



The Fuel Matrix, LLC
dba OXON™ Technologies
513 W Sunset Road
Henderson, NV 89011

Material Safety Data Sheet
OXON Build -- FM202D
(Denatured Ethyl Alcohol SDA 3-A 93.95%VOL)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: FM202D

Product Name: OXON Build (Denatured Ethyl Alcohol SDA 3-A 93.95%VOL)

Synonyms: None

Chemical Family: Alcohol / Naphtha

Application: Oxidation Inhibitors for Fuel Enhancement

Distributed By: The Fuel Matrix, LLC, dba OXON™ Technologies - 513 W Sunset Road, Henderson, NV 89011 USA

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2. HAZARDS IDENTIFICATION

Potential Acute Health Effects

Eye Contact: Causes moderate to severe irritation, experienced as discomfort or pain, excess blinking and tear production, with marked excess redness and swelling of the conjunctiva.

Skin Contact: Causes mild skin irritation. May be absorbed through the skin and contribute to the symptoms listed under ingestion. May cause dermatitis, prolonged or repeated contact may cause skin sensitization.

Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs; may cause headaches and dizziness; may be anesthetic and may cause other central nervous system effects.

Ingestion: May cause headache, nausea, abdominal discomfort, vomiting, diarrhea, dizziness, drowsiness, faintness, lack of coordination and unconsciousness. A small amount of methanol (usually two or more ounces) can cause mental sluggishness, nausea and vomiting leading to severe illness, and may produce adverse effects on vision with possible blindness or death if treatment is not received.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	Component Percentage	LD50s and LC50s Route & Species:
Ethanol 64-17-5	93.95%	Inhalation LC50 Rat = 124.7 mg/L 4 h
Methanol 67-56-1	4.73%	Dermal LD50 (Rabbit) 15800 mg/kg Oral LD50 (Rat) 5628 mg/kg Inhalation LC50 (Rat) >32,000 ppm / 8hrs Inhalation LC50 (Rat) 64000 ppm (4-hour exposure) Oral LD50 (Mouse) 7300 mg/kg
Hydrogen Peroxide 7722-84-1	0.99%	Inhalation LC50 (Rat) =2 gm/m3/4H Oral LD50 (Rat) = 1518 mg/kg;
Water 7732-18-5	0.33%	Oral LD50 (Rat) >90 mL/kg

Note: The concentration of remaining hazardous ingredients (if any) is below the Ingredient Disclosure List.

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with copious quantities of water for at least 20 minutes holding lids apart to ensure flushing of the entire surface. Seek immediate medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and laundry before reuse.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. Get medical attention immediately.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Notes to Physician: Treatment based on sound judgment of physician and individual reactions of patient. This product contains 9.3% v/v of methanol, a toxic substance having produced blindness and other serious effects on vision, as well as death. However, this product also contains the accepted antidote, ethanol (84.5% v/v).

5. FIRE FIGHTING MEASURES

Flash Point: 15 °C / 59 °F

Flash Point Method: Tag Closed Cup

Auto-ignition Temperature: 385 - 450 °C / 725 - 842 °F

Flammable Limits in Air (%): Lower: 2.2% Upper: 36%

Extinguishing Media: Use DRY chemicals, CO₂, alcohol foam or water spray.

Special Exposure Hazards: Use water spray to cool fire-exposed containers and structures. Use water spray to disperse vapors; re-ignition is possible. Vapors from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from product handling point.

Hazardous Decomposition/Combustion Materials (under fire conditions): Carbon monoxide. Carbon dioxide. Formaldehyde. Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 1, FLAMMABILITY 3, INSTABILITY 0

HMIS RATINGS FOR THIS PRODUCT ARE: HEALTH 1, FLAMMABILITY 3, REACTIVITY 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Wear appropriate protective equipment.

Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed. Consult local authorities.

Procedure for Clean Up: Isolate hazard area and restrict access. Stop leak only if safe to do so. Remove ignition sources and work with non-sparking tools. Small spills: soak up with absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container and flush with water.

7. HANDLING AND STORAGE

Handling: For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. DO NOT handle or store near an open flame, heat, or other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. DO NOT pressurize, cut, heat, or weld containers. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel protective equipment.

