATION: Toxic by inhalation. Breathing in the material may irritate the mucous membranes of the nose, throat bronchi and lungs. Vapors can cause irritation of the respiratory tract. High concentrations can cause headache, nausea, weakness, light-headedness, and stupor (CNS depression). May cause dizziness and drowsiness.

Acute Toxicity	
Skin Contact	drying, but not irritating unless exposure is prolonged
Skin Absorption	slight; no toxic effects likely by this route
Eye Contact	liquid moderately irritating; vapour irritating at 7000ppm
Inhalation	vapour irritating at 2000ppm; irritation makes it impossible to tolerate inhalation long enough to cause intoxication and other central nervous symptoms
Ingestion	intoxication, headache, nausea, eventual unconsciousness – not a route of industrial exposure

TOXICITY DATA: The following toxicological data are available for Ethanol. Due to the large amount of data available, only available human data, corrosivity data, LD50 (Oral-Rat or Mouse), LD50 (Skin-Rabbit or Rat), LC50 (Inhalation-Rat or Mouse) and mutagenic data are presented in this SDS. Contact Badger Ethanol for more information.

ETHANOL:
Open Irritation Test (Skin-Rabbit) 400 mg: Mild
Standard Draize Test (Skin-Rabbit) 20 mg/24 hours: Moderate
Standard Draize Test (Eye-Rabbit) 500 mg: Severe
Standard Draize Test (Eye-Rabbit) 500 mg/24 hours: Mild
Rinsed with Water (Eye-Rabbit) 100 mg/ seconds: Moderate
TDLo (Oral-Human) 22,500 mg/kg/4 weeks-intermittent: Endocrine: other changes; Blood: other changes
TDLo (Oral-Human) 0.5 mg/kg: Behavioral: changes in psychophysiological tests
TDLo (Oral-Human) 400 mg/kg: Behavioral: alteration of operant conditioning
TDLo (Oral-Human) 0.7 gm/kg/10 minutes: Behavioral: changes in psychophysiological tests
TDLo (Oral-Human) 0.5 gm/kg: Behavioral: somnolence (general depressed activity), changes in psychophysiological tests
TDLo (Oral-Human) 1.4 gm/kg: Behavioral: euphoria, changes in psychophysiological tests; Gastrointestinal: nausea or vomiting
(Oral-Infant) 11,712 µL/kg: Behavioral: general anesthetic; Cardiac: arrhythmias (including changes in conduction); Lungs, Thorax, or Respiration; dyspnea
TDLo (Oral-Child) 14400 mg/kg/30 minutes (intermittent): Behavioral: coma; Lungs, Thorax, or Respiration: dyspnea; Gastrointestinal: nausea or vomiting
TDLo (Oral-Woman) 1200 mg/kg/3 hours: Endocrine: changes in gonadotropins; Endocrine: other changes; Blood: other changes
TDLo (Oral-Woman) 256 gm/kg/12 weeks: Behavioral: hallucinations, distorted perceptions; Endocrine: effect on menstrual cycle
TDLo (Oral-Woman) 0.7 gm/kg: Behavioral: changes in psychophysiological tests TDLo (Oral-Woman) 41 gm/kg: female 41 week(s) after conception: Reproductive: Effects on Newborn: Apgar score (human only), other neonatal measures or effects, drug dependence
TDLo (Oral-Woman) 250 mg/kg: female 37 week(s) after conception: Reproductive: Effects on Embryo or Fetus: other effects to embryo
TDLo (Oral-Woman) 5860 mL/kg: female 3 year(s) pre-mating: 100 day(s) post-birth: Reproductive: Specific Developmental Abnormalities: craniofacial (including nose and tongue); Effects on Newborn: behavioral, delayed effects
TDLo (Oral-Man) 3371 µL/kg: Behavioral: altered sleep time (including change in righting reflex), excitement, coma
TDLo (Oral-Man) 700 mg/kg: Behavioral: changes in psychophysiological tests
TDLo (Oral-Man) 50 mg/kg: Gastrointestinal: alteration in gastric secretion, other changes TDLo (Oral-Man) 1430 µg/kg: Behavioral: changes in motor activity (specific assay), ataxia, antipsychotic
TDLo (Intravenous-Human) 1.6 gm/kg/6 hours: Biochemical: Metabolism (Intermediary):
TDLo (Intravenous-Human) 0.89 mL/kg: Vascular: regional or general arteriolar constriction, measurement of regional blood flow
TDLo (Intravenous-Man) 0.57 gm/kg: Behavioral: changes in psychophysiological tests TDLo (Intravenous-Woman) 8 gm/kg: female 32 week(s) after conception: Reproductive: Effects on Newborn: Apgar score (human only), other neonatal measures or effects TDLo (Intraarterial-Man) 0.071 mL/kg: Vascular: acute arterial occlusion
TDLo (Intrauterine-Woman) 200 mg/kg: female 5 day(s) pre-mating: Reproductive: Fertility: female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated)

