



Safety Data Sheet

Section 1: Identification

Product identifier

Product Name

- **No. 2 Diesel Fuel**

Synonyms

- Fuels, Diesel; No. 2 Ultra Low Sulfur Diesel - Dyed; No. 2 Ultra Low Sulfur Diesel - Undyed; ULSD; Ultra Low Sulfur Heating Oil

SDS Number/Grade

- 001847

Relevant identified uses of the substance or mixture and uses advised against

Recommended use

- Fuel

Details of the supplier of the safety data sheet

Manufacturer

- [Redacted]

Telephone (General)

- [Redacted]

Emergency telephone number

Manufacturer

- [Redacted]

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012

- Flammable Liquids 3
Aspiration 1
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
Carcinogenicity 2

Label elements

OSHA HCS 2012

DANGER



- Hazard statements** • Flammable liquid and vapour
 May be fatal if swallowed and enters airways
 May cause drowsiness or dizziness
 Suspected of causing cancer.

Precautionary statements

- Prevention** • Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
 Keep container tightly closed.
 Ground and/or bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Avoid breathing mists, vapours, and/or spray.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/protective clothing/eye protection/face protection.
- Response** • In case of fire: Use appropriate media for extinction.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Call a POISON CENTER or doctor/physician if you feel unwell.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 Do NOT induce vomiting.
 IF exposed or concerned: Get medical advice/attention.
- Storage/Disposal** • Store in a well-ventilated place. Keep container tightly closed.
 Keep cool.
 Store locked up.
 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Other hazards

- OSHA HCS 2012** • Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

Substances

- Material does not meet the criteria of a substance.

Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Fuels, diesel, No. 2	CAS:68476-34-6	95% TO 100%	NDA	OSHA HCS 2012: Flam. Liq. 3; STOT SE 3: Narc.; Asp. Tox. 1; Carc. 2	NDA
Renewable Diesel	NDA	0% TO 5%	NDA	OSHA HCS 2012: Not Classified	NDA
Naphthalene	CAS:91-20-3	< 1%	Skin-Rabbit LD50 • >20 g/kg Ingestion/Oral-Rat LD50 • 490 mg/kg	OSHA HCS 2012: Flam. Sol. 2; Acute Tox. 4 (orl); Skin Irrit. 2; Muta. 2; Carc. 2; Repr. 2; STOT SE 3: Narc.; STOT RE 1 (Blood, Eyes; Orl, Inhl)	NDA

Section 4: First-Aid Measures

Description of first aid measures

- Inhalation**
- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention immediately.
- Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing. Wash skin with soap and water. If skin irritation occurs: Get medical advice/attention.
- Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- Do NOT induce vomiting. Obtain medical attention immediately if ingested.

Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5: Fire-Fighting Measures

Extinguishing media

- Suitable Extinguishing Media**
- Use CO₂, dry chemical, or foam. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Water spray is recommended to cool or protect exposed materials or structures.
- Unsuitable Extinguishing Media**
- Do not use direct water streams.

Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Containers may explode when heated. Many liquids are lighter than water. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors may travel to source of ignition and flash back. Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard.
- Hazardous Combustion Products**
- Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulfur may also be formed.

Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA). Move containers from fire area if you can do it without risk. LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Ventilate the area before entry. CAUTION: Victim may be a source of contamination. Do not walk through spilled material. Wear appropriate protective equipment including

respiratory protection as conditions warrant. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet) ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Stay upwind. Keep out of low areas.

Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. A vapor suppressing foam may be used to reduce vapors. All equipment used when handling the product must be grounded. LARGE SPILLS: Dike far ahead of liquid spill for later disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Section 7 - Handling and Storage

Precautions for safe handling

Handling

- Use only in well ventilated areas. Avoid contact with heat and ignition sources. Take precautionary measures against static charges. Use only non-sparking tools. All equipment used when handling the product must be grounded. Do not siphon by mouth, this can result in lung aspiration which can be harmful or fatal. Open container slowly to relieve any pressure. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mists, vapours, and/or spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. "Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner.

Conditions for safe storage, including any incompatibilities

Storage

- Keep container tightly closed. Store in a cool/low-temperature, well-ventilated dry place away from heat and ignition sources. Protect container(s) against physical damage. Keep from direct sunlight. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Naphthalene (91-20-3)	TWAs	10 ppm TWA	10 ppm TWA; 50 mg/m3 TWA	10 ppm TWA; 50 mg/m3 TWA
	STELs	Not established	15 ppm STEL; 75 mg/m3 STEL	Not established

Fuels, diesel, No. 2 (68476-34-6)	TWAs	100 mg/m3 TWA (inhalable fraction and vapor, as total hydrocarbons, listed under Diesel fuel)	Not established	Not established
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Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear chemical splash safety goggles. Depending on conditions of use, a face shield may be necessary.