Storage: Store in a cool, dry, well-ventilated area, away from heat and ignition sources. Place away from incompatible materials. Store in accordance with good industrial practices.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use process enclosure, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Use explosion proof equipment.

Respiratory Protection: Up to 1000 ppm, an approved organic vapor cartridge respirator can be used. For concentrations above 1000 ppm, an air-supplying respirator is recommended. The user should consult a respirator guide, such as the Canadian Standards Association's guide Z94.4- M1982.

Gloves: Neoprene gloves, Rubber gloves, Butyl rubber gloves.

Skin Protection: Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.

Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Ethanol	1000 ppm STEL (Skin)	1000 ppm TWA (Skin) 1900 mg/m ³ TWA (Skin)	3300 ppm
Methanol	200 ppm TWA (Skin) 250 ppm STEL (Skin)	200 ppm TWA (Skin) 250 ppm STEL (Skin) 260 mg/m ³ TWA (Skin) 325 mg/m ³ STEL (Skin)	6000 ppm
Hydrogen Peroxide	1 ppm TWA (Skin)	1 ppm TWA (Skin)	75 ppm
Water	Not available.	Not available.	Not available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: Colorless

Odor: Alcohol and Naphtha

pH: Not Available.

Specific Gravity: 0.8081

Boiling Point: 76.6°C /169°F

Freezing/Melting Point: Not Available.

Vapor Pressure: Not Available.

Vapor Density: Not Available.

% Volatile by Volume: 100%

Evaporation Rate: 1.7

Solubility: Partially soluble in water.

VOCs: Not Available.

Viscosity: Not Available.

Molecular Weight: Not Available.

Other: Not Available.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Avoid excessive heat, open flames and all ignition sources.

Materials to Avoid: Oxidizing materials.

Hazardous Decomposition Products: Carbon monoxide. Carbon dioxide. Formaldehyde.

Additional Information: No additional remark.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: May cause headache, nausea, abdominal discomfort, vomiting, diarrhea, dizziness, drowsiness, faintness, lack of coordination and unconsciousness. A small amount of methanol (usually two or more ounces) can cause mental sluggishness, nausea and vomiting leading to severe illness, and may produce adverse effects on vision with possible blindness or death if treatment is not received.

Skin Contact: Causes mild skin irritation. May be absorbed through the skin and contribute to the symptoms listed under ingestion. May cause dermatitis, prolonged or repeated contact may cause skin sensitization.

Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs; may cause headaches and dizziness; may be anesthetic and may cause other central nervous system effects.

Eye Contact: Causes moderate to severe irritation, experienced as discomfort or pain, excess blinking and tear production, with marked excess redness and swelling of the conjunctiva.

Additional Information: Long term repeated oral exposure to Ethanol may result in the development of progressive liver injury with fibrosis. Repeated exposure by inhalation or absorption of methanol may cause systemic poisoning, brain disorders, impaired vision and blindness. Inhalation may worsen conditions such as emphysema or bronchitis. Repeated skin contact may cause dermal irritation, dryness and cracking. Effects of sub lethal doses may be nausea, headache, abdominal pain, vomiting and visual disturbances ranging from blurred vision to light sensitivity. Methanol is toxic by inhalation and ingestion. Inhalation of vapors may cause cyanosis, CNS effects, lethargy, loss of consciousness and death. The effects from inhalation may be delayed. Ingestion may cause malaise, CNS effects, discomfort, and death if not treated promptly. Ingestion of methanol has resulted in adverse effects (necrosis and hemorrhaging) in the brain. Medical conditions aggravated by exposure include: skin disorders and allergies, liver disorders and eye disease. Long term exposure to methanol has been associated with headaches, giddiness, conjunctivitis, insomnia and impaired vision. Dermal absorption of significant amounts of methanol resulted in death in several animal species. Toxic effects in animals exposed to methanol by inhalation include eye irritation, blindness and nasal discharge. Toxic effects observed in animals exposed to methanol by ingestion include CNS effects, gastrointestinal effects, anesthetic effects, damage to the optic nerve and acidosis.

Synergistic Products: In animals, high concentrations of methanol can increase the toxicity of other chemicals, particularly liver toxins like carbon tetrachloride. Ethanol significantly reduces the toxicity of methanol because it competes for the same metabolic enzymes, and has been used to treat methanol poisoning.