TDLo (Multiple Routes-Man) 3660 mg/kg: Endocrine: evidence of thyroid hypofunction TCLo (Inhalation-Human) 2500 mg/m3/20 minutes: Peripheral Nerve and Sensation: recording from afferent nerve
LDLo (Oral-Child) 2 gm/kg: Lungs, Thorax, or Respiration: other changes; Liver: fatty liver degeneration; Blood: other changes
LDLo (Oral-Human) 1400 mg/kg: Behavioral: sleep, headache; Gastrointestinal: nausea or vomiting
LDLo (Subcutaneous-Infant) 19,440 mg/kg: Behavioral: convulsions or effect on seizure threshold, coma; Nutritional and Gross Metabolic: body temperature decrease
LC50 (Inhalation-Rat) 20,000 ppm/10 hours
LC50 (Inhalation-Mouse) 39 gm/m3/4 hours
LD50 (Oral-Rat) 7060 mg/kg: Lungs, Thorax, or Respiration: other changes
LD50 (Oral-Rat) 7 gm/kg
LD50 (Oral-Mouse) 3450 mg/kg

CARCINOGENIC POTENTIAL OF COMPONENTS: Ethanol is listed by agencies tracking the carcinogenic potential of hemical compounds, as follows:
ETHANOL: ACGIH TLV-A3 (Confirmed Animal Carcinogen); MAK-5 (Substances with Carcinogenic and Genotoxic Effects, the Potency of Which is Considered to Be So Low that, Provided the MAK and BAT Values are Observed, No Significant Contribution to Human Cancer Risk is to Be Expected)

IRRITANCY OF PRODUCT: This product may cause moderate to severe irritation to the eyes. Prolonged skin exposure may cause dermatitis.
SENSITIZATION TO THE PRODUCT: No component of this product is known to cause human skin or respiratory sensitization.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product on the humanreproductive system and information from animal test data.
Mutagenicity: Ethanol is considered a very toxic mutagen, because it has caused mutations in both the germ cells and somatic cells of live animals. These effects were observed following exposure of the animals to very high, oral doses of Ethanol. The following are mutagenic data from testing of the Ethanol component on specific human tissues:

ETHANOL:
DNA Inhibition (Human-Lymphocyte) 220 mmol/L Micronucleus Test (Oral-Human) 817.6 g/kg/6 years-intermittent Cytogenetic Analysis (Human-Lymphocyte) 2.5 pph/24 hours Cytogenetic Analysis (Human-Lymphocyte) 1160 g/L
Cytogenetic Analysis (Human-Fibroblast) 12,000 ppm
Cytogenetic Analysis (Human-Leukocyte) 1 pph/72 hours-continuous Cytogenetic Analysis (Oral-Human) 49,014 g/kg/25 years
Sister Chromatid Exchange (Human-Lymphocyte) 500 ppm/72 hours-continuous

