



Safety Data Sheet

Conforms to OSHA Hazard Communication Standard 2024 and aligns with the United Nations Globally Harmonized System Revision 7

Date of Revision: 10/21/2024
Revision: 02

Section 1 - Chemical Product and Company Identification

- 1.1 Product Name: **MS109**
 - 1.2 Synonym: Blend
 - 1.3 VP Racing Fuels, Inc., 7124 Richter Road, Elmendorf, TX 78112, 210.635.7744
 - 1.4 Recommended Use: Racing Fuel
 - 1.5 **RESTRICTIONS ON USE: THIS FUEL IS FOR RACING VEHICLE USE ONLY, NOT LEGAL FOR STREET-DRIVEN VEHICLES.**
 - 1.6 Emergency Response Number: **CHEMTREC 1-800-424-9300**
- Local Emergency Telephone Number: 1-703-527-3887

Section 2 - Hazards Identification

2.1 GHS HAZARD

Hazard Classes

- Flammable liquid
- Specific Target Organs toxicity single exposure
- Specific Target Organs toxicity repeated exposure
- Skin Irritation
- Acute Toxicity Inhalation
- Reproductive Toxicity
- Aspiration Hazard
- Aquatic Acute
- Aquatic Chronic

Hazard Categories

- Category 2
- Category 3
- Category 2
- Category 2
- Category 4
- Category 2
- Category 1
- Category 1
- Category 1

GHS Classification Scale (1= severe hazard; 4= slight hazard)

2.2 Signal Word: **Danger**

2.3 Pictograms:



Flame Health Hazard Irritant Aquatic Hazard Keep Away From Children

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2.4 Hazard Statements

PHYSICAL HAZARDS:	H225: Highly flammable liquid and vapor.
HEALTH HAZARDS:	H304: May be fatal if swallowed and enter the airway. H315: Causes skin irritation. H361: Suspected of damaging fertility or the unborn child. H332: Harmful if inhaled. H336: May cause drowsiness or dizziness. H373: May cause damage to organs through prolonged or repeated exposure.
ENVIRONMENTAL HAZARDS:	H400: Very toxic to aquatic life H401: Very toxic to aquatic life with long-lasting effects.
PRECAUTIONARY STATEMENTS:	P102: Keep out of reach of children. P203: Obtain, read, and follow all safety instructions before use. READ SDS BEFORE USE. P210: Keep away from sparks and open flames- No smoking. P233: Keep the container tightly closed. P240: Ground or bond container and receiving equipment. P241: Use explosion-proof equipment. P242: Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260: Do not breathe vapors and mist. 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. P273: Avoid release to the environment. P280: Wear protective gloves, clothing, and eye protection.
RESPONSE STATEMENTS:	P301 +P310+ P331: IF SWALLOWED: <u>USA</u> Immediately call the National POISON CENTER at 800-222-1222. DO NOT induce vomiting. P303+P361+P353: IF ON SKIN or hair, Take off immediately all contaminated clothing. Rinse skin with water. P304+340: IF INHALED. Remove to fresh air and keep comfortable for breathing. P312: Call a POISON CENTER if you feel unwell.

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P313+P332: If skin irritation occurs, get medical attention.

P362+P364: Take off contaminated clothing and wash it before reusing.

P370+P378: In case of fire, use foam, carbon dioxide, or dry chemicals to extinguish a fire,

P391: Collect spillage.

STORAGE STATEMENTS:

P403+P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

DISPOSAL STATEMENTS:

P501: Dispose of content and container following local, regional, national, or international regulations.

2.5 Hazards not otherwise classified (HNOC) or not covered by GHS: Ocular eye irritation from vapors inflammation may occur. When splashed in the eye, the liquid may cause burning pain and transient corneal injury. **IF IN THE EYES: Rinse cautiously with water for at least 15 minutes.** Repeated liquid exposure may cause skin dryness or cracking.

2.6 Unknown acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Section 3 - Composition / Information on Ingredients

3.1

CAS#	Chemical Names	Synonyms	Percent	GHS Classification
637-92-3	2-ethoxy-2-methylpropane	ETBE	45-70	Flam. Liq. H225, STOT SE 3 H336
540-84-1	2, 2, 4-Trimethylpentane	Isooctane	30-60	Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 1 H410, Aquatic Acute 1 H400

3.2 Trade Secret Provision and Chemical Concentration Disclosure: Following OSHA and GHS Regulations, we have withheld specific percentages of the chemicals in this mixture. The chemical concentrations have been disclosed as a blend and applied to the hazards identified in this Safety Data Sheet.

Section 4 - First Aid Measures

4.1 Description of First Aid Measures

4.1.1 General information: Ensure medical personnel know the material(s) involved and take precautions to protect themselves.

