

1. Product and Supplier Information

Product's name: **AeroGen2 FAI**
Product code: XX% Methanol YY% Nitromethane ZZ% Lube oil
Product Code: 820018 Color : Pink

Product contains: Methanol and lubricants
Chemical Family or Formula: Methyl Alcohol C H3OH FW= 32.04 Synthetic and Castor Oil Lubricants
Purpose: Fuel for model cars, boats, airplanes, and the like.

The product is recommended for no other use.

Supplier: **Byron Originals, Inc.**

PO Box 279, 119 E. Hwy. 175

Ida Grove, IA 51445

Phone: 712-364-3165

Fax: 712-364-2028

email: info@byronoriginalsinc.com

Web page: www.byronfuels.com

Product Information: 712-364-3165

Transportation Emergency: 800-424-9300 for spills only (Chemtrec)

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

Poison Control Center: 800-222-1222

2. Hazards Identification**Emergency overview:**

OSHA Hazards

Flammable liquid, Target organ effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption.

Target organs:

Eyes, Kidney, Liver, Central nervous system.

GHS Classification:

Flammable liquid: Category 2

Acute toxicity, Oral: Category 3

Acute toxicity, Inhalation: Category 3

Acute toxicity, Dermal: Category 3

Specific target organ toxicity- single exposure: Category 1

GHS label elements, including precautionary statements:

Pictogram**Signal word:**

Danger

Hazard statements:

H225 Highly flammable liquid and vapor

H331 Toxic if inhaled

H311 Toxic in contact with skin

H301 Toxic if swallowed

H370 Causes damage to organs.

Precautionary statements:

P102 Keep out of reach of children

P210 Keep away from heat/sparks/open flames, hot surfaces. No smoking.

P233 Keep container tightly closed

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

2. Hazards Identification (continued)

Hazard Category Classifications and Ratings

Hazard Categories: Health Fire Pressure Reactivity Reference 49 CFR 171.8,
 Immediate Yes Yes No Yes OSHA 29 CFR 1910.1200 and
 Delayed Yes No No No SARA 302/311/312/313.

HMIS Hazard Ratings: Health 2 Fire 3 Instability 0 Other B (Goggles, gloves)

NFPA 704 Hazard Ratings: Health 2 Flammability 3 Reactivity 0 Special NA

Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4

Potential Health effects:

Inhalation Harmful or toxic if inhaled. Causes respiratory tract irritation.

Skin Harmful or toxic in contact with skin. Causes skin irritation.

Eyes Causes eye irritation.

Ingestion Harmful or toxic if swallowed.

3. Composition and Information on Ingredients

CAS #	SARA		Material or Component	Concentration %	Exposure limits ACGIH	
	313	dm			TWA*	STEL*
67-56-1	Yes	1	Methanol A4, BEI EINECS 200-659-6	82	200 ppm	250 ppm
NA	No	NA	Synthetic and Castor Oil Lubricants	18	NE	NE

A4= Not Classifiable as a Human Carcinogen

NE= Not Established

BEI= Biological Exposure Limit exists for this material

No component is listed in "Threshold and Biological Exposure Indices for 2014" from ACGIH except as noted above. Components listed in Title III Sec. 313 (EPCRA) are indicated by "Yes" above.

*TWA= Time Weighted Average; STEL= Short Term Expos Reportable Quantity (40 CFR 302.4):

dm = de minimus, the minimum percent which must be reported in discharge or spill.

4. First Aid

General advice: Consult a physician. Show this safety data sheet to the attending doctor.

Move out of the dangerous area to safety.

Inhalation: Remove individual to fresh air. If not breathing, give artificial respiration or oxygen as appropriate.

Seek medical attention if breathing becomes difficult. Vapors may irritate breathing passages.

Skin Contact: Flush skin with water for 15 minutes and remove contaminated clothing. Wash shoes and clothing before reuse. Extended or repeated contact can defat and irritate skin.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart.

