



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS NUMBER: V7770
MSDS DATE: 01-01-02
PRODUCT NAME: #2 DIESEL FUEL

24 HOUR EMERGENCY PHONE : (210) 979-8346

TRANSPORTATION EMERGENCIES: CALL CHEMTREC AT 1-800-424-9300

MSDS ASSISTANCE: (210) 592-4593

MANUFACTURER'S NAME/ADDRESS:
VALERO MARKETING & SUPPLY CO.
P.O BOX 696000
San Antonio, Texas 78269-6000.

CHEMICAL NAME: Diesel Fuel, No.2

CAS NUMBER: 68476-34-6

SYNONYMS/Common Names: This Material Safety Data Sheet applies to the following product descriptions for Hazard Communication purposes only. Technical specifications and formulations vary greatly and are not reflected in this document. Consult specification sheets for technical information.

ULTRA LOW SULFUR DIESEL – Low emission diesel fuels, ≤ 15 parts per million

2. COMPOSITION, INFORMATION ON INGREDIENTS

PRODUCT USE: This product is intended for use as a fuel in engines and heaters designed for diesel fuels, and for use in engineered processes. Use in other applications may result in higher exposures and require additional controls, such as local exhaust ventilation and personal protective equipment.

DESCRIPTION: Ultra Low Sulfur Diesel fuel is a complex mixture of hydrocarbons which are hydrofinished to remove sulfur. Composition varies greatly and includes C9 to C20 hydrocarbons with a boiling range of about 325-675° F. The following is a non-exhaustive list of common refinery process components, typical percentages, and exposure limits for each.

Component or Material Name	%	CAS Number	ACGIH Limits			OSHA Exposure Limits			
			TLV	STEL	Units	PEL	STEL	C/P	Units
Hydrotreated middle distillate	100	64742-46-7	100*	NA	mg/m3	NA	NA	NA	NA

* NIOSH recommends an exposure limit of 100 mg/m3 for kerosene, which is similar to these components. The ACGIH has proposed an exposure limit of 100 mg/m3 for Diesel Fuel products, but it has yet to be adopted and has been placed on the Notice of Intended Change list.

3. HAZARDS IDENTIFICATION

HEALTH HAZARD DATA:

The major effect of exposure to this product is that it may cause giddiness, headache, central nervous system depression; possible irritation of eyes, nose, and lungs; and dermal irritation. Signs of kidney and liver damage may be delayed. Pulmonary irritation secondary to exhalation of solvent.

HAZARDS OF COMBUSTION PRODUCTS: Carbon monoxide and carbon dioxide can be found in engine exhaust and other forms of hydrocarbon combustion. Carbon Monoxide in moderate concentrations can cause symptoms of headache, nausea, vomiting, increased cardiac output, and confusion. Exposure to higher concentrations of carbon monoxide can cause loss of consciousness, heart damage, brain damage, and/or death. Exposure to high concentrations of carbon dioxide can cause simple asphyxiation by displacing available oxygen. Combustion of this and other similar materials should only be carried out in well ventilated areas.

MEDICAL CONDITION GENERALLY AGGRAVATED BY EXPOSURE: Medical conditions which have the same symptoms and effects as those outlined under the health hazard information section can be aggravated by exposure to this product.

MEDICAL LIMITATION: N/A

ROUTES OF EXPOSURE

INHALATION: Irritation of the upper respiratory tract and eyes, with possible euphoria, dizziness, headache, discoordination, ringing in the ears, convulsions, coma, and respiratory arrest in extreme cases.

SKIN CONTACT: Defatting of the skin may occur with prolonged or repeated contact. Irritation and burning sensation may occur on exposure to the liquid or mists.

SKIN ABSORPTION: Not significant.

EYE CONTACT: Severe burning sensation with temporary irritation and swelling of lids.

INGESTION: Irritation of the mucous membranes of throat, esophagus and stomach which may result in nausea and vomiting; central nervous system depression may occur, if absorbed (see Inhalation above). If aspirated, chemical pneumonitis may occur with potentially fatal results. Possible kidney and liver damaged may be delayed. (See Notes To Physician in Section 5)

CARCINOGENICITY STATEMENT: Diesel Fuel is not listed as carcinogenic by NTP, OSHA, ACGIH.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with large amount of water for at least 15 minutes holding lids apart to ensure flushing of the entire eye surface. **SEEK IMMEDIATE MEDICAL ATTENTION.**

SKIN: Wash contaminated areas with plenty of soap and water. A soothing ointment may be applied to irritated skin after thoroughly cleansing. Remove contaminated clothing and footwear. **SEEK IMMEDIATE MEDICAL ATTENTION.**

INHALATION: Get person out of contaminated area to fresh air. If breathing has stopped resuscitate and administer oxygen if readily available. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

INGESTION: Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. If vomiting occurs spontaneously, keep airway clear. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

NOTES TO PHYSICIAN: Do not induce vomiting, use gastric lavage only. Aspiration of liquid into the lungs could result in Chemical Pneumonitis. Use of Adrenaline is not advised. Treat symptomatically.

