

Product Name: No. 2 Diesel Fuel  
 Product Code: Multiple

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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name: No. 2 Diesel Fuel  
 Product Code: Multiple  
 Synonyms: CARB Diesel TF3  
           CARB Diesel  
           CARB Diesel 10%  
           Diesel Fuel Oil  
           EPA Low Sulfur Diesel Fuel  
           EPA Low Sulfur Diesel Fuel - Dyed  
           EPA Off Road High Sulfur Diesel - Dyed  
           Fuel Oil No. 2 - CAS # 68476-30-2  
           No. 2 Diesel Fuel Oil  
           No. 2 Fuel Oil - Non Hiway - Dyed  
           No. 2 High Sulfur Diesel - Dyed  
           No. 2 Low Sulfur Diesel - Dyed  
           No. 2 Low Sulfur Diesel - Undyed

Responsible Party: Tosco Corporation  
                     1700 East Putnam Avenue  
                     Old Greenwich, CT 06870

Help Desk 8am - 4pm Pacific Time, Mon-Fri: 1-800-762-0942

**EMERGENCY OVERVIEW**

**24 Hour Emergency Telephone Numbers:**

Spill, Leak, Fire or Accident	California Poison Control
Call CHEMTREC	System: (800)356-3129
North America: (800)424-9300	
Others: (703)527-3887 (collect)	

**Health Hazards:** Causes severe skin irritation. Aspiration hazard if swallowed. Can enter lungs and cause damage. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Wash thoroughly after handling.

**Physical Hazards:** Flammable liquid and vapor. Keep away from heat, sparks, flames, static electricity or other sources of ignition.

► Physical Form: Liquid

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- ▶ Appearance: Straw-colored to dyed red
- ▶ Odor: Characteristic petroleum

NFPA HAZARD CLASS: Health: 0 (Least)  
Flammability: 2 (Moderate)  
Reactivity: 0 (Least)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	% Volume	EXPOSURE GUIDELINE		
		Limits	Agency	Type
Diesel Fuel No. 2 CAS# 68476-34-6	100	100* mg/m3	ACGIH	TWA-SKIN
Naphthalene CAS# 91-20-3	<1	10 ppm	ACGIH	TWA
		15 ppm	ACGIH	STEL
		10 ppm	OSHA	TWA
		250 ppm	NIOSH IDLH	

Tosco Low Sulfur No. 2 Diesel meets the specifications of 40 CFR 60.41 for low sulfur diesel fuel.

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

\*Proposed ACGIH (1999)

## 3. HAZARDS IDENTIFICATION

### POTENTIAL HEALTH EFFECTS:

**Eye:** Contact may cause mild eye irritation including stinging, watering, and redness.

**Skin:** Severe skin irritant. Contact may cause redness, itching, burning, and severe skin damage. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin, leading to dermatitis (inflammation). Not acutely toxic by skin absorption, but prolonged or repeated skin contact may be harmful (see Section 11).

**Inhalation (Breathing):** No information available. Studies by other exposure routes suggest a low degree of toxicity by

inhalation.

**Ingestion (Swallowing):** Low degree of toxicity by ingestion.  
**ASPIRATION HAZARD** - This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

**Signs and Symptoms:** Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract, nausea, diarrhea and transient excitation followed by signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue).

**Cancer:** Possible skin cancer hazard (see Sections 11 and 14).

**Target Organs:** There is limited evidence from animal studies that overexposure may cause injury to the kidney (see Section 11).

**Developmental:** Inadequate data available for this material.

**Pre-Existing Medical Conditions:** Conditions aggravated by exposure may include skin disorders and kidney disorders.

#### 4. FIRST AID MEASURES

**Eye:** If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin:** Immediately remove contaminated shoes, clothing, and constrictive jewelry and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek immediate medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops, seek immediate medical attention.

**Inhalation (Breathing):** If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

**Ingestion (Swallowing):** Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or

unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

## 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Flash Point: >125°F/>52°C  
OSHA Flammability Class: Combustible liquid  
LEL%: 0.3 / UEL%: 10.0  
Autoignition Temperature: 500°F/260°C

**Unusual Fire & Explosion Hazards:** This material is flammable and can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

**Extinguishing Media:** Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

**Fire Fighting Instructions:** For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

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Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

## 6. ACCIDENTAL RELEASE MEASURES

Flammable. Keep all sources of ignition and hot metal surfaces away from spill/release. The use of explosion-proof equipment is recommended.