Ingestion: Seek immediate medical attention. Induce vomiting only as directed by physician. Drink water to dilute. Never give anything by mouth to an unconscious person.

Note to physician:

When plasma methanol concentrations are higher than 20 mg/deciliter, when ingested doses are greater than 30 milliliters, and when there is evidence of acidosis or visual abnormalities, a 10% solution of ethanol in 5% aqueous dextrose, administered intravenously, is a safe, effective antidote. (WJ of M, Mar 1985, p 337)

5. Fire Fighting Measures

Flammability Summary (OSHA): No data on combinations. Component data given below.

Extremely flammable.

Flammable Properties:

	Product	Methanol
Flash Point:	Approx. 52°F (11°C)	52°F (11°C)
Autoignition Temperature:	No data	464°C
Upper Flammable/Explosive Limit, % in air:	No data	36%
Lower Flammable/Explosive Limit, % in air:	No data	6%

Conditions of flammability:

Flammable in the presence of a source of ignition and the liquid temperature is above the flash point.

Keep away from heat/ sparks/ open flame/ hot surface. No smoking in the vicinity.

Extremely dangerous! Vapor can travel distances to ignition sources and flash back.

Extinguishing Media:

Water spray, foam, dry chemical or carbon dioxide.

Do not allow contaminated water to enter sewers or waterways.

Fire Fighting Instructions:

In case of fire, use normal fire fighting equipment including a NIOSH approved self-contained breathing apparatus (SCBA). Use water to cool containers.

Hazardous Combustion Products:

Oxides of carbon plus product vapors.

6. Accidental Release Measures

Personal Protection for Emergency Situations:

Evacuate the area of all unnecessary personnel. Eliminate any ignition sources until the area is determined to be free from explosion and fire hazards. Contain the release and eliminate its source if this can be done safely.

Spill Mitigation Procedures

Air Release: Hazardous concentrations in air may be found in local spill area and immediately downwind.

Vapors may be suppressed by the use of water fog. Contain all liquid for treatment and/or disposal as a likely hazardous waste. Do not flush to sewer! US regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of stipulated quantities. US Coast Guard National Response Center is 800-424-8802.

Water Release: This material is soluble in water. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste. Notify all downstream users of possible contamination.

Land Release: Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Decontaminate all clothing and the spill area using a detergent and flush with large amounts of water. Contain all contaminated water for disposal and/or treatment. Vapors are heavier than air and may accumulate at ignitable concentrations in low areas.

Additional Spill Informatic Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel Dispose of spill residues per guidelines under Section 13, Disposal Considerations.

7. Handling and Storage

Handling: Use with adequate ventilation. Vent containers before opening wide.

Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash with water. Avoid breathing vapor, mist or gas. Electrically ground all equipment when handling this product.

Retained residue may make empty containers hazardous. USE CAUTION!

Storage

Keep container closed when not in use. Store in a cool dry area away from ignition sources and oxidizers.

Outside or detached storage is preferred. Do not store in copper or copper alloy storage vessels.

Shelf Life Limitations:

See label or certificate of analysis for shelf life if applicable.

Incompatible Materials for Storage: Refer to Section 10, "Incompatible Materials."

8. Exposure Controls and Personal Protection

CAS #	Material or Component	Parameter	Value	Source
67-56-1	Methanol	TLV	200 ppm	ACGIH and OSHA 1910.100 Table Z-1, NIOSH
		STEL	250 ppm	ACGIH and OSHA 1910.100 Table Z-1, NIOSH

Potential for dermal absorption. BEI.

Not applicable Non-petroleum lubricants No exposure limits established.

ACGIH = American Conference of Governmental Industrial Hygienists

OSHA = Occupational Safety and Health Administration

NIOSH = National Institute for Occupational Safety and Health

TLV = Threshold Limit Value; BEI= Biological Exposure Limit exists for this material

*TWA= Time Weighted Average; STEL= Short Term Exposure Limit

NE= Not Established

Ventilation:

Local exhaust ventilation or other engineering controls are normally preferred when handling or using this product. Otherwise, use general exhaust ventilation if that is sufficient for general worker safety and comfort.

