

Material Safety Data Sheet

Material Name: Tarragon Oxygenated Series, 110 O2, 112 O2, 114 O2, 116 O2, 118 O2

*** Section 1 - Chemical Product and Company Identification ***

Manufacturer Information

Newton Oil Company
1910 Wilson Street
Lafayette, IN 47904

Phone: 765-742-4001
Fax: 765-742-7415
Emergency # Chemtrec 1-800-633-8253

*** Section 2 - Hazards Identification ***

Emergency Overview

Flammable. Material can release vapors that readily from flammable mixtures.

Potential Health Effects: Eyes

May be irritating to eyes.

Potential Health Effects: Skin

Repeated exposure may cause skin dryness or cracking.

Potential Health Effects: Ingestion

If swallowed, may be aspirated and cause lung damage. May be irritating to nose, throat and lungs. May cause central nervous system depression.

Potential Health Effects: Inhalation

May cause central nervous system depression.

HMIS Ratings: Health: 1 Fire: 3 HMIS Reactivity 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

| CAS # | Component |
|---------------|-------------------------------------|
| 64741-66-8 | Naphtha (petroleum), light alkylate |
| Not Available | Paraffinic Hydrocarbons |
| Not Available | Aromatic Hydrocarbons |
| 108-88-3 | Toluene |
| 64-17-5 | Ethyl alcohol |
| Not Available | Olefinic Hydrocarbons |
| 100-41-4 | Ethyl benzene |
| 1330-20-7 | Xylenes (o-, m-, p- isomers) |
| 71-43-2 | Benzene |
| 74-98-6 | Propane |
| 78-00-2 | Tetraethyllead |
| 74-84-0 | Ethane |
| 106-97-8 | Butane |
| 75-08-1 | Ethyl mercaptan |

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists get medical attention.

First Aid: Skin

For skin contact, wash immediately with soap and water. Immediately take off all contaminated clothing.

First Aid: Ingestion

Seek immediate medical attention. Do not induce vomiting.

First Aid: Inhalation

Remove from further exposure. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance.

First Aid: Notes to Physician

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

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*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors are flammable and heavier than air and may travel across the ground and reach remote ignition sources causing a flashback fire danger.

Hazardous Combustion Products

Smoke, fume, incomplete combustion products and oxides of carbons.

Extinguishing Media

Water fog, foam, dry chemical or carbon dioxide

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

NFPA Ratings: Health: 1 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures

Eliminate all ignition sources and stop discharge if it is safe.

Clean-Up Procedures

Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

*** Section 7 - Handling and Storage ***

Handling Procedures

Avoid contact with skin. Use non-sparking tools and explosion-proof equipment. Potentially toxic/irritating fumes/vapors may be evolved from heated or agitated material. Use only with adequate ventilation. Use proper bonding and/or grounding procedures. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark.

Storage Procedures

Keep container closed. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Outside or detached storage preferred. Ground and bond containers and equip with self-closing valves, pressure vacuum bungs and flame arresters.

*** Section 8 - Exposure Controls / Personal Protection ***

A: Component Exposure Limits

Toluene (108-88-3)

ACGIH: 20 ppm TWA
OSHA: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL
NIOSH: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL

Ethyl alcohol (64-17-5)

ACGIH: 1000 ppm TWA
OSHA: 1000 ppm TWA; 1900 mg/m3 TWA
NIOSH: 1000 ppm TWA; 1900 mg/m3 TWA

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Benzene (71-43-2)

ACGIH: 0.5 ppm TWA
2.5 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 0.5 ppm Action Level; 1 ppm TWA; 5 ppm STEL (Cancer hazard, Flammable - see 29 CFR 1910.1028)
NIOSH: 0.1 ppm TWA
1 ppm STEL

Ethyl benzene (100-41-4)

ACGIH: 100 ppm TWA
125 ppm STEL
OSHA: 100 ppm TWA; 435 mg/m3 TWA
125 ppm STEL; 545 mg/m3 STEL
NIOSH: 100 ppm TWA; 435 mg/m3 TWA
125 ppm STEL; 545 mg/m3 STEL

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: 100 ppm TWA
150 ppm STEL
OSHA: 100 ppm TWA; 435 mg/m3 TWA
150 ppm STEL; 655 mg/m3 STEL

Propane (74-98-6)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-C4)
OSHA: 1000 ppm TWA; 1800 mg/m3 TWA
NIOSH: 1000 ppm TWA; 1800 mg/m3 TWA

Tetraethyllead (78-00-2)

ACGIH: 0.1 mg/m3 TWA (as Pb)
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 0.075 mg/m3 TWA (as Pb)
Prevent or reduce skin absorption
NIOSH: 0.075 mg/m3 TWA (as Pb)
Potential for dermal absorption

Ethane (74-84-0)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-C4)

Butane (106-97-8)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-C4)
OSHA: 800 ppm TWA; 1900 mg/m3 TWA
NIOSH: 800 ppm TWA; 1900 mg/m3 TWA

Ethyl mercaptan (75-08-1)

ACGIH: 0.5 ppm TWA
OSHA: 0.5 ppm TWA; 1 mg/m3 TWA
NIOSH: 0.5 ppm Ceiling (15 min); 1.3 mg/m3 Ceiling (15 min)

Engineering Controls

Use explosion proof ventilation equipment so that exposure limits are not exceeded.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses with side shields.