Potential for Accumulation: Methanol is readily absorbed into the body following inhalation and ingestion. Skin absorption may occur if the skin is broken or exposure is prolonged. Once absorbed, methanol is rapidly distributed to body tissues. A small amount is excreted unchanged in exhaled air and the urine. The rest is first metabolized to formaldehyde, which is then metabolized to formic acid and/or formate. The formic acid and formate are eventually converted to carbon dioxide and water. In humans, methanol clears from the body, after inhalation or oral exposure, with a half-life of 1 day or more for high doses (greater than 1000 mg/kg) or about 1.5-3 hours for low doses (less than 100 mg/kg or 76.5-230 ppm (100-300 mg/m³)). Synergistic Materials: Ethanol with carbon tetrachloride, chloroform, bromotrichloromethane, dimethyl-nitrosamine, thioacetamide, methanol with carbon tetrachloride.

Acute Test of Product

Acute Oral LD50: Not Available.

Acute Dermal LD50: Not Available.

Acute Inhalation LC50: Not Available.

Carcinogenicity

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Ethanol	Group 1	A3
Methanol	Not listed.	Not listed.
Hydrogen Peroxide	Not listed.	Not listed.
Water	Not listed.	Not listed.

Carcinogenicity Comment: No additional information available.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: Methanol is reported to cause birth defects in rats exposed to 20,000 ppm. In experimental animals, methanol is fetotoxic, teratogenic and has produced significant behavioral abnormalities in offspring at dose levels not producing maternal toxic effects. Behavioral abnormalities were observed in the offspring of rats given drinking water containing 2% methanol. Methanol has produced mutagenic effects (somatic cells) in experimental animals. Contains Ethanol, which may cause birth defects or other adverse effects on pregnancy. Risk of effects depends on duration and level of exposure.

Ecotoxicological Information:

12. ECOLOGICAL INFORMATION

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Ethanol	LC50 (Oncorhynchus mykiss) 12.0 - 16.0 mL/L 96 h LC50 (Pimephales promelas) 13400-15100 mg/L 96 h flow-through 100 mg/L	Not Available.	Not Available.
Methanol	LC50 (Oncorhynchus mykiss) 13200 mg/L LC50 (Pimephales promelas) 28100 mg/L (96 hrs) LC50 (Lepomis macrochirus) 15400 mg/L (96 hrs)	EC50 (Daphnia Magna): 24500 mg/L (48hrs)	EC50 (Selenastrum capricornutum): 7.1 mg/L (48hrs)
Hydrogen Peroxide	LC50 (Ictalurus punctatus) = 37.4 mg/L 96h LC50 (Pimephales promelas) = 16.4 mg/L 96h	Not Available.	Not Available.
Water	Not Available.	Not Available.	Not Available.

Other Information: No additional remark.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

DOT (U.S.)

DOT Shipping Name: ETHYL ALCOHOL, FLAMMABLE, TOXIC, n.o.s. (CONTAINS ETHANOL, METHANOL MIXTURE)

DOT Hazardous Class: 3 (6.1)

DOT UN Number: UN1986

DOT Packing Group: II

DOT Reportable Quantity (lbs): Not Available.

Note: No additional remark.

Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

Note: Not available.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Ethanol	Not Listed.	Not Listed.	Not Listed.
Methanol	Not Listed.	Listed.	Listed.
Hydrogen Peroxide	Not Listed.	Not Listed.	Not Listed.
Water	Not Listed.	Not Listed.	Not Listed.

California Proposition 65: Not Listed.

MA Right to Know List: Not Listed.

New Jersey Right-to-Know List: Not Listed.

Pennsylvania Right to Know List: Not Listed.

WHMIS Hazardous Class:

B2 FLAMMABLE LIQUIDS

D1B TOXIC MATERIALS

D2A VERY TOXIC MATERIALS

D2B TOXIC MATERIALS



16. OTHER INFORMATION

Additional Information: This product has been classified in accordance with the hazard criteria of the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS), the US OSHA Hazard Communication Rule (29 CFR1900.1200) and the Canadian Controlled Products Regulations (CPR).

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END OF MSDS