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4.1.2 Following Inhalation: Remove the victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

4.1.3 Following Skin contact: Flush skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

4.1.4 Following eye contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

4.1.5 Following ingestion: Do NOT induce vomiting. Get medical aid immediately.

4.2 Most important symptoms and effects, both acute and delayed:

4.2.1: Contact with the eyes can cause serious irritation. Symptoms may include discomfort or pain and redness. Severe overexposure can result in swelling of the conjunctiva along with tissue damage.

4.2.2: Prolonged and repeated liquid contact with the skin can cause defatting and drying, leading to irritation and dermatitis.

4.2.3: Liquid ingestion can cause inebriation, headache, gastrointestinal pain, nausea, and vomiting, leading to central nervous system depression. Aspiration of liquid into the lungs must be avoided as even small quantities can produce chemical pneumonia, pulmonary edema, and even death.

4.2.4: Prolonged breathing of high vapor concentrations can produce headaches, dizziness, nausea, and impaired vision. Excessive overexposure can cause central nervous system depression, loss of consciousness, liver damage, and death resulting from respiratory failure.

4.3 Indication of any immediate medical attention and special treatment needed: The severity of the outcome following exposure may be related to the time between the exposure and treatment rather than the amount of the exposure. Therefore, rapid treatment of any exposure is necessary.

Note to Physicians: If you determine that a medical emergency exists. The specific chemical identity is necessary for emergency or first-aid treatment and will be immediately disclosed the specific chemical identity. Call CHEMTREC 800-424-9300 or +1-703-527-3887. We will require a written statement of need and confidentiality agreement as soon as circumstances permit. In non-emergency situations, we will, upon written request, disclose a specific chemical identity.

Section 5 - Fire-Fighting Measures

General fire hazards: Highly flammable liquid and vapor.

5.1 Extinguishing media:

Suitable extinguishing media: Water fog. Alcohol-resistant foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media: Do not use a water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture: Vapors may form explosive mixtures with air. Vapors may travel a considerable distance to a source of ignition and flashback. During a fire, gases hazardous to health may be formed.

5.3 Advice for firefighters: Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing and avoid inhaling combustion products.

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Additional information: Do not release runoff from fire to sewers or waterways.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures:

6.1.1 For non-emergency personnel: Keep unnecessary personnel away. Keep people away from and upwind of spills and leaks. Take precautionary measures against static discharge. Eliminate all ignition sources. No smoking, flames, sparks, or flames in the immediate area. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

6.1.2 For emergency responders: Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS.

6.2 Environmental precautions: Avoid direct contact with the material. Stop leak if without risk. Move containers from the spill area. Prevent entry into sewers or waterways.

6.3 Methods and material for containment and cleaning up:

6.3.1 For containment: Eliminate all ignition sources (no smoking, flares, sparks, or flames in the immediate area). Keep combustibles such as wood, paper, and oil) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. The product is immiscible with water and will spread on the water's surface. Prevent entry into waterways, sewers, basements, or confined areas.

6.3.2 For clean-up:

6.3.2.1 Small spill: Absorb with earth, sand, or other non-combustible material and transfer to containers for later disposal. Clean the surface thoroughly to remove residual contamination.

6.3.2.2 Large spill: Stop the material flow if this is without risk. Contain the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand, or earth to soak up the product and place it into a container for later disposal. Following product recovery, flush the area with water.

6.3.3 Other information: Never return spills to original containers for reuse. Put material in suitable, covered, labeled containers.

6.4 Reference to other sections: See section 8 of the SDS for personal protection. For waste disposal, see section 13 of the SDS.

Section 7 - Handling and Storage

7.1 Precautions for safe handling: Avoid breathing vapors. Avoid contact with eyes, skin, and clothing. Avoid contact with eyes. Observe good industrial hygiene practices. Provide adequate ventilation. Take precautionary measures against static discharge. Eliminate all ignition sources. No smoking, flames, sparks, or flames in the immediate area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Launder contaminated clothing before reuse. Avoid release to the environment. Observe good industrial hygiene practices.

7.1.1 Bonding and grounding plastic containers:

When bonding and grounding two non-conductive containers, a static electrical charge can be generated when two dissimilar materials (Metal and Plastic) pass quickly by one another; their many factors affect the size and strength of the static charge or potential that may develop, such as transfer speed, humidity, and

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container size. Therefore, the transfer of flammable liquids between plastic or other non-conductive containers should be under the following conditions:

1. A non-conductive container must be equipped with an approved metallic suction pump and draw tube for taking liquid from the top of a plastic container. The pump must be electrically grounded.
2. The non-conductive container must have a metallic, self-closing faucet that can be grounded electrically.