Personal Protective Equipment: Skin

Wear chemical resistant gloves.

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Personal Protective Equipment: Respiratory

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

Personal Protective Equipment: General

Eye wash fountain and emergency showers are recommended.

*** Section 9 - Physical & Chemical Properties ***

| | | | |
|--|-------------------------------|--|------------------------|
| Appearance: | Clear | Odor: | Mild Petroleum/Solvent |
| Physical State: | Liquid | pH: | ND |
| Vapor Pressure: | 4.92 kPa (36.9 mm Hg) at 20 C | Vapor Density: | 3.9 at 101 kPa |
| Boiling Point: | 98°C-104°C | Melting Point: | NA |
| Solubility (H2O): | Negligible | Specific Gravity: | 0.722 |
| Evaporation Rate: | 3.83 | VOC: | ND |
| Octanol/H2O Coeff.: | ND | Flash Point: | -8°C (18°F) |
| Flash Point Method: | ASTM D-56 | Upper Flammability Limit (UFL): | 6.3 |
| Lower Flammability Limit (LFL): | 0.9 | Burning Rate: | ND |
| Auto Ignition: | 442°C (828°F) | | |

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Chemical Stability: Conditions to Avoid

Heat, sparks, open flames and other ignition sources.

Incompatibility

Strong oxidizers.

Hazardous Decomposition

Will not decompose at ambient temperatures.

Possibility of Hazardous Reactions

Will not occur.

*** Section 11 - Toxicological Information ***

Acute Dose Effects

A: General Product Information

No information available for the product.

B: Component Analysis - LD50/LC50

Naphtha (petroleum), light alkylate (64741-66-8)

Inhalation LC50 Rat: >5.04 mg/L/4H; Oral LD50 Rat:>7000 mg/kg; Dermal LD50 Rabbit:>2000 mg/kg

Toluene (108-88-3)

Inhalation LC50 Rat: 12.5 mg/L/4H; Inhalation LC50 Rat:>26700 ppm/1H; Oral LD50 Rat:636 mg/kg; Dermal LD50 Rabbit:8390 mg/kg; Dermal LD50 Rat:12124 mg/kg

Ethyl alcohol (64-17-5)

Oral LD50 Rat: 7060 mg/kg

Benzene (71-43-2)

Inhalation LC50 Rat: 13050-14380 ppm/4H; Oral LD50 Rat:1800 mg/kg

Ethyl benzene (100-41-4)

Inhalation LC50 Rat: 17.2 mg/L/4H; Oral LD50 Rat:3500 mg/kg; Dermal LD50 Rabbit:15354 mg/kg

Xylenes (o-, m-, p- isomers) (1330-20-7)

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Inhalation LC50 Rat: 5000 ppm/4H; Inhalation LC50 Rat:47635 mg/L/4H; Oral LD50 Rat:4300 mg/kg; Dermal LD50 Rabbit:>1700 mg/kg

Propane (74-98-6)

Inhalation LC50 Rat: 658 mg/L/4H

Tetraethyllead (78-00-2)

Inhalation LC50 Rat: 850 mg/m3/1H; Oral LD50 Rat:12.3 mg/kg

Ethane (74-84-0)

Inhalation LC50 Rat: 658 mg/L/4H

Butane (106-97-8)

Inhalation LC50 Rat: 658 mg/L/4H

Ethyl mercaptan (75-08-1)

Inhalation LC50 Rat: 4299 ppm/4H; Oral LD50 Rat:517 mg/kg; Dermal LD50 Rat:>2000 mg/kg

Carcinogenicity

A: General Product Information

No information available for the product.