5. FIRE AND EXPLOSION DATA

FLASH POINT: 100°F (PM) minimum

AUTOIGNITION TEMPERATURE: 494°F

FLAMMABLE LIMITS IN AIR: UEL: 5 %

LEL: 0.7 %

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, foam or water spray. Water may be ineffective in fighting fires of liquids with low flash points, but water should be used to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse vapors and to protect persons attempting to stop a leak.

SPECIAL FIRE FIGHTING PROCEDURES: Pressure-demand, self contained, breathing apparatus should be provided for fire fighters in buildings or confined areas where product is stored.

UNUSUAL FIRE AND EXPLOSION HAZARD: Vapor accumulation is possible, and flashback can occur with explosive force if vapors are ignited.

6. ACCIDENTAL RELEASE MEASURES

If material is spilled, steps should be taken to contain liquid and prevent discharges to streams or sewer systems and control or stop the loss of volatile materials to the atmosphere. Spills or releases should be reported, if required to the appropriate local, state and federal regulatory agencies.

SMALL SPILLS: Remove ignition sources. Absorb spilled material with non-combustible materials such as cat litter, dirt, sand, or petroleum sorbent pads/pillows. Do not use combustible materials like rags, wood chips, or saw dust. Remove contaminated materials to an appropriate disposal container.

LARGE SPILLS: Remove ignition sources. Dike spill area with sand or dirt to contain material and cover sewers/drains. Remain upwind and keep unnecessary people away. Contact trained emergency response team for cleanup. Remove liquid using grounded suction pumps, isolate hazard area and deny entry.

7. HANDLING AND STORAGE INFORMATION

Store only in approved containers. Protect containers against physical damage. Outside or detached storage is preferred. Separate from oxidizing materials. Store in cool, well ventilated area of non-combustible construction away from possible sources of ignition. Keep away from incompatible materials and follow OSHA 29 CFR 1910.106 and NFPA 30 for storage requirements.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION REQUIREMENTS: Work in well ventilated areas using good engineering practices to process, transfer and store. Special ventilation is not required unless product is sprayed or heated. High volume use may require engineering controls.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: Respiratory protection is not required unless exposure levels exceed 100 mg/m³. Use NIOSH approved respiratory protection following manufacturer's recommendations where spray, mists, or vapors may be generated above the applicable exposure limits. Supplied air respiratory protection is required for IDLH areas. See 29 CFR 1910.134 for OSHA Respiratory Protection regulations.

EYE: Face shield and goggles or chemical goggles should be worn where mist or spray may be generated, and where splashing occurs. Shower and eyewash facilities should be accessible.

GLOVES: Impermeable protective gloves such as nitrile gloves should be worn during routine handling of this product. Barrier creams may also be appropriate where tactile sensitivity is required.

OTHER CLOTHING AND EQUIPMENT: Clothing contaminated with this product should be removed and laundered before reuse. Items which can not be laundered should be discarded. Allow contaminated items to air dry or hang in a well ventilated area. Spontaneous combustion or fire may result from contaminated materials being placed together before drying.

EXPOSURE MONITORING

BIOLOGICAL: No applicable procedure, breath analysis for hydrocarbons has been suggested.

PERSONAL/AREA: Based on similarity to kerosene, both active and passive monitors employing charcoal adsorption follow by gas chromatography. An average molecular weight of 170 has been suggested as the average value to convert the determined weight of hydrocarbons to ppm. Direct reading colorimetric tubes are available to evaluate short term exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Colorless to straw or red oily liquid with characteristic kerosene-like odor.
VISCOSITY: Spec. dependent, 1.7 - 3.4 cSt @ 104° F **pH:** NA
BOILING RANGE @ 760 mm Hg: 302-644° F **SOLUBILITY IN H₂O (wt. %):** Insoluble
VAPOR DENSITY (Air=1): 4.5 (kerosene) **FREEZING POINT:** -51° F
EVAPORATION RATE (BuAc=1): N/A **VAPOR PRESSURE:** 0.5 mmHg @ 20 °C
SPECIFIC GRAVITY (H₂O=1): 0.865 **% VOLATILES BY VOL.:** NA
BULK DENSITY AT 60° F: 6.8-7.2 lbs./gal. **API GRAVITY:** Specification dependent

10. STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY: Under normal conditions, the material is stable. Avoid sources of ignition such as flames, hot surfaces, sparks, and electrical equipment.
INCOMPATIBILITY: Avoid contact with strong oxidizers such as chlorine, concentrated oxygen, and sodium hypochlorite or other hypochlorites.
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products may include carbon monoxide and carbon dioxide, oxides of sulfur and nitrogen, and other toxic gasses.
HAZARDOUS POLYMERIZATION: Material is not known to polymerize.