Explosion proof motors and fans are required. A NIOSH/MSHA approved air supplied respirator is advised in the absence of adequate environmental control.

Protective Equipment for Routine Use of Product

Respiratory Protection:

See previous paragraph. Material should be handled or transferred in an approved fume hood or with adequate ventilation.

Respirator Type(s):

Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin: Wear impervious gloves (butyl rubber, Viton, e.g.) to avoid skin contact. Follow good industrial hygiene practices.

Eyes: Use chemical safety glasses with side shields, safety goggles and/or a full face shield where splashing is possible.

Protective Clothing Type: Impervious

Other: A safety shower and eye bath should be readily available.

9. Physical Data

Physical State: Thin liquid

Color: Pink

Odor: Characteristic odor: Irritating, alcohol, disagreeable

Molecular Weight: Not applicable to a blend. See Sec. 1 & 3 for component data.

pH (@ 25 Deg. C): Not applicable

Melting/ Freezing Point: Below 0°F (-18°C) Methanol -97.8°C

Initial Boiling Point: / Boiling range: 149°F (65°C) Methanol 65°C

Flash point: Approx. 52°F (11°C) Methanol 52°F (11°C)

Evaporation rate: No data

Flammability solid/ gas: Not applicable

Upper flammability limit: No data

36% V (Methanol)

Lower flammability limit: No data

6% V (Methanol)

Vapor Pressure (mm Hg @ 20 Deg. C): No data

Partition coefficient: n-octanol/ water: No data

Vapor Density (Air = 1): No data

Auto ignition temperature: No data

Relative density/ Specific Gravity: No data

Decomposition temperature: No data

Solubility in Water: 82%

Viscosity: No data

Volatiles %: 82

10. Stability and Reactivity

Stability and Reactivity Summary:

Stable under normal conditions.

Methanol:

Reactive Properties:

Sensitivity to mechanical shock: None

Hazardous Polymerization: Will not occur

Conditions to Avoid: High temperatures, exposure to heat, sparks, flame

Chemical Incompatibility: May react violently with acids, acid chlorides, acid anhydrides, oxidizing agents and alkali metals.

Incompatible materials: May soften some plastics.

Hazardous Decomposition Products: CO, CO₂

Decomposition Temperature: No data

Product May Be Unstable At Temperatures Above No data

11. Toxicological Information

Component Animal Toxicology	Methanol	Lubricant
Oral LD50 value:	1.187 mg/kg (rat)	>2,000 mg/kg
Dermal LD50 value:	17.1 g/kg (rabbit)	No data
Inhalation LC50 value:	128.2 mg/l rat, 4 hrs	> 30,000 mg/kg

Skin Irritation: This material is expected to be moderately irritating.

Eye Irritation: This material is expected to be severely irritating.

Reproductive and Developmental Toxicity:

Methanol caused birth defects in rats exposed to high levels of vapors : 20,000 ppm.

Mutagenicity: Methanol: In vitro: Limited positive evidence. In vivo: No information.

Specific target organ toxicity - single exposure (GHS): Causes damage to organs.

Specific target organ toxicity - repeated exposure (GHS): not classified as specific target organ toxicant, repeated exposure.

Carcinogenicity:

Methanol: No evidence in animals from ingestion or skin absorption.

