

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Substance
Trade name	: Diesel Secondary Reference Fuel T
Chemical name	: Diesel
CAS-No.	: 68476-34-6
Product code	: HF3007
Formula	: Unspecified
Synonyms	: Diesel oil, No. 2 / Diesel No. 2 / Diesel fuel No. 2 / Diesel fuel oil no. 2-D / Fuel oil, no. 2-D / Fuels, diesel, No. 2 / Diesel fuel no. 2 / Diesel oil No. 2 / Fuels, diesel, no. 2 (A distillate oil having a minimum viscosity of 32.6 SUS at 37.7°C (100°F) to a maximum of 40.1 SUS at 37.7°C (100°F).) / Fuels, diesel, No 2 / Fuel oil No. 2-D

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Fuel for engine development and testing
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#### 1.3. Supplier

Haltermann Solutions™  
 15600 W Hardy Rd.  
 Houston, TX 77060 - USA  
 T 1-800-969-2542 - F 281-457-1469  
[gdunford@haltermann.com](mailto:gdunford@haltermann.com)

#### 1.4. Emergency telephone number

Emergency number	: 24 HR CHEMTREC: 1-800-424-9300; Emergency Assistance: 1-800-969-2542 (8 AM to 5 PM CDT)
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### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flammable liquids Category 4	H227	Combustible liquid
Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Carcinogenicity Category 2	H351	Suspected of causing cancer
Reproductive toxicity Category 2	H361	Suspected of damaging fertility or the unborn child
Specific target organ toxicity (single exposure) Category 3	H336	May cause drowsiness or dizziness
Specific target organ toxicity (single exposure) Category 3	H335	May cause respiratory irritation
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure
Aspiration hazard Category 1	H304	May be fatal if swallowed and enters airways
Hazardous to the aquatic environment - Acute Hazard Category 2	H401	Toxic to aquatic life
Hazardous to the aquatic environment - Chronic Hazard Category 2	H411	Toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 2.2. GHS Label elements, including precautionary statements

#### GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H227 - Combustible liquid  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H335 - May cause respiratory irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer  
H361 - Suspected of damaging fertility or the unborn child  
H373 - May cause damage to organs through prolonged or repeated exposure  
H401 - Toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US)

: P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 - If swallowed: Immediately call a doctor, a POISON CENTER  
P302+P352 - If on skin: Wash with plenty of soap and water  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P312 - Call a doctor, a POISON CENTER if you feel unwell  
P314 - Get medical advice/attention if you feel unwell.  
P321 - Specific treatment (see supplemental first aid instruction on this label)  
P331 - Do NOT induce vomiting.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder to extinguish.  
P391 - Collect spillage.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Chemical name

: Diesel

CAS-No.

: 68476-34-6

Name	Product identifier	%
Diesel	(CAS-No.) 68476-34-6	100
Petroleum Distillates	(CAS-No.) 8002-05-9	75 - 85
Petroleum distillates, hydrotreated light	(CAS-No.) 64742-47-8	15 - 25
Distillates, petroleum, hydrotreated middle	(CAS-No.) 64742-46-7	5 - 15

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%
Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified, [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).]	(CAS-No.) 64742-94-5	5 - 15
naphthalene	(CAS-No.) 91-20-3	0 - 3
n-hexane	(CAS-No.) 110-54-3	0 - 2
n-Heptane	(CAS-No.) 142-82-5	0 - 2
Octane	(CAS-No.) 111-65-9	0 - 2

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Do not induce vomiting. Call a physician immediately.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects	: May cause drowsiness or dizziness.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: Risk of lung edema.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Specific hazards arising from the chemical

Fire hazard	: Combustible liquid.
Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.
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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Diesel (68476-34-6)		
ACGIH	Local name	Diesel fuel as total
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup> (inhalable fraction and vapor)
ACGIH	Regulatory reference	ACGIH 2018
Petroleum Distillates (8002-05-9)		
OSHA	OSHA PEL (TWA) (ppm)	500 ppm
IDLH	US IDLH (ppm)	1100 ppm (10% LEL)
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	350 mg/m <sup>3</sup>
NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
Petroleum distillates, hydrotreated light (64742-47-8)		
OSHA	OSHA PEL (TWA) (ppm)	500 ppm
Distillates, petroleum, hydrotreated middle (64742-46-7)		
OSHA	OSHA PEL (TWA) (ppm)	500 ppm
n-hexane (110-54-3)		
ACGIH	Local name	n-Hexane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	CNS impair; peripheral neuropathy; eye irr; Skin; BEI
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	500 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
IDLH	US IDLH (ppm)	1100 ppm (10% LEL)
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	180 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	50 ppm
n-Heptane (142-82-5)		
ACGIH	Local name	Heptane, all isomers
ACGIH	ACGIH TWA (ppm)	400 ppm
ACGIH	ACGIH STEL (ppm)	500 ppm
ACGIH	Regulatory reference	ACGIH 2018

