

MATERIAL SAFETY DATA SHEET

TORCO RACING FUELS PRO NITRO

1-3-2005

SECTION 1 – Chemical Product and Company Identification

Product/Chemical Name: Nitromethane

Chemical Formula: CH₃NO₂

CAS Number: 75-52-5

Other Designations: Nitrocarbol

Derivation: A nitroparaffin derived by nitration of propane or methane, or the reaction between sodium nitrate and sodium chloroacetate.

General Use: Used as a solvent for cellulosic compounds, polymers, waxes, and fats, rocket and racing car fuel; in chemical synthesis, explosive mixtures, and in the coating industry.

Emergency Telephone: CHEMTREC 1-800-424-9300

SECTION 2 – Composition / Information on Ingredients

Ingredient Name	CAS Number	EINECS/ELINCS	%wt or % vol
Nitromethane	75-52-5	200-876-6	100

Trace Impurities:

1992 OSHA PEL Transitional and Final Rule Limits 8-hr TWA: 100 ppm (250mg/m ³)	1993-94 ACGIH TLV TWA: 20ppm (50mg/in ³)	1991 DFG (Germany)MAK TWA: 100ppm (250mg/m ³)	1990 IDLH Level 1000 ppm
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1192 NIOSH REL

None established

*See NIOSH, RTECS (PA9800090), for additional toxicity data.

SECTION 3 – Hazards Identification

*****Emergency Overview*****

Appearance: clear, colorless. Flash Point: 35 deg C. Danger! Flammable Liquid. Causes respiratory tract irritation. May cause digestive tract irritation. May be harmful if swallowed. May cause central nervous system depression. May be absorbed through the skin. May cause methemoglobinemia. May cause eye and skin irritation. May cause liver and kidney damage.

Potential Health Effects

Primary Entry Routes: Inhalation, skin and eye contact

Target Organs: Blood, Kidneys, central nervous system, liver.

Acute Effects

Eye: May cause eye irritation. Vapors may cause eye irritation

Skin: May cause skin irritation. Prolonged and/or repeated contact may cause irritation and/or dermatitis. May be absorbed through the skin.

Ingestion: May cause irritation of the digestive tract. Methemoglobinemia is characterized by dizziness, drowsiness, headache, breath shortness, cyanosis with bluish skin, rapid heart rate and chocolate-brown colored blood. May be harmful if swallowed.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause liver and kidney damage. May cause narcotic effects. May cause thyroid effects. May cause blood changes.

Carcinogenicity: IARC, NTP, and OSHA do not list nitromethane as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: skin disorders.

Chronic Effects: Prolonged or repeated skin contact may cause dermatitis. May cause methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis, rapid heart rate, unconsciousness and possible death.

HMIS

H - 1

F - 3

R - 3

PPE*

*Sec. 3

Section 4 - First Aid Measure

Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

Skin: Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.

Ingestion: Do **NOT** induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure to fresh air immediately. If not breathing. Give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: If exposure is suspected, perform liver and kidney function tests and obtain arterial blood gases and a chest x-ray.

Special Precautions/ Procedures:

Section 5 - Fire Fighting Measures

Flash Point: 95 deg F (35 deg C)

NFPA

Flash Point Method:

3

Burning Rate:

1 3

Autoignition Temperature: 784.4 deg F (418 deg C)

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LEL: 7.1% v/v

UEL: 63.0% v/v

Flammability Classification: Highly Flammable

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray, or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam.

Unusual Fire or Explosion Hazards: Containers may rupture in heat of fire. Vapors may travel to ignition source and flash back.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode. Structural firefighters protective clothing provides only limited protection. Apply cooling water to sides of containers until well after fire is out. For massive fire in cargo area, use monitor nozzles or unmanned hose holders. Withdraw immediately if you hear a rising sound from venting safety device or notice any tank discoloration due to fire.

Section 6 -- Accidental Release Measures

Spill/Leak Procedures: Notify safety personnel, isolate and ventilate area, deny entry, and stay upwind. Shut off ignition sources.

Small spills: Absorb spill with inert material, (e.g. dry sand or earth) then place into a chemical waste container.

Remove all sources of ignition. Use a spark-proof tool.

Large Spills:

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Clean-Up: Cleanup personnel should protect against inhalation and skin/eye contact.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120)

Section 7 - Handling and Storage

Handling Precautions: Wash thoroughly after handling. Use only in a well ventilated area. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid Contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage Requirements: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables area.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: To reduce potential health hazards, use sufficient dilution or local exhaust ventilation to control airborne contaminants and to maintain concentrations at the lowest practical level. Install Class 1, Group C electrical equipment.

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: Consider pre-placement and periodic medical exams with emphasis on the skin and liver.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29CFR 1910.134) and, if necessary, wear a MSHA/NIOSH- approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and

presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.

WARNING! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/ Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face protection regulations (29 CFR 1910.133). Contact lens are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

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

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 -- Physical and Chemical Properties

Physical State: Liquid

Appearance and Odor: Clear, colorless/disagreeable
Fruity odor.