Additionally, flammable liquids between small containers may not require special bonding and grounding techniques. NFPA 77-1993 states that glass containers or other non-conductive materials of five gallons or less capacity are usually filled without special precautions." However, NFPA 77-1993 suggests that special techniques should handle flammable liquids in plastic containers with 5 to 60 gallons for larger containers would consider compliance with NFPA 77-1993 regarding the Bonding and grounding of plastic containers holding flammable liquids.).

7.2 Conditions for safe storage, including incompatibilities: Store locked up in a cool, dry, well-ventilated place out of direct sunlight. Keep away from heat, sparks, and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a tightly closed container. Store in a. Store away from incompatible materials (see section 10).

7.3 Specific end use(s): Racing fuel only.

Section 8 - Exposure Controls / Personal Protection

8.1

Chemical Names	ACGIH- TLV	OSHA – PEL
2-ethoxy-2-methylpropane	25 ppm TWA	25 ppm TWA
2, 2, 4-Trimethylpentane	300 ppm TWA	None shown

8.2

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value.

OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits.

NOTE: TWA Means "TWA is the employee's average airborne exposure in any 8-hour work shift of a 40-hour workweek which shall not be exceeded.

8.3 Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below TLV/PELs. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

8.4 Contaminated Equipment: Separate contaminated work clothes from street clothes and launder them before reuse. Remove this material from your shoes and clean personal protective equipment.

8.5 Personal protective equipment

8.5.1 Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with a multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as backup engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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8.5.2 Hand protection

Handle with gloves. Gloves must be inspected before use. Use proper glove removal techniques to avoid skin contact with this product. Dispose of contaminated gloves after use. Select gloves tested to the **ANSI/ISEA 105-2011** or European EN374 Standard.

Full contact: Viton

Splash contact: Viton

Registered trademark of The Chemours Company FC, LLC.

8.5.3 Eye protection

Face shield and safety glasses: Use eye protection equipment tested and approved under appropriate government standards, such as NIOSH (US) or EN 166(EU).

8.5.4 Skin and body protection

Impervious clothing, flame retardant antistatic protective clothing, and the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

8.6 Protective Clothing Pictograms



Section 9 - Physical and Chemical Properties

9.1

Physical state: Liquid

Color: Clear

Odor: Aromatic Hydrocarbon

Odor threshold: Not Available

Melting point/freezing point: Not Available

Boiling point (or initial boiling point or boiling range): 149.3-288.8°F 65.2-142.7°C

Flammability: Yes

Lower explosion limit: Not Available

Upper explosion limit: Not Available

Flashpoint: 10.4°F, -12°C c.c. Estimated

Auto-ignition temperature: Not Available

Decomposition temperature: Not Available

pH: None

Kinematic viscosity: <20.5mm²/s @104°F 40°C

Solubility: Insoluble

Partition coefficient n-octanol/water (log value): Not Available

Vapor pressure (includes evaporation rate): Not Available

Density: >1

Relative density: 0.7250

Section 10 - Stability and Reactivity

10.1 Stability: Stable under ordinary conditions of use and storage.

10.2 Polymerization: Hazardous polymerization has not been reported.

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10.3 Chemical Incompatibilities: Strong oxidizing agents.

10.4 Hazardous Decomposition Products: Combustion produces carbon monoxide and carbon dioxide.

10.5 Conditions to Avoid: Avoid heat, sparks, open flames, and other ignition sources.

Section 11- Toxicological Information

ATE (Oral): 2777 mg/kg

ATE (Dermal): 2000 mg/kg

ATE (Inhalation vapor/mist): 9.04mg/l

11.1.1 OECD Guideline Test results in the European Chemical Agency Database show that no product components cause Toxic Oral Toxicity.

11.1.2 OECD Guideline Test results in the European Chemical Agency Database show that no product components cause Harmful Dermal Toxicity.

11.1.3 OECD Guideline Test results in the European Chemical Agency Database show that this product's components cause Toxic Inhalation Toxicity.

11.2 Route of Entry: Inhalation, Ingestion, Absorption, Skin, and Eye Contact.

11.3 Aspiration Hazard: The European Chemical Agency Database shows that components of this product may be fatal if swallowed and enter the airways.

11.4 Mutagenicity: OECD Guideline Test results found in the European Chemical Agency Database show no components of this product cause genetic defects.

11.5 Skin Corrosion/Irritation: OECD Guideline Test results found in the European Chemical Agency Database show that this product's components cause skin irritation. Repeated exposure may cause skin dryness or cracking.

11.6 Serious Eye Damage/Irritation: OECD Guideline Test results found in the European Chemical Agency Database show that no product components cause serious eye irritation. However, it still may irritate your eyes.