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>n-Heptane (142-82-5)</b>		
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2000 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	500 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
IDLH	US IDLH (ppm)	750 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	350 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	85 ppm
NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
NIOSH	NIOSH REL (ceiling) (ppm)	440 ppm
<b>Octane (111-65-9)</b>		
ACGIH	Local name	Octane
ACGIH	ACGIH TWA (ppm)	300 ppm
ACGIH	Remark (ACGIH)	URT irr
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2350 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	500 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
IDLH	US IDLH (ppm)	1000 ppm (10% LEL)
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	350 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	75 ppm
NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
NIOSH	NIOSH REL (ceiling) (ppm)	385 ppm
<b>Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified, [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)</b>		
OSHA	OSHA PEL (TWA) (ppm)	500 ppm
<b>naphthalene (91-20-3)</b>		
ACGIH	Local name	Naphthalene
ACGIH	ACGIH TWA (ppm)	10 ppm
ACGIH	Remark (ACGIH)	Hematologic eff; URT & eye irr; Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure)
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	10 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
IDLH	US IDLH (ppm)	250 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	10 ppm
NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	75 mg/m <sup>3</sup>
NIOSH	NIOSH REL (STEL) (ppm)	15 ppm

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Appearance : Liquid.  
Color : Pale yellow to brown if undyed, red or purple if dyed  
Odor : mild  
Odor threshold : No data available  
pH : No data available  
Melting point : Not applicable  
Freezing point : No data available  
Boiling point : 170 - 365 °C  
Flash point : > 60.5 °C closed cup  
Relative evaporation rate (butyl acetate=1) : No data available  
Flammability (solid, gas) : Not applicable.  
Vapor pressure : 4 hPa (at 40 °C)  
Relative vapor density at 20 °C : No data available  
Relative density : 33 - 42 °API  
Specific gravity / density : 0.84 g/cm<sup>3</sup> (at 15 °C)  
Solubility : No data available  
Log Pow : No data available  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Viscosity, kinematic : No data available  
Viscosity, dynamic : No data available  
Explosion limits : No data available  
Explosive properties : No data available  
Oxidizing properties : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Inhalation:dust,mist: Harmful if inhaled.

<b>Diesel (68476-34-6)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	1 - 5 mg/l/4h
ATE US (vapors)	1 mg/l/4h
ATE US (dust, mist)	1 mg/l/4h
<b>Petroleum Distillates (8002-05-9)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
<b>Petroleum distillates, hydrotreated light (64742-47-8)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.2 mg/l/4h
<b>Distillates, petroleum, hydrotreated middle (64742-46-7)</b>	
LD50 oral rat	7400 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	4.6 mg/l/4h
ATE US (oral)	7400 mg/kg body weight
ATE US (vapors)	4.6 mg/l/4h
ATE US (dust, mist)	4.6 mg/l/4h
<b>n-hexane (110-54-3)</b>	
LD50 oral rat	25 g/kg
LD50 dermal rabbit	3000 mg/kg
LC50 inhalation rat (ppm)	48000 ppm/4h
ATE US (oral)	25000 mg/kg body weight
ATE US (dermal)	3000 mg/kg body weight
ATE US (gases)	48000 ppmV/4h
<b>n-Heptane (142-82-5)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	3000 mg/kg
LC50 inhalation rat (mg/l)	103 g/m <sup>3</sup> (Exposure time: 4 h)
ATE US (dermal)	3000 mg/kg body weight
ATE US (vapors)	103 mg/l/4h
ATE US (dust, mist)	103 mg/l/4h
<b>Octane (111-65-9)</b>	
LC50 inhalation rat (mg/l)	> 23.36 mg/l/4h
<b>Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified, [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 3160 mg/kg

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified, [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)**

LC50 inhalation rat (mg/l) > 5.2 mg/l (Exposure time: 4 h)

### naphthalene (91-20-3)

LD50 dermal rat > 2500 mg/kg (Rat)

LD50 dermal rabbit > 2000 mg/kg body weight

LC50 inhalation rat (mg/l) > 0.34 mg/l (Exposure time: 1 h)

ATE US (oral) 533 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Causes serious eye irritation.  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Suspected of causing cancer.

### Petroleum Distillates (8002-05-9)

IARC group 3 - Not classifiable

### naphthalene (91-20-3)

National Toxicology Program (NTP) Status Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen

In OSHA Hazard Communication Carcinogen list Yes

Reproductive toxicity : Suspected of damaging fertility or the unborn child.  
Specific target organ toxicity – single exposure : May cause drowsiness or dizziness. May cause respiratory irritation.

