Section 1 - Chemical Product and Company Identification

1.1 Product Name: **M5**

1.2 VP Racing Fuels, Inc., 7124 Richter Road, Elmendorf, TX 78112, 210.635.7744

1.3 Recommended Use: Racing Fuel

1.4 **RESTRICTIONS on USE** THIS FUEL IS FOR RACING VEHICLE USE ONLY!

**NOT LEGAL FOR STREET DRIVEN MOTOR VEHICLE**

1.5 Emergency Response Number: CHEMTREC 800-424-9300

   International Emergency Telephone Number: +1-703-527-3887

1.6 See Section 16.3 for CHEMTREC in Country Emergency Numbers

Section 2 - Hazards Identification

2.1 **GHS HAZARD**

<table>
<thead>
<tr>
<th>Hazard Classes</th>
<th>Hazard Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Flammable liquid/vapor</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity single exposure</td>
<td>Category 3</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity repeated exposure</td>
<td>Category 1</td>
</tr>
<tr>
<td>Eye Irritation</td>
<td>Category 2A</td>
</tr>
<tr>
<td>Skin Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Acute Toxicity (Inhalation)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute Toxicity (Dermal)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute Toxicity (Oral)</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

2.2 **Signal Word:** Danger
2.3 Pictograms:

- Flame
- Health Hazard
- Irritant
- Toxic

2.4 Hazard Statements

**PHYSICAL HAZARDS:**

- H225: Highly flammable liquid and vapor

**HEALTH HAZARDS:**

- H301 + H311: Toxic if swallowed or in contact with skin
- H315: Causes skin irritation
- H319: Causes serious eye irritation
- H332: Harmful if inhaled
- H336: May cause drowsiness or dizziness
- H372: Causes damage to organs

**ENVIRONMENTAL HAZARDS:**

- None

**PRECAUTIONARY STATEMENTS:**

- P102: Keep out of reach of children
- P202: Do not handle until all safety precautions have been read and understood
- P210: Keep away from sparks and open flames- No smoking
- P260: Do not breathe vapors
- P270: Do not eat, drink or smoke when using this product
- P280: Wear protective gloves, clothing, respiratory and eye protection

**RESPONSE STATEMENTS:**

- P301 + P310 + P331: IF SWALLOWED: USA Immediately call the National POISON CENTER at 800-222-1222. OUTSIDE USA Immediately call poison center or doctor. DO NOT induce vomiting
- P303+P361+353: IF ON SKIN Take off immediately all contaminated clothing. Rinse skin with water
- P304+340: IF INHALED, Remove to fresh air and keep comfortable for breathing
- P305+P351: IF IN EYES rinse cautiously with water for at least 15 minutes
- P306+P361: IF ON CLOTHING, Take off contaminated clothing
- P370: In case of fire use foam, carbon dioxide, dry chemical to extinguish fire
- P376: Stop leaks if safe to do so.
STORAGE STATEMENTS: P403: Keep Cool Store in a well-ventilated place

DISPOSAL STATEMENTS: P501: Dispose of content and/or container in accordance with local, regional, national or international regulations

2.5 Hazards not otherwise classified (HNOC) or not covered by GHS: Repeated exposure may cause skin dryness or cracking.

Section 3 - Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>EC#</th>
<th>Chemical Names</th>
<th>Percent</th>
<th>Other Identifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Blend of Aliphatic and Aromatic Hydrocarbons C-2 to C-20</td>
<td>7-8%</td>
<td>None</td>
</tr>
<tr>
<td>67-56-1</td>
<td>200-659-6</td>
<td>Carbinol</td>
<td>89-92%</td>
<td>Hydroxymethane</td>
</tr>
<tr>
<td>75-52-5</td>
<td>200-876-6</td>
<td>Nitrocarbol</td>
<td>1-3%</td>
<td>NM</td>
</tr>
</tbody>
</table>

3.2 Blend Contains

<table>
<thead>
<tr>
<th>Chemical Names</th>
<th>CAS#</th>
<th>EC#</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methylbutane</td>
<td>78-78-4</td>
<td>201-142-8</td>
</tr>
<tr>
<td>Pentamethylene</td>
<td>278-92-3</td>
<td>206-016-6</td>
</tr>
</tbody>
</table>

3.3 Trade Secret Provision and Chemical Concentration Disclosure: In accordance with OSHA and GHS Regulations we have withheld specific percentages of the chemicals in this mixture. The chemical concentrations have been disclosed as a range and are applicable to the hazards as identified in this Safety Data Sheet

Section 4 - First Aid Measures

4.1 Eye: 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.

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

4.2 Skin: Prolonged and repeated liquid contact can cause defatting and drying of the skin and can lead to irritation and/or dermatitis.

