



CI-0801

Material Safety Data Sheet

1 Company Identification

Innospec Fuel Specialties
8375 S. Willow Street
Littleton, CO 80124

Product information 1-800-441-9547
In Case of Emergency
Call Chemtrec 1-800-424-9300

2 Composition / Ingredient Information

<u>Material</u>	<u>CAS Number</u>	<u>%</u>
2-Ethylhexyl Nitrate.....	27247-96-7	98-100
2-Ethylhexyl Alcohol.....	104-76-7	<2

3 Hazardous Identification

Potential Health Effects

Inhalation or ingestion of 2-Ethyl Hexyl Nitrate may initially include cause nonspecific discomfort, such as nausea, headache, or weakness. Exposed workers reported throbbing headaches and heart palpitations. Data to evaluate the skin permeation hazard of this compound are insufficient. There are no reports of human sensitization. No adequate epidemiologic studies are available for this compound.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA, ACGIH as carcinogens.

4 First Aid Measures

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Skin Contact

Flush skin with water after contact. Wash contaminated clothing before reuse.

Eye Contact

In case of contact immediately, flush eyes with plenty of water for at least 15 minutes. Call a physician.

Ingestion

If swallowed, do not induce vomiting. Allow victim to rinse his mouth and then to drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400-ml water and mix thoroughly. Administer 5 ml/kg or 350 ml for an average adult.

Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances. Activated charcoal may induce vomiting, but may be given after emesis or lavage to absorb toxic additives. Steroid therapy in mild to moderate cases does not improve outcome. Bacterial pneumonia often occurs after exposure, but prophylactic antibiotics are not indicated and should be reserved for documented bacterial pneumonia.

5 Fire Fighting Measures

Flammable Properties

Flash Point.....	79°C (174°F)
Method.....	TCC
Flammable limits in air.....	LEL 0.25% by volume
Autoignition.....	130°C (266°F)
Autodecomposition.....	185°C (365°F)
Exotherm initiation temperature.....	120°C (248°F)
(Self-heating sustained due to decomposition)	
Combustible Heating can release vapors, which can be ignited.	

Hazardous gases/vapors produced in fire are carbon monoxide and oxides of nitrogen. Risk of explosion if heated under confinement.

Extinguishing Media

Water Spray, Foam, Dry Chemical, CO₂.

Fire Fighting Instructions

Evacuate personnel to safe area. Wear self-contained breathing apparatus. Cool tank/container with water spray. Fight fire from maximum distance, use extreme caution as heat may decompose material and rupture containers.

6 Accidental Release Measures

Note: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) SECTIONS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up. Soak up with sawdust, sand, oil dry or other absorbent material. Remove source of heat, sparks, flame, impact, friction, or electricity. Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean-Up

Soak up with sawdust, sand, oil dry or other absorbent material.

Accidental Release Measures

Spills are very slippery and should be cleaned up promptly. Unless released material is cleaned up immediately for reprocessing, recycling, or reuse, a release of 100 lbs. may trigger the reporting requirements of CERCLA Section 103.

7 Handling and Storage

Handling (Personnel)

Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.

Handling (Physical Aspects)

Keep away from heat, sparks and flames.

Storage

Store in a well-ventilated place. Keep container tightly closed. Store in accordance with National Fire Protection Association recommendations. Please refer to the CEFIC Best Practice Guidelines offered by Innospec in PLMR 2007-5 for product safety and handling information. This bulletin presents background information on thermal stability for storage and safe handling of blends containing 2-Ethylhexyl Nitrate (CI-0801). This bulletin also describes proper, safe unloading of equipment from bulk containers.

Important considerations are:

- Properly insulated tank car or tank truck.
- Cap steam coils and valves on tank car, truck and storage tanks.
- Water deluge system for storage tank.
- One or more of the following safeguards is recommended - unrestricted recirculation loop and/or thermal sensor and relief in pump system and/or low flow pump interlock.

8 Exposure Controls

Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

Personal Protective Equipment

Eye/Face Protection

Wear coverall chemical splash goggles or safety glasses.