B: Component Carcinogenicity

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71 [1999], Monograph 47 [1989] (Group 3 (not classifiable))

Ethyl alcohol (64-17-5)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 96 [2007] (in alcoholic beverages) (Group 1 (carcinogenic to humans))

Benzene (71-43-2)

ACGIH: A1 - Confirmed Human Carcinogen

OSHA: 0.5 ppm Action Level; 1 ppm TWA; 5 ppm STEL (Cancer hazard, Flammable - see 29 CFR 1910.1028)

NIOSH: potential occupational carcinogen

NTP: Known Human Carcinogen (Select Carcinogen)

IARC: Supplement 7 [1987], Monograph 29 [1982] (Group 1 (carcinogenic to humans))

Ethyl benzene (100-41-4)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71 [1999], Monograph 47 [1989] (Group 3 (not classifiable))

Tetraethyllead (78-00-2)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 87 [2006], Supplement 7 [1987] (listed under Organolead compounds), Monograph 23 [1980] (Group 3 (not classifiable))

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

No information available for the product.

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B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Naphtha (petroleum), light alkylate (64741-66-8)

| Test & Species | | Conditions |
|--------------------------------------|------------|------------|
| 72 Hr EC50 Selenastrum capricornutum | 30000 mg/L | |
| 48 Hr LC50 Mysidopsis bahia | 2 mg/L | |

Toluene (108-88-3)

| Test & Species | | Conditions |
|--------------------------------------|--------------------------|------------|
| 96 Hr LC50 Pimephales promelas | 25 mg/L [flow-through] | 1 day old |
| 96 Hr LC50 Oncorhynchus mykiss | 24.0 mg/L [flow-through] | |
| 96 Hr LC50 Lepomis macrochirus | 24.0 mg/L [static] | |
| 96 Hr LC50 Lepomis macrochirus | 13 mg/L [static] | |
| 96 Hr EC50 Selenastrum capricornutum | >433 mg/L | |
| 48 Hr EC50 water flea | 11.3 mg/L | |
| 48 Hr EC50 water flea | 310 mg/L | |
| 48 Hr EC50 Daphnia magna | 11.3 mg/L | |

Ethyl alcohol (64-17-5)

| Test & Species | | Conditions |
|--------------------------------|---------------------------|-------------|
| 96 Hr LC50 Oncorhynchus mykiss | 12900 mg/L [flow-through] | 30 days old |
| 96 Hr LC50 Pimephales promelas | 14.2 mg/L | |
| 48 Hr EC50 Daphnia magna | 9268 mg/L | |
| 24 Hr EC50 Daphnia magna | 10800 mg/L | |

Benzene (71-43-2)

| Test & Species | | Conditions |
|--------------------------------------|----------------------|------------|
| 96 Hr LC50 Lepomis macrochirus | 22.49 mg/L [static] | |
| 96 Hr LC50 Poecilia reticulata | 28.6 mg/L [static] | |
| 72 Hr EC50 Selenastrum capricornutum | 29 mg/L | |
| 48 Hr EC50 water flea | 356 mg/L [Static] | |
| 48 Hr EC50 Daphnia magna | 10 mg/L | |

Ethyl benzene (100-41-4)

| Test & Species | | Conditions |
|--------------------------------------|--------------------------|------------|
| 96 Hr LC50 Oncorhynchus mykiss | 14.0 mg/L [static] | |
| 96 Hr LC50 Pimephales promelas | 9.09 mg/L [flow-through] | |
| 96 Hr LC50 Lepomis macrochirus | 150.0 mg/L [static] | |
| 96 Hr LC50 Oncorhynchus mykiss | 4.2 mg/L [static] | |
| 96 Hr LC50 Lepomis macrochirus | 32 mg/L [static] | |
| 96 Hr LC50 Pimephales promelas | 48.5 mg/L [static] | |
| 96 Hr LC50 Poecilia reticulata | 9.6 mg/L [static] | |
| 72 Hr EC50 Selenastrum capricornutum | 4.6 mg/L | |
| 96 Hr EC50 Selenastrum capricornutum | >438 mg/L | |
| 48 Hr EC50 Daphnia magna | 1.8-2.4 mg/L | |

Xylenes (o-, m-, p- isomers) (1330-20-7)

| Test & Species | | Conditions |
|----------------|--|------------|
|----------------|--|------------|

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| | |
|--------------------------------|--------------------------|
| 96 Hr LC50 Pimephales promelas | 13.4 mg/L [flow-through] |
| 96 Hr LC50 Oncorhynchus mykiss | 8.05 mg/L [flow-through] |
| 96 Hr LC50 Lepomis macrochirus | 16.1 mg/L [flow-through] |
| 96 Hr LC50 Pimephales promelas | 26.7 mg/L [static] |
| 48 Hr EC50 water flea | 3.82 mg/L |
| 48 Hr LC50 Gammarus lacustris | 0.6 mg/L |

Tetraethyllead (78-00-2)

| Test & Species | Conditions |
|-----------------------------------|------------|
| 96 Hr LC50 Lepomis macrochirus | 84 mg/L |
| 96 Hr LC50 Pimephales promelas | 19.3 mg/L |
| 48 Hr EC50 Dunaliella tertiolecta | 0.1 mg/L |
| 48 Hr EC50 Artemia salina | 85 µg/L |