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

4.3 Ingestion: 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 in the lungs can produce chemical pneumonia, pulmonary edema and even death.

**Ingestion:** Do NOT induce vomiting. Get medical aid immediately.
4.4 Inhalation: Prolonged breathing of high vapor concentrations can produce headache, dizziness, nausea, and impaired vision. Excessive overexposure can cause central nervous system depression, loss of consciousness, liver damage and death resulting from respiratory failure.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult and IF TRAINED, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation without protection.

4.5 After first aid, get appropriate paramedic, or community medical support. The severity of outcome following ingestion may be more related to the time between ingestion and treatment, rather than the amount ingested. Therefore, there is a need for rapid treatment of any ingestion exposure.

4.6 Note to Physicians: If you determine that a medical emergency exists and the specific chemical identity is necessary for emergency or first-aid treatment we will immediately disclose the specific chemical identity. Call CHEMTREC 800-424-9300 or 703-527-3887. We will require a written statement of need and confidentiality agreement, in accordance with OSHA’s Trade Secret Regulations as soon as circumstances permit. In non-emergency situations, we will upon written request disclose a specific chemical identity.

Section 5 - Fire-Fighting Measures

5.1 General Fire Hazards
Use water to cool containers exposed to fire

5.2 Hazardous Combustion Products
Avoid fumes of burning product.

5.3 Extinguishing Media
Carbon dioxide, dry chemical, foam

5.4 Fire Fighting Equipment/Instructions
Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.

Section 6 - Accidental Release Measures

6.1 Spill /Leak Procedures: Ventilate area highly flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition away from the spill.

6.2 Spills: Avoid direct contact with material. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers or waterways. Contain and collect spillage with non-combustible, absorbent material such as sand, earth, vermiculite or diatomaceous earth and place in a container for disposal.

Section 7 - Handling and Storage

7.1 Handling Precautions: Wash hands and exposed skin thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid ingestion and contact with eyes, skin or clothing. Keep container tightly closed. Avoid inhalation.

7.2 Storage Requirements: Store in a tightly closed container in a cool, dry and well-ventilated area.
8.1

<table>
<thead>
<tr>
<th>Chemical Names</th>
<th>ACGIH- TLV</th>
<th>OSHA - PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blend of Aliphatic and Aromatic Hydrocarbons C-2 to C-20</td>
<td>600 ppm TWA</td>
<td>*600 ppm TWA</td>
</tr>
<tr>
<td>Nitrocarbol</td>
<td>50 ppm TWA</td>
<td>*100 ppm TWA</td>
</tr>
<tr>
<td>Carbinol</td>
<td>200 ppm TWA</td>
<td>*250 ppm TWA</td>
</tr>
</tbody>
</table>

8.2

70ACGIH® = 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 work week which shall not be exceeded. *Listed on the OSHA Z1 or Z2 Table.

8.3 Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below TLV/PELs. Local exhaust ventilation are 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 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 multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to 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).

8.5.2 Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique 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: Nitrile rubber

Splash contact: Nitrile rubber

8.5.3 Eye protection

Face shield and safety glasses Use equipment for eye protection 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, 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
Appearance: Clear
Odor: Pungent

Vapor Pressure: 141mmHg@21°C
Vapor Density (Air=1): 1.1
Specific Gravity (H2O=1): .75
Relative Density: Not Available
Odor Threshold: Not Available

Flammability (solid, gas): Not applicable.
Evaporation rate: Not Available
Partition coefficient octanol/water: Not Available

Water Solubility: Completely miscible
Flash Point: 49.5 °F, 9.7 °C - closed cup
Boiling Point: 149 °F, 65 °C
Freezing/Melting Point: -144 °F, -98 °C
Viscosity: Not Available
Auto ignition Temperature: Not Available