Specific target organ toxicity – repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : May be fatal if swallowed and enters airways.

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : Risk of lung edema.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

### Diesel (68476-34-6)

LC50 fish 1 35 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

EC50 Daphnia 1 6.4 mg/l 48 hr

### Petroleum Distillates (8002-05-9)

LC50 fish 1 3 mg/l (Exposure time: 96 h - Species: Oncorhynchus Mykiss)

EC50 Daphnia 1 < 0.26 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

### Petroleum distillates, hydrotreated light (64742-47-8)

LC50 fish 1 45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

LC50 fish 2 2.2 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

### Distillates, petroleum, hydrotreated middle (64742-46-7)

LC50 fish 1 35 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

LC50 fish 2 > 10000 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>n-Heptane (142-82-5)</b>	
LC50 fish 1	375 mg/l (Exposure time: 96 h - Species: Cichlid fish)
EC50 Daphnia 1	> 10 mg/l 24hr
LC50 fish 2	0.1 mg/l (Exposure time: 96 h - Species: Mysidopsis Bahia)
<b>Octane (111-65-9)</b>	
EC50 Daphnia 1	0.38 mg/l (Exposure time: 48 h - Species: water flea)
<b>Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified, [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)</b>	
LC50 fish 1	19 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	0.95 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	2.34 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
<b>naphthalene (91-20-3)</b>	
LC50 fish 1	5.74 - 6.44 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	2.16 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Daphnia 2	1.96 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through])

### 12.2. Persistence and degradability

<b>n-hexane (110-54-3)</b>	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
ThOD	3.52 g O <sub>2</sub> /g substance

<b>naphthalene (91-20-3)</b>	
Persistence and degradability	Not established.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.22 g O <sub>2</sub> /g substance
ThOD	2.99 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

<b>Petroleum distillates, hydrotreated light (64742-47-8)</b>	
BCF fish 1	61 - 159
<b>n-hexane (110-54-3)</b>	
BCF fish 1	501.187 (Other, Pimephales promelas, QSAR)
Log Pow	4 (Experimental value, Equivalent or similar to OECD 107, 20 °C)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
<b>n-Heptane (142-82-5)</b>	
Log Pow	4.66
<b>Octane (111-65-9)</b>	
Log Pow	5.18
<b>Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified, [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)</b>	
BCF fish 1	61 - 159
Log Pow	2.9 - 6.1
<b>naphthalene (91-20-3)</b>	
BCF fish 1	30 - 430
Log Pow	3.6
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

<b>n-hexane (110-54-3)</b>	
Surface tension	0.018 N/m (25 °C, 1 g/l)

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>n-hexane (110-54-3)</b>	
Log Koc	3.34 (log Koc, QSAR)
Ecology - soil	Low potential for mobility in soil.

<b>naphthalene (91-20-3)</b>	
Surface tension	0.03 N/m (100 °C)
Ecology - soil	Adsorbs into the soil.

### 12.5. Other adverse effects

<b>n-hexane (110-54-3)</b>	
1990 Hazardous Air Pollutant (Clean Air Act)	Yes

<b>naphthalene (91-20-3)</b>	
1990 Hazardous Air Pollutant (Clean Air Act)	Yes

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description : NA1993 Combustible liquid, n.o.s. (Diesel Fuel), 3, III  
UN-No.(DOT) : NA1993  
Proper Shipping Name (DOT) : Combustible liquid, n.o.s.  
Diesel Fuel  
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Packing group (DOT) : III - Minor Danger  
Dangerous for the environment : Yes  
Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 241  
DOT Symbols : D - Proper shipping name for domestic use only, or to and from Canada, G - Identifies PSN requiring a technical name  
DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).  
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)  
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Emergency Response Guide (ERG) Number	: 128
Other information	: Transportation Notes: Material is not regulated by the U.S. DOT for ground transportation within the U.S. if shipped in non-bulk packaging (<119 gallons).