11.7 Reproductive toxicity: OECD Guideline Test results found in the European Chemical Agency Database show no components of this product cause damage to fertility or the unborn child.

11.8 Skin Sensitization OECD Guideline Test results in the European Chemical Agency Database show no product components cause skin sensitivity.

11.9 Respiratory Sensitization OECD Guideline Test results in the European Chemical Agency Database show no product components cause respiratory sensitivity.

11.10 Specific Target Organ Toxicity (Single exposure): The European Chemical Agency Database shows that components of this product may damage the central nervous system (CNS).

11.11 Specific Target Organ Toxicity (Repeated Exposure): Contains chemicals that may cause damage to the following organs: kidneys, lungs, liver, upper respiratory tract, skin, eyes, and central nervous system (CNS).

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11.12 Signs and Symptoms: Effects due to exposure may include Headache, Dizziness, Drowsiness, Metabolic Acidosis, Coma, and Seizures. Symptoms may be delayed

11.13 Carcinogenicity: OECD Guideline Test results in the European Chemical Agency Database show that this product's components will not cause cancer.

11.13.1 The National Toxicology Program (NTP): None shown.

11.13.2 The International Agency for Research on Cancer (IARC): None shown.

11.13.3 OSHA: None shown.

Section 12 - Ecological Information

12.1

Product Name	Results	Species	Exposure
2-ethoxy-2-methylpropane	LC50 100 mg/l	Fish	96 hours
2, 2, 4-Trimethylpentane	LC50 0.561 mg/l	Fish	96 hours

Toxicity: OECD Guideline Test results found in the European Chemical Agency Database show that components of this product cause immediate and long-term toxicity to aquatic life.

12.2 Mobility: Floats on water.

12.3 Persistence/degradability: Inconclusive technical data.

12.4 Bioaccumulation: Inconclusive technical data.

12.5 Other adverse effects: Inconclusive technical data.

Section 13 - Disposal Considerations

13.1 Disposal: DO NOT REUSE EMPTY CONTAINER! The container should be completely emptied before discarding. Contact a licensed contractor for detailed recommendations. Follow applicable federal, state, and local regulations.

Section 14 - Transport Information

14.1 DOT Transport Information



ID No.: UN 1203

Shipping Name: Gasoline

Hazard Class: 3

Packing Group: II

Label: Flammable

Placard: Flammable

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Marking: MARINE POLLUTANT 2, 2, 4-Trimethylpentane when shipping ground greater than 119 gallons' single Container or any quantity by water.

Section 15 - Regulatory Information

15.1 US Regulations

US Toxic Substances Control Act: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

Toxic Release Inventory (TRI): This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know- Act of 1986 (40 CFR 372):

CAS Number	Chemical Name	Chemical percentage by weight not exceeding
108-88-3	Toluene	25%

This information must be included in all SDSs that are copied and distributed for this material.

CERCLA Hazardous Substances and corresponding RQs: 2, 2, 4-Trimethylpentane 1000 lbs, Toluene 1000 lbs.

SARA Community Right-to-Know Program: All components of the blend.

Clean Water Act: None

Clean Air Act: None

OSHA: All ingredients are regulated by 1910.1200

State Regulations



WARNING: This product can expose you to chemicals. Toluene CAS # 188-88-3 is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Chemicals on the following State Right to Know Lists:

Massachusetts: All components of this product are on the Massachusetts Inventory or are exempt from Inventory requirements.

New Jersey: All components of this product are on the New Jersey inventory or are exempt from Inventory requirements.

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Pennsylvania: All components of this product are on the Pennsylvania Inventory or are exempt from Inventory requirements.

Section 16 - Other Information

16.1 Disclaimer: The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO responsibility is assumed for any damage or injury resulting from abnormal use or failure to adhere to recommended practices. The information provided above is furnished on the condition that the person receiving them shall determine the product's suitability for their particular purpose and that they assume the risk of its use.

16.2 References: European Chemical Agency Database, and MSDS and SDS of chemicals in this mixture.

16.3 SJC Compliance Education Inc. (SJC) did not test, certify, or approve the substance described in this SDS, and all information in this SDS was provided by VP Racing Fuels Inc. or was reproduced from publicly available regulatory data sources and product SDSs. SJC makes no representations or warranties regarding the completeness or accuracy of the information in this SDS and disclaims all liability concerning the use of this information or the substance described in this SDS

16.4 SDS Preparation Date 04/19/2017

SDS Previous Issue Date: None

SDS Revision Date: 03/11/2020 Revised Sections 1,2,3,4,8,11.12.13.115.16

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END OF SAFETY DATA SHEET