11. TOXICOLOGICAL INFORMATION

1. NIOSH recommends that whole diesel exhaust be regarded as a potential occupational carcinogen; follow OSHA and MSHA rules where exhaust fumes may be generated.
2. A life time skin painting study by the American Petroleum Institute has shown that similar naphtha products with a boiling range of 350-700° F usually produce skin tumors and/or skin cancers in laboratory mice. Only a weak to moderate response occurred. The effect to humans has not been determined.
3. Positive results at 2.0 ml/kg and 6.0 ml/kg noted in mutagenesis studies via in-vivo bone marrow cytogenetics assay in rats.

For more detailed information, contact MSDS Assistance at (210) 592-4593.

12. ECOLOGICAL INFORMATION

For detailed information, contact MSDS Assistance at (210) 592-4593.

13. DISPOSAL CONSIDERATIONS

Shipment, storage, disposal, and cleanup actions of waste materials are regulated under local, state and federal rules. Contact the appropriate agencies if uncertain of applicability. Waste product and contaminated material having a flash point below 140°F is considered a hazardous waste. DOT Hazardous Waste Number D001 applies. Consult 40 CFR 262 for EPA disposal requirements.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME	Combustible Liquid, n.o.s.	Diesel fuel
DOT HAZARD CLASS*	Combustible Liquid	3*
DOT PACKING GROUP (PG)	III	III
I.D. NUMBER	NA1993	NA1993
REQUIRED LABELING	None	Flammable Liquid

* Since this product has a flash point >100°F and no other hazard class applies, it may be reclassified as a Combustible Liquid and NA1993 substituted for the product specific I.D. Number above. Consult 49 CFR 173.120 for specific details.

15. REGULATORY INFORMATION

TSCA (Toxic Substances Control Act) Inventory

Diesel Fuel is listed in the TSCA inventory.

SARA (Superfund Amendments and Reauthorization Act) TITLE III

This product is reportable under SARA Title III, Sections 311 & 312 as a hazardous substance.

Hazard Categories Applicable under 40 CFR 370.2 (SARA Section 311):

Acute Health	Chronic Health	Pressure	Fire	Reactive
Yes	Yes	No	Yes	No

Components listed under 40 CFR 372.65 (SARA Section 313):

This product does not contain chemicals identified as toxic by EPA under 40 CFR Part 372 and is not subject to the reporting requirements of this section.

STATE REGULATIONS:

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION

NFPA (National Fire Protection Association) Hazard Ratings Codes

Health	Fire	Reactivity	Other
1	2	0	

Based on "Standard System for the Identification of the Fire Hazards of Materials, NFPA No. 704 M

THIS MATERIAL SAFETY DATA SHEET WAS PREPARED BY VALERO MARKETING & SUPPLY CO. IN ACCORDANCE WITH 29 CFR 1910.1200. ALL INFORMATION, RECOMMENDATIONS AND SUGGESTIONS APPEARING HEREIN CONCERNING THIS PRODUCT ARE BASED UPON TESTS AND DATA BELIEVED TO BE RELIABLE, HOWEVER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SAFETY, TOXICITY AND SUITABILITY FOR HIS OWN USE OF THE PRODUCT DESCRIBED HEREIN. SINCE THE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, THE RESULTS TO BE OBTAINED OR THE SAFETY AND TOXICITY OF THE PRODUCT NOR DOES VALERO MARKETING & SUPPLY CO. ASSUME ANY LIABILITY ARISING OUT OF USE BY OTHERS OF THE PRODUCT REFERRED TO HEREIN. NOR IS THE INFORMATION HEREIN TO BE CONSTRUED AS ABSOLUTELY COMPLETE SINCE ADDITIONAL INFORMATION MAY BE NECESSARY OR DESIRABLE WHEN PARTICULAR OR EXCEPTIONAL CONDITIONS OR CIRCUMSTANCES EXIST OR BECAUSE OF APPLICABLE LAWS OR GOVERNMENT REGULATIONS.