LEL: 6%
UEL: 36%
Viscosity: Not Available
Auto ignition Temperature: Not Available
Decomposition temperature: Not Available
pH: None

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

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

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Results</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blend of Aliphatic and Aromatic Hydrocarbons C-2 to C-20</td>
<td>Oral LD50</td>
<td>Rat</td>
<td>&lt;2000 mg/kg</td>
<td>Non Listed</td>
</tr>
<tr>
<td>Nitrocarbol</td>
<td>Oral LD50</td>
<td>Rat</td>
<td>940 mg/kg</td>
<td>None Listed</td>
</tr>
<tr>
<td>Carbinol</td>
<td>Oral LD50</td>
<td>Rat</td>
<td>&lt;300 mg/kg</td>
<td>None Listed</td>
</tr>
</tbody>
</table>

11.1.1 OECD Guideline 401 Tests results found in the European Chemical Agency Data Base shows that components of this product to be Acute Oral Toxicity.

11.1.2 OECD Guideline 403 Tests results found in the European Chemical Agency Data Base shows that components of this product to be Acute Inhalation Toxicity.

11.1.3 OECD Guideline 402 Tests results found in the European Chemical Agency Data Base shows that components of this product to be Acute Dermal Toxicity.

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

11.3 Aspiration Hazard: European Chemical Agency Data Base shows that no components of this product may be fatal if swallowed and enters airways.

11.5 Mutagenicity: European Chemical Agency Data Base show that no components of this product to cause genetic defects.
11.6 Skin Corrosion/Irritation: OECD Guideline 404 Tests results found in the European Chemical Agency Data Base shows that components of this product to cause skin irritation. Repeated exposure may cause skin dryness or cracking.

11.7 Serious Eye Damage/Irritation: OECD Guideline 405 Tests results found in the European Chemical Agency Data Base shows that components of this product to cause serious eye irritation.

11.8 Specific Target Organ Toxicity (Single Exposure): European Chemical Agency Data Base shows that components of this product may cause drowsiness and dizziness.

11.9 Reproductive toxicity: OECD Guideline 421 Tests results found in the European Chemical Agency Data Base show components of this product to cause damage to fertility or the unborn child.

11.10 Target Organ Toxicity (Repeated Exposure): Contains material which may cause damage to the following organs: kidneys, lungs, liver, upper respiratory tract, skin, eyes, central nervous system (CNS).

11.11 Signs and Symptoms: Contains material which may cause damage to the following organs: Eyes, Kidney, Liver, Heart, Central nervous system. Symptoms may be delayed.

11.12 Carcinogenicity: OECD Guideline 453 Tests results found in the European Chemical Agency Data Base shows that components of this product to cause cancer.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>IARC</th>
<th>ACGIH</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blend of Aliphatic and Aromatic Hydrocarbons C-2 to C-20</td>
<td>Not classifiable as a human carcinogen</td>
<td>Not classifiable as a human carcinogen</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Nitrocarbol</td>
<td>Substance is possibly carcinogenic to humans</td>
<td>Confirmed animal with unknown relevance to humans</td>
<td>Substance is reasonably anticipated to be a human carcinogen</td>
<td>Yes</td>
</tr>
<tr>
<td>Carbinol</td>
<td>Not listed</td>
<td>Confirmed Human Carcinogen</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

11.12.1 OECD Guideline 453 Tests results found in the European Chemical Agency Data Base shows that components of this product to cause cancer.

### Section 12 - Ecological Information

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Results</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blend of Aliphatic and Aromatic Hydrocarbons C-2 to C-20</td>
<td>Not expected to be toxic to aquatic organisms.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrocarbol</td>
<td>IC50 36 mg/l</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td>Nitrocarbol</td>
<td>EC50 450 mg/l</td>
<td>Daphnia</td>
<td>24 hours</td>
</tr>
<tr>
<td>Nitrocarbol</td>
<td>LC50 460 mg/l</td>
<td>Fish</td>
<td>58 hours</td>
</tr>
<tr>
<td>Carbinol</td>
<td>LC50 29.4 mg/L</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td>Carbinol</td>
<td>LC50 22,200 mg/L</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
</tbody>
</table>

**Toxicity:** This chemical is not regarded as toxic to aquatic organisms. However **DO NOT** discharge into a sewer or waterway.
12.2 Mobility: Floats on water