Ethyl mercaptan (75-08-1)

| Test & Species | Conditions |
|--------------------------|------------|
| 48 Hr EC50 Daphnia magna | 90 mg/L |

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

Component Waste Numbers

Toluene (108-88-3)

RCRA: waste number U220

Benzene (71-43-2)

RCRA: waste number U019 (Ignitable waste, Toxic waste)
0.5 mg/L regulatory level

Xylenes (o-, m-, p- isomers) (1330-20-7)

RCRA: waste number U239 (Ignitable waste, Toxic waste)

Tetraethyllead (78-00-2)

RCRA: waste number P110

Disposal Instructions

All wastes must be handled in accordance with local, state and federal regulations.

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Petroleum Distillates, n.o.s.

UN/NA #: 1268 Hazard Class: 3 Packing Group: II

*** Section 15 - Regulatory Information ***

US Federal Regulations

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A: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Toluene (108-88-3)

SARA 313: 1.0 % de minimis concentration
 CERCLA: 1000 lb final RQ; 454 kg final RQ

Benzene (71-43-2)

SARA 313: 0.1 % de minimis concentration
 CERCLA: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)

Ethyl benzene (100-41-4)

SARA 313: 0.1 % de minimis concentration
 CERCLA: 1000 lb final RQ; 454 kg final RQ

Xylenes (o-, m-, p- isomers) (1330-20-7)

SARA 313: 1.0 % de minimis concentration
 CERCLA: 100 lb final RQ; 45.4 kg final RQ

Tetraethyllead (78-00-2)

SARA 302: 100 lb TPQ
 CERCLA: 10 lb final RQ; 4.54 kg final RQ

B: Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

| Component | CAS # | |
|----------------|---------|--|
| Tetraethyllead | 78-00-2 | DOT regulated severe marine pollutant (liquid) |

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

| Component | CAS | CA | MA | MN | NJ | PA | RI |
|------------------------------|-----------|-----|-----|-----|-----|-----|-----|
| Toluene | 108-88-3 | Yes | Yes | Yes | Yes | Yes | Yes |
| Ethyl alcohol | 64-17-5 | Yes | Yes | Yes | Yes | Yes | Yes |
| Benzene | 71-43-2 | Yes | Yes | Yes | Yes | Yes | Yes |
| Ethyl benzene | 100-41-4 | Yes | Yes | Yes | Yes | Yes | Yes |
| Xylenes (o-, m-, p- isomers) | 1330-20-7 | Yes | Yes | Yes | Yes | Yes | Yes |
| Propane | 74-98-6 | No | Yes | Yes | Yes | Yes | Yes |
| Tetraethyllead | 78-00-2 | Yes | Yes | Yes | Yes | Yes | Yes |
| Ethane | 74-84-0 | No | Yes | Yes | Yes | Yes | Yes |
| Butane | 106-97-8 | Yes | Yes | Yes | Yes | Yes | Yes |
| Ethyl mercaptan | 75-08-1 | Yes | Yes | Yes | Yes | Yes | Yes |

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.
 WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

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Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

| Component | CAS # | Minimum Concentration |
|----------------|----------|-----------------------|
| Toluene | 108-88-3 | 1 % |
| Ethyl alcohol | 64-17-5 | 0.1 % |
| Benzene | 71-43-2 | 0.1 % |
| Ethyl benzene | 100-41-4 | 0.1 % |
| Tetraethyllead | 78-00-2 | 1 % |

Additional Regulatory Information

Component Analysis - Inventory

| Component | CAS # | TSCA | CAN | EEC |
|-------------------------------------|------------|------|-----|--------|
| Naphtha (petroleum), light alkylate | 64741-66-8 | Yes | DSL | EINECS |
| Toluene | 108-88-3 | Yes | DSL | EINECS |
| Ethyl alcohol | 64-17-5 | Yes | DSL | EINECS |
| Benzene | 71-43-2 | Yes | DSL | EINECS |
| Ethyl benzene | 100-41-4 | Yes | DSL | EINECS |
| Xylenes (o-, m-, p- isomers) | 1330-20-7 | Yes | DSL | EINECS |
| Propane | 74-98-6 | Yes | DSL | EINECS |
| Tetraethyllead | 78-00-2 | Yes | DSL | EINECS |
| Ethane | 74-84-0 | Yes | DSL | EINECS |
| Butane | 106-97-8 | Yes | DSL | EINECS |
| Ethyl mercaptan | 75-08-1 | Yes | DSL | EINECS |

*** Section 16 - Other Information ***

Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.