12. Ecological Information

Methanol

Toxicity:

To fish: Mortality LC₅₀ - *Lepomis macrochirus* (Blue gill) - 15,400 mg/l - 96 hr
NOEC - *Oryzias latipes* - 7,900 mg/l - 200 hr

To daphnia and other aquatic invertebrates: EC-50: *Daphnia magna* (Water flea) ->10,000 mg/l -48 hr

To algae: Growth inhibition EC₅₀ - *Scenedesmus capricornutum* (fresh water algae)- 22,000 mg/l -96 hr

Biodegradability: Aerobic: 72% -rapidly biodegradable

Bioaccumulation potential: Bioaccumulation: *Cyprinus carpio* (Carp)- 72 d at 20°C
Bioconcentration factor (BCF): 1.0

Environmental Fate:

Methyl alcohol is expected to biodegrade in soil and water very rapidly.

This product will show high soil mobility and will be degraded from the ambient atmosphere by the reaction with photochemically produced hydroxyl radicals with an estimated half-life of 17.8 days.

Bioconcentration factor for fish (golden ide) < 10.

Based on a log Kow of -0.77, the BCF value for methanol can be estimated to be 0.2.

12. Ecological Information (continued)**Lubricant**

Ecotoxicity:

Acute and Prolonged Toxicity to Fish -

Rainbow Trout / LC50 (96 h): > 100 mg/l

Toxicity to Microorganisms: N/A

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. Do not release untreated into natural waters.

Not a Marine Pollutant.

Environmental Fate:

Biodegradation:

Test Method: OECD Guideline 301F

Method of Analysis: BOD of the ThOD

Degree of Elimination: > 60% (28 d)

Evaluation: Readily Biodegradable

Chemical Oxygen Demand (COD): 2,050 mg/g

13. Disposal Considerations

Waste Disposal Summary:

Product as supplied qualifies as "Unlisted Hazardous Waste D001" with the characteristic of ignitability.

Disposal Methods:

Dispose of in accordance with local, state and federal regulations for hazardous waste.

Components subject to land ban restrictions:

No components subject to land ban restrictions.

14. Transportation Information

UN/NA Number, Proper Shipping Name, Hazard Class, Packing Group, Emergency Response Guide Number

US DOT: UN1993, Flammable liquids, n.o.s., (Contains methanol), Class 3, PG II ERG 128

Labels required per 49 CFR 172.101: Flammable

Size for "Limited quantity" per 49 CFR 173.150-.155: 1 quart max. in 66# max. container

Reportable Quantity ("RQ") per 49 CFR 172.101: Not possible in one non bulk container.

Passenger air/ Rail: 5 Liter Cargo air only: 60 liter Vessel stowage:: B

IMO/IMDG Classification: UN1992, Flammable liquids, N.O.S., TOXIC, (Contains methanol)
Class 3(6.1), PG II (12'C cc)

15. Regulatory Information

OSHA Hazards: Flammable liquid and vapor, toxic.

SARA Title III, Section 302 Components (40 CFR 365, APP. A):

Methanol 5000 #

SARA 311/312 Hazards

Acute Yes

Chronic Yes

SARA Title III, Section 313 Components (40 CFR 370.2):

Methanol

CERCLA (Comprehensive Environmental Response Compensation and Liability Act, 40 CFR 302.4

Reportable quantities: Methanol 5000#. Not possible in one non bulk container.

TSCA (Toxic Substances Control Act: 40 CFR 710:

All ingredients listed.

RCRA (Resource Conservation & Recovery Act)

Product has the characteristic of flammability and qualifies as "Unlisted Hazardous Waste D001" RQ 100#.

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or other reproductive harm.

State Right-to-Know Regulations Status of Ingredients

Methanol listed in: CT, FL, IL, MA, NJ, NY, PA, RI

Canada: WHMIS (Workplace Hazardous Materials Information System):

Category B2, Flammable Liquid

16. Additional Information

This Safety Data Sheet (SDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. The information in this SDS should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. This information is furnished without warranty, expressed or implied, except that it is accurate to the best of the knowledge of the manufacturer. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials and the health of employees and customers.

If this SDS is more than three (3) years old you should contact the supplier to make sure that the information is still current. Date of revision for flame: April 23, 2015 Replacing: .June 16, 2014