12.3 Persistence/degradability: No date available on this product

12.4 Bioaccumulation: No date available on this product

12.5 Other adverse effects: No date available on this product

Section 13 - Disposal Considerations

13.1 Disposal: DO NOT REUSE EMPTY CONTAINER! Container should be completely emptied prior to discard. Container with residues should be considered to be hazardous wastes. 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 1992
Shipping Name: Flammable, liquids, toxic n.o.s. (Carbinol, Pentamethylene)
Hazard Class: 3, (6.1)
Packing Group: II
Label: Flammable
Placard: Flammable

14.2 TDG Canadian Transport Information

ID No.: UN 1992
Shipping Name: Flammable, liquids, toxic n.o.s. (Carbinol, Pentamethylene)
Hazard Class: 3, (6.1)
Packing Group: II
Label: Flammable
Placard: Flammable
14.3 IMDG Transport Information

ID No.: UN 1992  
**Shipping Name:** FLAMMABLE, LIQUIDS, TOXIC N.O.S. (Carbinol, Pentamethylene)  
**Hazard Class:** 3, (6.1)  
**Packing Group:** II  
**Flash Point:** (9.7 °C c.c.)  
**EmS Number:** F-E, S-D  
**Label:** Flammable  
**Placard:** Flammable

14.4 ADR/RID Transport Information

ID No.: UN 1992  
**Shipping Name:** Flammable, liquids, toxic n.o.s. (Carbinol, Pentamethylene)  
**Hazard Class:** 3(6.1)  
**Packing Group:** II  
**Label:** Flammable  
**Placard:** Flammable  
**Classification Code:** FT1

14.5 Australian Dangerous Goods Transport Information

ID No.: UN 1992  
**Shipping Name:** Flammable, liquids, toxic n.o.s. (Carbinol, Pentamethylene)  
**Hazard Class:** 3, (6.1)  
**Packing Group:** II  
**Label:** Flammable  
**Placard:** Flammable

**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

**CERCLA Hazardous Substances and corresponding RQs:** Carbinol 5000 pounds

**SARA Community Right-to-Know Program:** Pentamethylene, Carbinol
M5
Conforms to OSHA CFR 29 1910.1200 and aligns to the United Nations Globally Harmonized System
Conforms to The United Nations Regulation Globally Harmonized System
Conforms to Regulation (EU) No 453/2010
Conforms to Regulation (EC) No 1272/2008 and aligns to the United Nations Globally Harmonized System
Conforms to the Australian Preparation of Safety Data Sheets for Hazardous Chemicals under section 274 of the Work Health and Safety Act

Clean Water Act: None

Clean Air Act: Carbinol

OSHA: All ingredients are regulated by 1910.1200

State Regulations
California prop. 65: Carbinol, Nitrocarbol Cancer

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

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

15.2 Canadian Regulation:
The following substances are specified on the public Portion of the Domestic Substances List (DSL): All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

15.3 Europe Regulations
All substances contained in this product are listed on the EU directives or are not required to be listed.

15.4 International Regulations:
Australian Inventory of Chemical Substance: All components of this product are on the Inventory or are exempt from Inventory requirements.

National Existing Chemical Inventory in Taiwan: All components of this product are on Inventory or are exempt from Inventory requirements.

Philippine Inventory of Chemicals and Chemical Substances All components of this product are on the Inventory or are exempt from Inventory requirements.

China Existing Chemical Inventory: All components of this product are on the 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 from any failure to adhere to recommended practices. The information provided above is furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use.

16.2 References: CHEMpendium data base of Canadian Centre for Occupational Health and Safety (CCOHS), JJ Keller on Line, European Chemical Agency Data Base and MSDS and SDS of chemicals in this mixture.
16.3 CHEMTREC In country emergency dial numbers:

- Australia (Sydney) + (61)-290372994
- China 4001-204937 must be call within China
- Germany 0800-181-7059 must be call within Germany
- Germany (Frankfurt) + (49)-6964350840
- Russia 8-800-100-6346 Must be call within Russia

16.4 SDS Preparation Date 01/26/2016
SDS Previous issue Date: None
Prepared by SJC Compliance Education, Inc
16516 El Camino Real Suite 417
Houston, TX 77062