Skin/Body

- Wear appropriate gloves. Depending on conditions of use, apron and/or arm covers may be necessary.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

STEL = Short Term Exposure Limits are based on 15-minute exposures

NIOSH = National Institute of Occupational Safety and Health

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Straw colored to dyed red liquid with a diesel fuel odor.
Color	Straw colored to dyed red.	Odor	Diesel fuel.
Odor Threshold	No data available		
General Properties			
Boiling Point	300 to 690 F(148.8889 to 365.5556 C)	Melting Point/Freezing Point	No data available
Decomposition Temperature	No data available	pH	No data available
Specific Gravity/Relative Density	0.81 to 0.88 Water=1	Bulk Density	7.08 lbs/gal
Water Solubility	Negligible	Viscosity	No data available
Volatility			
Vapor Pressure	0.4 mmHg (torr)	Vapor Density	> 3 Air=1
Evaporation Rate	< 1 n-Butyl Acetate = 1		
Flammability			
Flash Point	125 to 180 F(51.6667 to 82.2222 C) PMCC (Pensky-Martins Closed Cup)	UEL	10 %
LEL	0.3 %	Autoignition	500 F(260 C)
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- No dangerous reaction known under conditions of normal use.

Chemical stability

- Stable under normal temperatures and pressures.

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Avoid contact with heat and ignition sources.

Incompatible materials

- Avoid contact with strong oxidizing agents and strong reducing agents.

Hazardous decomposition products

- Not anticipated under normal conditions of use.

Section 11 - Toxicological Information

Information on toxicological effects

Components		
Fuels, diesel, No. 2 (95% TO 100%)	68476-34-6	Tumorigen / Carcinogen: Skin-Mouse TDLo • 312 mL/kg 78 Week(s)-Intermittent; <i>Tumorigenic:</i> Carcinogenic by RTECS criteria; Skin and Appendages:Other:Tumors
Naphthalene (< 1%)	91-20-3	Acute Toxicity: Ingestion/Oral-Guinea Pig LD50 • 1200 mg/kg; <i>Behavioral:Somnolence (general depressed activity); Behavioral:Changes in motor activity (specific assay);</i> Ingestion/Oral-Rat LD50 • 490 mg/kg; Ingestion/Oral-Mouse TDLo • 158 mg/kg; <i>Brain and Coverings:Other degenerative changes; Liver:Other changes; Biochemical:Metabolism (intermediary):Lipids, including transport;</i> Inhalation-Human TCLo • 250 mg/m ³ ; <i>Sense Organs and Special Senses:Eye:Lacrimation; Behavioral:Headache;</i> Skin-Rabbit LD50 • >20 g/kg; Irritation: Skin-Rabbit • 0.05 mL 24 Hour(s) • Severe irritation; Multi-dose Toxicity: Ingestion/Oral-Rat TDLo • 500 mg/kg 10 Day(s)-Intermittent; <i>Behavioral:Sleep; Lungs, Thorax, or Respiration:Dyspnea;</i> Ingestion/Oral-Rat TDLo • 4500 mg/kg 10 Day(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes;</i> Mutagen: Specific locus test • Inhalation-Rat • 30 ppm 13 Week(s)-Intermittent; Micronucleus test • Unreported Route-Human • Lymphocyte (Somatic cell) • 30 mg/L; Reproductive: Ingestion/Oral-Mouse TDLo • 2400 mg/kg (7-14D preg); <i>Reproductive Effects:Effects on Newborn:Live birth index; Reproductive Effects:Effects on Newborn:Viability index (e.g., # alive at day 4 per # born alive);</i> Ingestion/Oral-Rat TDLo • 4500 mg/kg (6-15D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Specific Developmental Abnormalities:Other developmental abnormalities;</i> Tumorigen / Carcinogen: Inhalation-Mouse TCLo • 30 ppm 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic:Neoplastic by RTECS criteria; Lungs, Thorax, or Respiration:Tumors;</i> Inhalation-Rat TCLo • 1575 mg/kg 105 Week(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Sense Organs and Special Senses:Olfaction:Tumors;</i> Inhalation-Rat TCLo • 60 ppm 6 Hour(s) 105 Week(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Sense Organs and Special Senses:Olfaction:Tumors</i>

