**Material Safety Data Sheet**

**Product Name:** Torco Leaded Race Fuel 110

**Identification**

- **Chemical Name:** Torco Leaded Race Fuel 110
- **Chemical Family:** Mixture
- **CAS #:** 70024-92-9
- **CAS Name:** Isoalkanes, C7-C8
- **Synonyms / Common Name:** Race Fuel

**Physical Data**

- **Appearance:** Thin Liquid
- **Color:** Color of liquid varies
- **State:** Liquid
- **Odor Characteristics:** Hydrocarbon Odor
- **pH:** NA
- **Viscosity:** NDA
- **Specific Gravity (Water = 1):** 0.74 @ 16° (60.8°F)
- **Vapor Density (Air = 1):** 3-4
- **Vapor Pressure:** 5.3 - 6.7 psia @ 38°C (100.4°)
- **Melting Point:** NDA
- **Boiling Point:** 29 - 149°C (300.2°F)
- **Flash Point:** -37°C (-34.6°F)
- **Freezing Point:** NDA
- **Percent Volatility:** NDA
- **Evaporation Rate (BAc = 1):** NDA
- **Solubility in Water:** Negligible
- **Solubility in Oil:** NDA
- **Solubility in Acetone:** NDA

**Ingredients**

<table>
<thead>
<tr>
<th>Material / Components</th>
<th>CAS #:</th>
<th>CAS Name</th>
<th>TLV Units</th>
<th>Approx. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isoalkanes, C7-C8</td>
<td>70024-92-9</td>
<td>Isoalkanes, C7-C8</td>
<td>70024-92-9</td>
<td>10-50%</td>
</tr>
<tr>
<td>Isoptane</td>
<td>78-78-4</td>
<td>Isoptane</td>
<td>78-78-4</td>
<td>10-30%</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>Toluene</td>
<td>108-88-3</td>
<td>10-40%</td>
</tr>
<tr>
<td>n-butane</td>
<td>106-97-8</td>
<td>n-butane</td>
<td>106-97-8</td>
<td>1-30%</td>
</tr>
<tr>
<td>Tetraethyl Lead</td>
<td>78-00-2</td>
<td>Tetraethyl Lead</td>
<td>78-00-2</td>
<td>0.5-10%</td>
</tr>
</tbody>
</table>

**Fire and Explosion Hazard Data**

- **Flash Point:** -37°C (-34.6°F)
- **Flammable Limits in Air % by volume:** Lower NDA, Upper NDA
- **Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.
- **Unusual Fire & Explosion Hazards:** Combustion Products: Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce...
5. HEALTH HAZARD DATA

Threshold Limit Value:

Effects of Overexposure:

Inhalation:
- **Skin Contact**: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin.
- **Eye Contact**: Contact with the eyes causes irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision. Not expected to cause prolonged or significant eye irritation.
- **Ingestion**: This material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.

**Delayed Effects**: None reported.

**Medical Conditions Aggravated by Exposure**: None reported.

6. FIRST AID MEASURES

**Inhalation**: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

**Skin Contact**: To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. Get medical attention if any symptoms develop.

**Eye Contact**: Flush eyes with running water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.

**Ingestion**: If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.

**NOTES TO PHYSICIAN**: Ingestion of this product of subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

7. REACTIVITY DATA

**Stability**: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Incompatibility**: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Hazardous Combustion or Decomposition Products**: Carbon Oxides. Simple Hydrocarbons.

**Hazardous Polymerization**: Hazardous polymerization will not occur.

**Conditions to Avoid**: See Section 10

8. SPILL OR LEAK PROCEDURES

**Actions to take for Leaks & Spills**: None reported.

**Waste Disposal Method**: None reported.
9. SPECIAL PROTECTION INFORMATION

Respiratory Protection:

   Eye Protection: Wear eye protection such as safety glasses, chemical goggles, or faceshields if engineering controls or work practices are not adequate to prevent eye contact.

Skin Protection:

Other Clothing:

Other Equipment:

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

10. HANDLING AND STORAGE

Special Precautions:

Other Precautions:

11. REGULATORY INFORMATION

Workplace Classification:

12. TOXICOLOGICAL INFORMATION

Acute Data:

   Acute Oral Toxicity: LD50 / rat / 183 mg/kg
   Acute Dermal Toxicity: LD50 / rabbit / 4815 mg/kg
   Acute Inhalation Toxicity: LC50 / rat / 4.7 mg/l

Reproductive / Teratology Data:

   Reproductive and Developmental Toxicity: 2-generation/95 days/ inhalation/ rats / Doses: 0, 100, 500, or 2000ppm / NOAEL = 2000ppm (max dose) -no effect on fertility, repro or lactation parameters; NOAEL for developmental effects =

13. ECOLOGICAL INFORMATION

Fate in the Environment:

14. DISPOSAL CONDITIONS

Procedures:

15. TRANSPORTATION INFORMATION

DOT Classification:

Warning Labels:
16. OTHER INFORMATION
ADDENDUM for Section - 3. INGREDIENTS - Ref. Pg. 1

<table>
<thead>
<tr>
<th>Component</th>
<th>Cas Number</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha, Petroleum, Light Alkylate</td>
<td>64741-66-8</td>
<td>40-90% by weight</td>
</tr>
</tbody>
</table>

ADDENDUM for Section - 4. FIRE AND EXPLOSION HAZARD DATA - Ref. Pg. 1

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: WARNING! FLAMMABLE. Clear fire area of non-emergency personnel. Only enter confined fire space with full bunker gear including a positive pressure, NIOSH-approved, self-contained breathing apparatus. Cool surrounding equipment, fire-exposed containers and structures with water. Container areas exposed to direct flame contact should be cooled with large quantities of water (500 gallons water per minute flame impingement exposure) to prevent weakening of container structure.