Embryotoxicity: There are no reports of adverse effects on pregnancy following occupational exposure to Ethanol. It is well documented that exposure to Ethanol through the ingestion of alcoholic beverages during pregnancy can cause significant harmful effects in unborn children. The harmful effects of Ethanol administration to pregnant animals are well documented. The minimum dose required to produce embryotoxicity varies and determination of this dose is complicated by factors such as the duration and route of exposure and the stage of pregnancy during which the Ethanol is administered. For example, long-term exposure during pregnancy produces effects at lower doses than short-term exposure. Most studies involving oral exposure to Ethanol have involved very large doses, which have also produced significant maternal toxicity.

Teratogenicity: Ethanol has shown significant teratogenic effects in animal tests (e.g., malformations of the central nervous system, facial structures, heart, limbs and urogenital system). The lowest reported dose that caused teratogenicity in rats is approximately 316 mg/kg (cited as 0.4 mL/kg). No firm conclusions can be drawn from this study since the authors did not conduct a full evaluation of maternal toxicity. Inhalation exposure to levels as high as 20,000 ppm have not produced any statistically significant teratogenic effects despite severe maternal toxicity (unconsciousness). In a related study, male and female rats were exposed to 16,000 or 10,000 ppm for 6 weeks before mating with untreated rats. Pregnant rats were exposed throughout pregnancy. Despite the presence of measurable neuro-chemical effects, there were no behavioral effects observed in the offspring of exposed male or female rats.

Reproductive Toxicity: There are no reports of adverse effects on pregnancy following occupational exposure to Ethanol. Reproductive effects have been observed in people who have consumed large amounts of alcoholic beverages that contain Ethanol. In tests involving Ethanol, effects on reproductive organs, including decreased testicular weight, decreased numbers of motile sperm, decreased ovarian function and irregular fertility cycles, have been observed in animals given large oral doses of Ethanol. However, no confirmed effects on fertility or reproductive capability have been observed. In a well-conducted continuous breeding study involving Ethanol, mice were exposed to 5, 10 or 15% Ethanol in water (approximately 8,500, 16,000 and 20,000 mg/kg/day). No effects on fertility and only minor reproductive effects were observed (reduced sperm motility and increased time between litters). Male and female rats with inhalation exposure to 10,000 or 16,000 ppm Ethanol for 6 weeks prior to mating showed no effect on fertility.

11. TOXICITY, CONTINUED

General
Prolonged exposure may cause dermatitis, redness; *liver damage & blindness may be caused by absorption of this product, but not in quantities relevant to industrial exposure*

Sensitising
Not a sensitiser in humans or animals

Carcinogen
Not considered a tumorigen or a carcinogen in humans or animals*

Reproductive Effect
No known effect in humans or animals*

Mutagen
No known effect on humans or animals*

Synergistic With
Not known

12. ECOLOGICAL INFORMATION

Bioaccumulation	this product is not a bioaccumulator
Biodegradation	this product degrades readily and rapidly in the presence of oxygen; 37-86% biodegraded in 5 days
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; half-life in air 4-6days *(ethanol)*, 17days *(methanol)*
Mobility in soil, water	this product is water soluble and will move readily in soil and water

Aquatic Toxicity	
LC_{50} (Fish, 96hr)	12.9-15.3mg/l (fathead minnow & rainbow trout – *several test results*)
LC_{50} (Crustacea, 48hr)	1800-8800mg/kg (ceriodaphnia dubia)
EC_{50} (Crustacea, 48hr)	5410mg/kg (daphnia magna – immobilisation)
EC_{10} (Bacteria)	10,943-11,619 (skeletonema costatum – growth inhibition)
	Note: The above information is for ethanol.

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Do not flush to sewer, recycle solvent if possible, local regulations may permit disposal in sanitary landfill, may be incinerated in approved facility after mixing with a suitable flammable waste

Containers

Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.

Pails must be vented and thoroughly dried prior to crushing and recycling.

IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5yrs).
Steel containers must be inspected, pressure tested & recertified every 5 years.

Never cut, drill, weld or grind on or near this container, even if empty

14. TRANSPORT INFORMATION

Canada TDG	**UN / PIN #**	UN1170	
AND	**Shipping Name**	Ethanol Solution	
U.S.A. 49 CFR	**Class & Packing Group**	3,II	

Marine Pollutant	Not a marine pollutant
ERAP Required (CA only)	No
Emergency Response Guide No.	127

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

15. REGULATORY INFORMATION

Canada DSL	On Inventory
U.S.A. TSCA	On Inventory
Europe EINECS	On Inventory

U.S. Federal Regulations:

Immediately Dangerous to Life or Health: 3300 ppm

Allowable Tolerances: Residues of ethanol are exempted from the requirement of a tolerance when used as a solvent, cosolvent in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest. Residues of ethanol are exempted from the requirement of a tolerance when used as a solvent, co-solvent in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to animals. Residues of the following chemical substances are exempted from the requirement of a tolerance when used in accordance with good manufacturing practice as ingredients in an antimicrobial pesticide formulation, provided that the substance is applied on a semi-permanent or permanent food-contact surface (other than being applied on food packaging) with adequate draining before contact with food. (a) The following chemical substances when used as ingredients in an antimicrobial pesticide formulation may be applied to: Food-contact surfaces in public eating places, dairy-processing equipment, and food-processing equipment and utensils. Ethanol is included on this list. Residues of the following chemical substances are exempted from the requirement of a tolerance when used in accordance with good manufacturing practice as ingredients in an antimicrobial pesticide formulation, provided that the substance is applied on a semi-permanent or permanent food-contact surface (other than being applied on food packaging) with adequate draining before contact with food. ... (c) The following chemical substances when used as ingredients in an antimicrobial pesticide formulation may be applied to: Food-processing equipment and utensils. Ethanol is included on this list.

OSHA Standards: Permissible Exposure Limit: Table Z-1 8-hr Time Weighted Avg: 1000 ppm (1900 mg/cu m).

NIOSH Recommendations: Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 1000 ppm (1900 mg/cu m).

Threshold Limit Values: 8 hr Time Weighted Avg (TWA): 1000 ppm. Excursion Limit Recommendation: Excursions in worker exposure levels may exceed 3 times the TLV-TWA for no more than a total of 30 minutes during a work day, and under no circumstances should they exceed 5 times the TLV-TWA, provided that the TLV-TWA is not exceeded. A4: Not classifiable as a human carcinogen. 2008 Notice of Intended Changes: These substances, with their corresponding values and notations, comprise those for which (1) a limit is proposed for the first time, (2) a change in the Adopted value is proposed, (3) retention as an NIC is proposed, or (4) withdrawal of the Documentation and adopted TLV is proposed. In each case, the proposals should be considered trial values during the period they are on the NIC. These proposals were ratified by the ACGIH Board of Directors and will remain on the NIC for approximately one year following this ratification. If the Committee neither finds nor receives any substantive data that changes its scientific opinion regarding an NIC TLV, the Committee may then approve its recommendation to the ACGIH Board of Directors for adoption. If the Committee finds or receives substantive data that change its scientific opinion regarding an NIC TLV, the Committee may change its recommendation to the ACGIH Board of Directors for the matter to be either retained on or withdrawn from the NIC. Substance: Ethanol; Time Weighted Avg (TWA): None; Short Term Exposure Limit (STEL): 1000 ppm; Notations: A3: Confirmed animal carcinogen with unknown relevance to human; Molecular Weight: 46.07; TLV Basis-Critical Effect(s): upper respiratory tract irritation.