GHS Properties	Classification
Respiratory sensitization	OSHA HCS 2012 • No data available
Serious eye damage/Irritation	OSHA HCS 2012 • No data available
Acute toxicity	OSHA HCS 2012 • No data available

Aspiration Hazard	OSHA HCS 2012 • Aspiration 1
Carcinogenicity	OSHA HCS 2012 • Carcinogenicity 2
Skin corrosion/Irritation	OSHA HCS 2012 • No data available
Skin sensitization	OSHA HCS 2012 • No data available
STOT-RE	OSHA HCS 2012 • No data available
STOT-SE	OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
Toxicity for Reproduction	OSHA HCS 2012 • No data available
Germ Cell Mutagenicity	OSHA HCS 2012 • No data available

Potential Health Effects

Inhalation

- Acute (Immediate)**
 - May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.
- Chronic (Delayed)**
 - No data available

Skin

- Acute (Immediate)**
 - No data available
- Chronic (Delayed)**
 - No data available.

Eye

- Acute (Immediate)**
 - May cause mild irritation.
- Chronic (Delayed)**
 - No data available.

Ingestion

- Acute (Immediate)**
 - Material may be aspirated into lungs during ingestion and/or subsequent vomiting. Aspiration of this material will cause severe lung injury, chemical pneumonitis, pulmonary edema or death.
- Chronic (Delayed)**
 - No data available.

Carcinogenic Effects

- Repeated and prolonged exposure may cause cancer.

Carcinogenic Effects			
	CAS	IARC	NTP
Naphthalene	91-20-3	Group 2B-Possible Carcinogen	Reasonably Anticipated to be Human Carcinogen

Key to abbreviations

- LD = Lethal Dose
- TC = Toxic Concentration
- TD = Toxic Dose

Section 12 - Ecological Information

Toxicity

- Experimental studies of gas oils show that acute aquatic toxicity values are typically in the range 2-20 mg/L. These values are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions. They should be regarded as toxic to aquatic organisms, with the potential to cause long term adverse effects in the aquatic environment.

Persistence and degradability

- Gas oils are complex combinations of individual hydrocarbon species. Based on the known or expected properties of individual constituents, category members are not predicted to be readily biodegradable. Some hydrocarbon constituents of gas oils are

predicted to meet the criteria for persistence; on the other hand, some components can be easily degraded by microorganisms under aerobic conditions.

Bioaccumulative potential

- Gas oil components have measured or calculated Log Kow values in the range of 3.9 to 6 which indicates a high potential to bioaccumulate. Lower molecular weight compounds are readily metabolized and the actual bioaccumulation potential of higher molecular weight compounds is limited by the low water solubility and large molecular size.

Mobility in Soil

- On release to water, hydrocarbons will float on the surface and since they are sparingly soluble, the only significant loss is volatilization to air. In air, these hydrocarbons are photodegraded by reaction with hydroxyl radicals with half lives varying from 6.5 days for benzene to 0.5 days for n-dodecane.

Other adverse effects

- None anticipated.

Section 13 - Disposal Considerations

Waste treatment methods

- Product waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Packaging waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	NA1993	Diesel fuel	3	III	NDA

- Special precautions for user** • None specified.
- Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** • No data available

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute, Chronic, Fire

Inventory		
Component	CAS	TSCA
Fuels, diesel, No. 2	68476-34-6	Yes
Naphthalene	91-20-3	Yes
Sulfur	7704-34-9	Yes

United States

Labor		
U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals		
• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	Not Listed

• Sulfur	7704-34-9	Not Listed
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U.S. - OSHA - Specifically Regulated Chemicals

• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	Not Listed
• Sulfur	7704-34-9	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	100 b final RQ; 45.4 kg final RQ
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	0.1 % de minimis concentration
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	Not Listed
• Sulfur	7704-34-9	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	carcinogen, initial date 4/19/02
• Sulfur	7704-34-9	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Fuels, diesel, No. 2	68476-34-6	Not Listed
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• Naphthalene	91-20-3	Not Listed
• Sulfur	7704-34-9	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	Not Listed
• Sulfur	7704-34-9	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	5.8 µg/day NSRL
• Sulfur	7704-34-9	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	Not Listed
• Sulfur	7704-34-9	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
• Fuels, diesel, No. 2	68476-34-6	Not Listed
• Naphthalene	91-20-3	Not Listed
• Sulfur	7704-34-9	Not Listed

Other Information

- **WARNING:** This product contains a chemical known to the State of California to cause cancer.

Section 16 - Other Information

Revision Date	• 09/September/2015
Preparation Date	• 21/March/2013
Disclaimer/Statement of Liability	• The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

Key to abbreviations

NDA = No data available