ADDENDUM for Section - 5. HEALTH HAZARD DATA - Ref. Pg. 2

Inhalation: Breathing of high vapor concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness. Exposure to very high levels may trigger heartbeat irregularities (cardiac arrhythmia), and possible cardiac sensitization. The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty in breathing. Breathing this material at elevated concentrations causes central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death. Reproduction and Birth Defects: Contains material that may be harmful to the developing fetus based on animal data.

DELAYED OR OTHER HEALTH EFFECTS:
Cancer: Prolonged or repeated exposure to this material may cause cancer.
Target Organs: Repeated inhalation of this material at elevated concentrations may cause damage to the following organ(s) based on animal data: - Nervous System - Auditory System
ADDENDUM for Section - 8. SPILL OR LEAK PROCEDURES - Ref. Pg. 2

Protective Measures: Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: U.S.A. regulations may require reporting spills of this material that could reach any surface waters. Report spills to local authorities and/or the National Response Center at (800) 424-8802 as appropriate or required.

ADDENDUM for Section - 9. SPECIAL PROTECTION INFORMATION - Ref. Pg. 3

Respiratory Protection: If exposure is anticipated to be greater than applicable exposure limits, wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material, such as: Self-contained breathing apparatus (SCBA) for use in environments with unknown concentrations or emergency situations, or Air-Purifying Respirator for Organic Vapors, or Supplied-Air Respirator. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Skin Protection: Wear impervious protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Users should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing. Suggested materials for protective gloves include: Viton, or Silver Shield

Skin Protection: Wear impervious protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Users should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing. Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), or Polyurethane, or Nitrile, or Viton
ADDENDUM for Section - 10. HANDLING AND STORAGE - Ref. Pg. 3

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. REFER TO PRODUCT LABEL OR MANUFACTURERS TECHNICAL BULLETINS FOR THE PROPER USE AND HANDLING OF THIS MATERIAL.

Precautionary Measures: Do not taste or swallow. Do not breathe vapor or fumes.

General Handling Information: Avoid work practices that may release volatile components in the atmosphere. Local air pollution regulations should be consulted to determine if the release of volatile components is regulated or restricted in the area in which this material is used. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations, which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, ‘Flammable and Combustible Liquids, National Fire Protection Association (NFPA 77), Recommended Practice on Static Electricity’ (liquids, powders and dusts), and/or the American Petroleum Institute (API) Recommended Practice 2003, ‘Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents’ (liquids).

General Storage Information: Empty non-returnable containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or disposed of properly. DO NOT USE OR STORE near heat, sparks or open flames. USE AND STORE ONLY IN WELL VENTILATED AREA.

ADDENDUM for Section - 13. ECOLOGICAL INFORMATION - Ref. Pg. 3

ENVIRONMENTAL FATE:

Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline. The aqueous solubility of non-oxygenated unleaded gasoline, based on analysis of benzene, toluene, ethylbenzene+xylenes and naphthalene, is reported to be 112 mg/L. Solubility data on individual gasoline constituents also available. Toluene is volatile and when released into water will be volatilized to the atmosphere where it is degraded with a half-life of 10 to 104 hours. Toluene is readily biodegradable in tests using sewage or sludge inocula. The biodegradation half-life for toluene in surface waters and soils is expected to range from 4 to 22 days.

Toluene that does not evaporate following release to soil is expected to be highly mobile and may leach to groundwater. In groundwater, toluene has been reported to be degraded in 7 to 28 days.

ADDENDUM for Section - 14. DISPOSAL CONDITIONS - Ref. Pg. 3

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.
ADDENDUM for Section - 15. TRANSPORTATION INFORMATION - Ref. Pg. 3

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition). Consult the appropriate domestic or international mode- specific and quantity- specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.). Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the MSDS and the bill of lading.

Shipping Descriptions per regulatory authority:

US DOT
UN1203, GASOLINE, (Tetraethyl Lead), 3, II, RQ (Tetraethyl Lead, Toluene), Marine Pollutant (Tetraethyl Lead)

ICAO / IATA
UN1203, GASOLINE, 3, II

IMO / IMDG UN1203, GASOLINE, (Tetraethyl Lead), 3, II, (-37°C), RQ (Tetraethyl Lead, Toluene), Marine Pollutant (Tetraethyl Lead)

RID / ADR
UN1203, GASOLINE, 3, II
If exposure is anti