Respirators

Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

Protective Clothing

Where there is potential for skin contact have available and wear as appropriate Impervious gloves, apron, pants, hood and jacket.

Exposure Limits

2-Ethylhexyl Nitrate:

PEL (OSHA) None established
TLV (ACGIH) None established
AEL* (Innospec Fuel Specialties) 5 ppm, 8 & 12 hr, TWA

2-Ethylhexyl Alcohol:

PEL (OSHA) None established
TLV (ACGIH) None established
AEL* (Innospec Fuel Specialties) 20 ppm, 8 hr, TWA

The "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered

* AEL is Innospec Fuel Specialties' acceptable exposure limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

9 Physical and Chemical Properties

Physical Data

Appearance..... Light straw colored
Form..... Liquid
Odor..... Strong Pungent
Specific Gravity 0.967 @ 60/60°F (16/16°C)
Density 8.06 lbs./gal @ 60°F (16°C)
Solubility in water 0.02 wt%
Boiling Point..... Decomposes above 100°C (212°F)
Vapor Pressure 0.035 mm Hg @ 20°C (68°F)
Vapor Density >1 (air=1)
Evaporation Rate <1 (Butyl Acetate = 1)

Physical Hazard

2-Ethylhexyl nitrate should not be exposed to steam, sparks, flames, or hot surfaces. Rapid gas evolution during decomposition may lead to bursting of container and may be explosive if heated under confinement.

10 Stability and Reactivity

Chemical Stability

Stable at normal temperatures and storage conditions.

Incompatibility

Incompatible with strong oxidizers.

Decomposition

Decomposes with heat. Hazardous gases/vapors produced are oxides of nitrogen and carbon monoxide. Decomposition temperature is >100°C (>212°F).

Polymerization

Will not occur.

11 Toxicological Information

Animal Data

2-Ethylhexyl Nitrate:

Inhalation 1 hour LC50..... >639 ppm in rats
Skin absorption LD50..... >4,820 mg/kg in rabbits
Oral LD50..... >9,640 mg/kg in rats

2-Ethylhexyl Alcohol:

Inhalation 6 hour LC50..... >2,000 ppm in rats
Skin absorption LD50..... 1,970 mg/kg in rabbits
Oral LD50..... 3,730 mg/kg in rats

2-Ethylhexyl Nitrate is not a skin and eye irritant, but is untested for animal sensitization. Single ingestion exposure produced weight loss, diarrhea, incoordination and prostration. Repeated inhalation exposures produced weight loss and increased liver weight. No animal test reports are available to define carcinogenic, mutagenic, developmental, or reproductive hazards.

12 Ecological Information

2-Ethylhexyl Nitrate:

24 hour LC50, Trout: 145 mg/L
48 hour LC50, Trout: 116 mg/L
24 hour LC50, Bluegill: 6.5 mg/L
48 hour LC50, Bluegill: 6.0 mg/L

13 Disposal Considerations

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial and Local regulations.

14 Shipping Information

DOT

Proper Shipping Name..... Combustible Liquid, n.o.s. (2-Ethylhexyl Nitrate)
Hazard Class 3
I.D. No. (UN/NA) NA 1993
Packing Group III
Special Information Flash Point: 79°C
 Marine Pollutant 2-Ethylhexyl Nitrate
 Reportable Quantity No
DOT Label(s) Combustible Liquid

IMO

Proper Shipping Name..... Environmentally Hazardous Substance, Liquid, n.o.s.
(2-Ethylhexyl Nitrate)
Hazard Class 9
UN No. 3082
Packing Group III
Marine Pollutant..... 2-Ethylhexyl Nitrate

Shipping Containers

Steel Drums UN1A1/Y/100

15 US Federal Regulations

TSCA Inventory Status..... Reported / Included

Title III Hazard Classifications Sections 311, 312

Acute..... Yes
Chronic..... No
Fire..... Yes
Reactivity Yes
Pressure..... No

16 Other Information

NPCA-HMIS Rating

Health..... 2
Flammability..... 2
Reactivity 3

Personal Protection rating to be supplied by user depending on uses conditions

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS:

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