Odor Threshold: <200 ppm

Vapor Pressure: 27.8 mm Hg at 68 deg F (20 deg C)

Saturated Vapor Density (Air=0.075 lb/ft³ or 1.2 kg/m³):
0.08 lb/ft³ or 1.25 kg/m³

Vapor Density(Air=1): 2.11

Formula Weight: 61.04

Bulk Density: 9.5 lb/gall

Specific Gravity (H₂O=1,at 4deg C): 1.139 at 68 deg F (20 deg C)

PH: 0.01 solution = 6.12

Water Solubility: 9.5% at 68 deg F (20deg C)

Other Solubilities: Ethyl alcohol, ethyl ether,
And Dimethylformamide

Boiling Point: 213 deg F (101 deg C)

Freezing/Melting Point: -20deg F (-29 deg C)

Viscosity:

Refractive Index;

Surface Tension:

% Volatile:

Evaporation Rate:

Section 10 - Stability and Reactivity

Stability: Nitromethane is shock sensitive and thermally unstable (may decompose explosively above 599 deg F (315 deg C). High pressures and contamination with other materials such as acids and amine contribute to instability.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Include acetone: aluminum chloride + organic matter: alkyl metal halides: silver oxide + boron trifluoride etherate: acids and bases such as calcium hydroxide, calcium hypochlorite, aniline, diaminoethane, morpholine, methylamine, ammonium hydroxide, potassium hydroxide, sodium carbonate, n-methylaniline, formaldehyde, lithium perchlorate, and formic, nitric, sulfuric, or phosphoric acids: aqueous silver nitrate (forms explosive silver fulminate), metal oxides, hexamethylbenzene; hydrocarbons, and oxidizing materials. It slowly corrodes some metal, including copper and steel (when wet).

Conditions to Avoid: Exposure to heat, ignition sources, shock, or incompatibles. Use small pore sieve (3 or 4A) for drying and storing nitromethane. Larger pore sieves can cause decomposition problems.

Hazardous Decomposition Products: Thermal oxidative decomposition of nitromethane can produce nitrogen oxides, carbon monoxide, carbon dioxide.

Section 11 -- Toxicological Information

Toxicity Data:*

Eye Effects:

Acute Inhalation Effects

Human, inhalation, TCLo = ?? ppm

Skin Effects:

Acute Oral Effects:

Rat, oral, LD50-940 mg/kg

Mouse, oral, LD50 – 950 mg/kg

Chronic Effects: No information available

Carcinogenicity: No information available

Mutagenicity: No information available

Teratogenicity: No information available

- See NIOSH, RTECS (PA9800000), for additional toxicity data.
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Section 12 -- Ecological Information

Ecotoxicity: see Dictionary of Substances and their Effects

Environmental Fate: No information available

Environmental Degradation:

Soil Absorption/Mobility:

Section 13 -- Disposal Consideration

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, State and Local regulations.

Disposal Regulatory Requirement:

Container Cleaning and Disposal:

Section 14 -- Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Nitromethane	Packaging Authorizations	Quantity Limitations
Shipping Symbols:	a) Exceptions: 173.150	a) Passenger, Aircraft, or Railcar:
Hazard Class: 3	b) Nonbulk Packaging: 173.202	Forbidden
ID No.: UN 1261	c) Bulk Packaging: none	b) Cargo Aircraft Only: 601
Packing Group: II		
Label: Flammable Liquid		Vessel Stowage Requirements:
Special Provisions (172.102):		a) Vessel Stowage: A
T25		b) Other:

Section 15 -- Regulatory Information

US FEDERAL

TSCA

CAS# 75-52-5 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS#75-52-5: Effective Date: April 13, 1989; Sunset Date: December 19, 1995

Chemical Test Rules

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

None of the chemicals in this material have an RQ.

Section 302 (TPQ).

None of the chemicals in this product have a TPQ.

SARA codes

CAS # 75-52-5: chronic, flammable, reactive.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

CAS # 75-52-5 is considered highly hazardous by OSHA.

STATE

CAS # 75-52-5 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

The following statement(s) is (are) made in order to comply with the California Safe Drinking Water Act:

California No significant Risk Level: None of the chemicals in this product are listed.

European/ International Regulations

European Labeling in Accordance with EC Directives

Hazardous Symbols

XN

Risk Phrases:

R 10 Flammable. R 22 Harmful if swallowed. R 5 Heating may cause an explosion.

Safety Phrases:

S 41 In case of fire and/or explosion do not breathe fumes.

WGK (Water Danger/Protection)

CAS# 75-52-5

Canada

CAS # 75-52-5 is listed on Canada's DSL/NDSL list

WHMIS: Not available

CAS # 75-52-5 is not listed on Canada's Ingredient Disclosure List.

Section 16 -- Other Information

Disclaimer: All information, recommendations and suggestions appearing herein are based upon sources believed to be Reliable: However, it is the user's responsibility to determine the safety, toxicity, and suitability for its own use of this product. Pro Nitro, LLC DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE USE BY OTHERS OF THIS PRODUCT.