Atmospheric Standards: This action promulgates standards of performance for equipment leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemical Manufacturing Industry (SOCMI). The intended effect of these standards is to require all newly constructed, modified, and reconstructed SOCMI process units to use the best

demonstrated system of continuous emission reduction for equipment leaks of VOC, considering costs, non air quality health and environmental impact and energy requirements. Ethanol is produced, as an intermediate or a final product, by process units covered under this subpart.

FIFRA Requirements: As the federal pesticide law FIFRA directs, EPA is conducting a comprehensive review of older pesticides to consider their health and environmental effects and make decisions about their future use. Under this pesticide reregistration program, EPA examines health and safety data for pesticide active ingredients initially registered before November 1, 1984, and determines whether they are eligible for reregistration. In addition, all pesticides must meet the new safety standard of the Food Quality Protection Act of 1996. Pesticides for which EPA had not issued Registration Standards prior to the effective date of FIFRA '88 were divided into three lists based upon their potential for human exposure and other factors, with List B containing pesticides of greater concern and List D pesticides of less concern. Ethanol is found on List D. Case No: 001501; Pesticide type: insecticide, fungicide, herbicide, antimicrobial; Case Status: RED Approved 3/95; OPP has made a decision that some/all uses of the pesticide are eligible for reregistration, as reflected in a Reregistration Eligibility Decision (RED) document .; Active ingredient (AI): ethanol; AI Status: OPP has completed a Reregistration Eligibility Decision (RED) for the case/AI.. Residues of ethanol are exempted from the requirement of a tolerance when used as a solvent, cosolvent in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest. Residues of ethanol are exempted from the requirement of a tolerance when used as a solvent, co-solvent in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to animals. Residues of the following chemical substances are exempted from the requirement of a tolerance when used in accordance with good manufacturing practice as ingredients in an antimicrobial pesticide formulation, provided that the substance is applied on a semi-permanent or permanent food-contact surface (other than being applied on food packaging) with adequate draining before contact with food. (a) The following chemical substances when used as ingredients in an antimicrobial pesticide formulation may be applied to: Food-contact surfaces in public eating places, dairy-processing equipment, and food-processing equipment and utensils. Ethanol is included on this list. Residues of the following chemical substances are exempted from the requirement of a tolerance when used in accordance with good manufacturing practice as ingredients in an antimicrobial pesticide formulation, provided that the substance is applied on a semi-permanent or permanent food-contact surface (other than being applied on food packaging) with adequate draining before contact with food. ... (c) The following chemical substances when used as ingredients in an antimicrobial pesticide formulation may be applied to: Food-processing equipment and utensils. Ethanol is included on this list.

FDA Requirements: Substance added directly to human food affirmed as generally recognized as safe. Ethanol is an indirect food additive for use only as a component of adhesives.

CERCLA – SARA Hazard Category: This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:
Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA SECTION 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Methanol	67-56-1

U.S. State Regulations:
New Jersey Right-To-Know: The following materials are non-hazardous, but are among the top five components in this product. No NJ Right-To-Know components exist in this product.
Pennsylvania Right-To-Know: The following non-hazardous ingredients are present in the product at greater than 3%. No PA Right-To-Know components exist in this product.
California Proposition 65 Carcinagens: Warning: The following ingredients present in the product are known to the state of California to cause Cancer. No Proposition 65 Carcinogens exist in this product.

California Proposition 65 Reproductive Toxins: Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

Chemical Name	CAS-No.
Methanol	67-56-1

16. OTHER INFORMATION

NFPA RATING	Health 2	Flammability 3	Instability 0

Prepared for *Megaloid Laboratories* **by** *Rob Cangiano*

Preparation Date: June 2009
Revision Dates: January 2018, April 2020

Key to Abbreviations	**ACGIH®** = American Conference of Governmental Industrial Hygienists **AIHA®** = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank **IARC** = International Agency for Research on Cancer **NIOSH** = National Institute for Occupational Safety and Health **NTP** = National Toxicology Program **OSHA** = US Occupational Safety and Health Administration **RTECS®** = Registry of Toxic Effects of Chemical Substances
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).
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