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Use foam on spills to minimize vapors (see Section 5). Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

## 7. HANDLING AND STORAGE

**Handling:** Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel to another. Can accumulate static charge by flow or agitation. Can be ignited by static discharge. The use of explosion-proof equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-704 and/or API RP 2003 for specific bonding/grounding requirements.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

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Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. Use good personal hygiene practices.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

"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. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1 and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

**Storage:** Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post area "No Smoking or Open Flame." Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional ventilation or exhaust systems may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used (see appropriate electrical codes).

**Personal Protective Equipment (PPE):**

**Respiratory:** A NIOSH certified air purifying respirator with

an organic vapor cartridge may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**Skin:** The use of gloves impervious to the specific material handled is advised to prevent skin contact, possible irritation, and skin damage (see glove manufacturer literature for information on permeability). Depending on conditions of use, apron and/or arm covers may be necessary.

**Eye/Face:** Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

**Other Protective Equipment:** Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse. It is recommended that impervious clothing be worn when skin contact is possible.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Flash Point: >125°F / >52°C

Flammable/Explosive Limits (%): LEL: 0.3 / UEL: 10.0

Autoignition Temperature: 500°F / 260°C

Appearance: Straw-colored to dyed red

Physical State: Liquid

Odor: Characteristic petroleum

pH: Not applicable

Vapor Pressure (mm Hg): 0.40

Vapor Density (air=1): >3

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Boiling Point/Range: 320-700°F / 160-371°C  
Freezing/Melting Point: No Data  
Solubility in Water: Negligible  
Specific Gravity: 0.81-0.88 @60°F  
Percent Volatile: Negligible  
Evaporation Rate (nBuAc=1): <1  
Viscosity: 32.6-40.0 SUS @100°F  
Bulk Density: 7.08 lbs/gal

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable under normal conditions of storage and handling. Flammable liquid and vapor. Vapor can cause flash fire.

**Conditions To Avoid:** Avoid all possible sources of ignition (see Sections 5 and 7).

**Incompatible Materials:** Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc.

**Hazardous Decomposition Products:** The use of hydrocarbon fuels in an area without adequate ventilation may result in hazardous levels of combustion products (e.g., oxides of carbon, sulfur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels. ACGIH has included a TLV of 0.05 mg/m<sup>3</sup> TWA for diesel exhaust particulate on its 1999 Notice of Intended Changes. See Section 11 for additional information on hazards of engine exhaust.

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Diesel Fuel No. 2 (CAS# 68476-34-6)**

**Carcinogenicity:** Chronic dermal application of certain middle distillate streams contained in diesel fuel No. 2 resulted in an increased incidence of skin tumors in mice. This material has not been identified as a carcinogen by NTP, IARC, or OSHA. Diesel exhaust is a probable cancer hazard based on tests with laboratory animals.

**Target Organ(s):** Limited evidence of renal impairment has been noted from a few case reports involving excessive exposure to

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diesel fuel No. 2.

**Naphthalene (CAS# 91-20-3)**

**Carcinogenicity:** Female mice exposed via inhalation to naphthalene developed alveolar adenomas. This effect was not seen in male mice. It has not been identified as a carcinogen by NTP, IARC or OSHA.

## 12. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, would be a RCRA "characteristic" hazardous waste due to the characteristic(s) of ignitability (D001) and benzene (D018). If the material is spilled to soil or water, characteristic testing of the contaminated materials is recommended. Further, this material, once it becomes a waste, is subject to the land disposal restrictions in 40 CFR 268.40 and may require treatment prior to disposal to meet specific standards. Consult state and local regulations to determine whether they are more stringent than the federal requirements.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

## 13. TRANSPORT INFORMATION

DOT Proper Shipping Name / Technical Name: Diesel Fuel  
Hazard Class or Division: 3  
ID #: NA1993  
Packing Group: III

## 14. REGULATORY INFORMATION

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

COMPONENT	CAS NUMBER	WEIGHT %
-- None known --		

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**Warning:** This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

COMPONENT	EFFECT
Benzene	Cancer, Developmental and Reproductive Toxicant
Toluene	Developmental Toxicant

Diesel engine exhaust, while not a component of this material, is on the Proposition 65 list of chemicals known to the State of California to cause cancer.

This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any. Diesel exhaust is a probable cancer hazard based on tests in laboratory animals. It has been identified as a carcinogen by IARC.

EPA (CERCLA) Reportable Quantity: --None--

#### 15. DOCUMENTARY INFORMATION

Issue Date: 07/10/00  
Previous Issue Date: 04/03/00  
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#### 16. DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material 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

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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.

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