### Transport by sea

Transport document description (IMDG)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diesel Fuel), 9, III
UN-No. (IMDG)	: 3082
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class (IMDG)	: 9 - Miscellaneous dangerous substances and articles
Packing group (IMDG)	: III - substances presenting low danger
Marine pollutant	: Yes



### Air transport

Transport document description (IATA)	: UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Diesel Fuel), 9, III
UN-No. (IATA)	: 3082
Proper Shipping Name (IATA)	: Environmentally hazardous substance, liquid, n.o.s.
Class (IATA)	: 9 - Miscellaneous Dangerous Goods
Packing group (IATA)	: III - Minor Danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Diesel (68476-34-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Petroleum Distillates (8002-05-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Petroleum distillates, hydrotreated light (64742-47-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Distillates, petroleum, hydrotreated middle (64742-46-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### n-hexane (110-54-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	5000 lb
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#### n-Heptane (142-82-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Octane (111-65-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Solvent naphtha (petroleum), heavy arom.; Kerosine** - unspecified, [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### naphthalene (91-20-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	100 lb
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# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 15.2. International regulations

#### CANADA

<b>Diesel (68476-34-6)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>Petroleum Distillates (8002-05-9)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>Petroleum distillates, hydrotreated light (64742-47-8)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>Distillates, petroleum, hydrotreated middle (64742-46-7)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>n-hexane (110-54-3)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>n-Heptane (142-82-5)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>Octane (111-65-9)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>Solvent naphtha (petroleum), heavy arom.; Kerosine</b> - unspecified, [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] <b>(64742-94-5)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>naphthalene (91-20-3)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
Toxic Substance (CEPA – Schedule I)	Yes
<b>Diesel (68476-34-6)</b>	
Listed on the Canadian DSL (Domestic Substances List)	

#### EU-Regulations

<b>Diesel (68476-34-6)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Petroleum Distillates (8002-05-9)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Petroleum distillates, hydrotreated light (64742-47-8)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Distillates, petroleum, hydrotreated middle (64742-46-7)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>n-hexane (110-54-3)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>n-Heptane (142-82-5)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Octane (111-65-9)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Solvent naphtha (petroleum), heavy arom.; Kerosine</b> - unspecified, [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] <b>(64742-94-5)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>naphthalene (91-20-3)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	

#### National regulations

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### **Diesel (68476-34-6)**

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### **Petroleum Distillates (8002-05-9)**

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### **Petroleum distillates, hydrotreated light (64742-47-8)**

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### **Distillates, petroleum, hydrotreated middle (64742-46-7)**

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### **n-hexane (110-54-3)**

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### **n-Heptane (142-82-5)**

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Octane (111-65-9)

Listed on the AICS (Australian Inventory of Chemical Substances)  
 Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
 Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
 Listed on the Japanese ISHL (Industrial Safety and Health Law)  
 Listed on the Korean ECL (Existing Chemicals List)  
 Listed on NZIoC (New Zealand Inventory of Chemicals)  
 Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
 Listed on INSQ (Mexican National Inventory of Chemical Substances)  
 Listed on CICR (Turkish Inventory and Control of Chemicals)  
 Listed on the TCSI (Taiwan Chemical Substance Inventory)

**Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified.** [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] **(64742-94-5)**

Listed on the AICS (Australian Inventory of Chemical Substances)  
 Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
 Listed on the Korean ECL (Existing Chemicals List)  
 Listed on NZIoC (New Zealand Inventory of Chemicals)  
 Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
 Listed on INSQ (Mexican National Inventory of Chemical Substances)  
 Listed on CICR (Turkish Inventory and Control of Chemicals)  
 Listed on the TCSI (Taiwan Chemical Substance Inventory)

### naphthalene (91-20-3)

Listed on the AICS (Australian Inventory of Chemical Substances)  
 Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
 Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
 Listed on the Japanese ISHL (Industrial Safety and Health Law)  
 Listed on the Korean ECL (Existing Chemicals List)  
 Listed on NZIoC (New Zealand Inventory of Chemicals)  
 Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
 Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
 Listed on INSQ (Mexican National Inventory of Chemical Substances)  
 Listed on CICR (Turkish Inventory and Control of Chemicals)  
 Listed on the TCSI (Taiwan Chemical Substance Inventory)

### 15.3. US State regulations

**⚠ WARNING** This product can expose you to naphthalene, which is known to the State of California to cause cancer, and n-hexane, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### n-hexane (110-54-3)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	No	No	Yes		

#### naphthalene (91-20-3)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	5.8 µg/day	

#### Petroleum Distillates (8002-05-9)

U.S. - Massachusetts - Right To Know List  
 U.S. - New Jersey - Right to Know Hazardous Substance List  
 U.S. - Pennsylvania - RTK (Right to Know) List

# Diesel Secondary Reference Fuel T

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### n-hexane (110-54-3)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

### n-Heptane (142-82-5)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

### Octane (111-65-9)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

### naphthalene (91-20-3)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

Revision date : 06/19/2018

Full text of H-phrases:

H227	Combustible liquid
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard

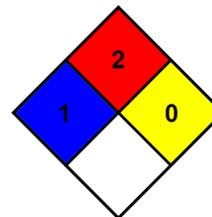
: 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard

: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



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