



**ORIGINAL**

March 25, 2013

Lee County Board of County Commissioners  
Division of Procurement Management  
1825 Hendry Street  
3<sup>rd</sup> Floor  
Fort Myers, FL 33901

Dear Mr. Franceschini:

Mansfield Oil Company appreciates the opportunity to participate in your current bid: B-130173 / Annual Purchase of Fuel. The differentials quoted are plus the OPIS Daily Average for Tampa, Florida, as indicated in the bid documents.

Pricing is based on Net 30 Day terms. Normal delivery after receipt of order is within 24 hours.

Should you have any questions, feel free to call Desiree Watkins at 1-800-255-6699, Ext. 2238.

Again, thank you for the opportunity to respond to your invitation to bid.

Best Regards,

David Zarfoss  
Director of Pricing



## INFORMATION ABOUT MANSFIELD OIL COMPANY

Mansfield Oil is a national fuel supply, distribution and logistics company focused on improving efficiencies in the downstream petroleum supply chain. We help our customers optimize and control fuel-related costs with local service, nationwide. We offer secure and reliable fuel supply from over 900 supply points in 49 states and Canada. Our service offering includes most varieties of fuel (diesel/gas/biofuel/ethanol/CNG), credit card/fleet card transaction processing, DEF supply and logistics, fuel and DEF systems design, environmental compliance, ERP integration, tax exempt transaction processing, and fuel systems (tank) monitoring. Mansfield's corporate headquarters is located in Gainesville, GA with five regional service centers located in Chicago, IL, Denver, CO, Detroit, MI, Houston, TX and Calgary, AB and 4 alternative fuel centers in Bloomington, MN, Sioux Center, IA, Charlottesville, VA and Ontario, CA .

We develop our own information technology systems and utilize third party integration tools to facilitate the unimpeded flow of information between our suppliers, carriers, ourselves and our customers. Mansfield's unique and industry leading electronic interface continues to make our customer's daily operations more manageable and measureable, key components of successful operations. We own and manage a fleet of 34 transport trucks in Atlanta, GA; N. Augusta, SC; Charlotte, NC and Orlando, FL from our office which gives us valuable insight into the trends and dynamics of our transportation partners.

Mansfield Oil maintains market strength through optimization of volume, financial strength, and successful relationships with our customers. Currently Mansfield Oil is ranked in the Top 50 Forbes List of Privately Held Companies, was a multiple finalist in the 2009, 2010 and 2011 Platts Global Energy Awards, and is rated 5A2 with Dun and Bradstreet indicating significant financial strength and credit worthiness. Mansfield has achieved double digit growth for the past three decades with revenues of \$4.3 billion in 2010.

Some of Mansfield's current government customers include:

- **Federal** - AAFES, NAVY, DESC/DLA, AMTRAK
- **States/DOT** - Georgia, New York, North Carolina, Pennsylvania, West Virginia
- **County** - Hillsborough, FL, Orange, FL, North GA Coop (5 counties), Southern Maryland Coop (3 counties)
- **City** - Philadelphia, PA, Jacksonville, FL, Chesapeake, VA
- **Transit Agencies** - KCATA (Kansas City, MO), CTA (Chicago, IL), LANTA (Lehigh, PA), WMATA (Washington, D.C.)

Some of Mansfield's commercial customers include:

- National, regional and local truck load and less than truck load carriers
- Distribution centers for various retailers and wholesalers
- Most major package delivery companies
- Aggregate companies

**LEE COUNTY, FLORIDA  
PROPOSAL QUOTE FORM  
FOR THE ANNUAL PURCHASE OF FUEL**

DATE SUBMITTED: March 25, 2013

VENDOR NAME: Mansfield Oil Company of Gainesville, Inc.

TO: The Board of County Commissioners  
Lee County  
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

**NOTE REQUIREMENT: IT IS THE SOLE RESPONSIBILITY OF THE VENDOR TO CHECK LEE COUNTY PROCUREMENT MANAGEMENT WEB SITE FOR ANY PROJECT ADDENDA ISSUED FOR THIS PROJECT. THE COUNTY WILL POST ADDENDA TO THIS WEB PAGE, BUT WILL NOT NOTIFY.**

The undersigned acknowledges receipt of Addenda numbers: 1

**SECTION A – TRANSPORT DELIVERY**

**TOTAL FOR ALL 4 GRADES:**      \$ 12.3789

**SECTION B – TANK WAGON DELIVERY**

**TOTAL FOR ALL 4 GRADES:**      \$ 13.3504

**GRAND TOTAL (SECTIONS A & B):** \$ 25.7293



**Mansfield Oil Company  
1025 Airport Parkway, S.W.  
Gainesville, GA 30501**

**SECTION A – TRANSPORT DELIVERY**

PLEASE SPECIFY THE SIZE OF A TRANSPORT LOAD: 7500 gallons\*                      GALLONS

\* Delivery can be split between up to three sites with a \$35 charge for each additional stop.

**UNLEADED GASOLINE – E10**

	UNLEADED 87 OCTANE	UNLEADED 89 OCTANE
BASE PRICE* PER GALLON	<u>\$ 2.8921</u>	<u>\$ 3.0104</u>
VENDOR MARKUP PER GALLON (EXCLUDING TAX)	<u>\$ +0.0410</u>	<u>\$ +0.0378</u>
TOTAL PER GALLON	<u>\$ 2.9331</u>	<u>\$ 3.0482</u>

**#2 ULTRA LOW SULFUR DIESEL – CLEAR & DYED**

	#2 ULTRA LOW SULFUR DIESEL CLEAR	#2 ULTRA LOW SULFUR DIESEL DYED
BASE PRICE* PER GALLON	<u>\$ 3.1447</u>	<u>\$ 3.1476</u>
VENDOR MARKUP PER GALLON (EXCLUDING TAX)	<u>\$ +0.0524</u>	<u>\$ +0.0529</u>
TOTAL PER GALLON	<u>\$ 3.1971</u>	<u>\$ 3.2005</u>

\*The "Base" price per gallon will be filled in by the vendor and will be based upon the average Tampa, Florida price as reported in the "Oil Price Information Service" ("OPIS") on the opening date of this Bid (stated on the cover sheet of this bid package) at 10:00 a.m.

**SECTION A TOTAL (ALL 4 GRADES):**     \$ 12.3789



**Mansfield Oil Company**  
1025 Airport Parkway, S.W.  
Gainesville, GA 30501

**SECTION B – TANK WAGON DELIVERY**

PLEASE SPECIFY THE SIZE OF A TANK WAGON LOAD: 1/2 of tank capacity,  
up to 4500 gallons. GALLONS

**UNLEADED GASOLINE – E10**

	UNLEADED 87 OCTANE	UNLEADED 89 OCTANE
BASE PRICE* PER GALLON	<u>\$2.8921</u>	<u>\$ 3.0104</u>
VENDOR MARKUP PER GALLON (EXCLUDING TAX)	<u>+\$0.2889</u>	<u>+\$0.2889</u>
TOTAL PER GALLON	<u>\$ 3.1810</u>	<u>\$ 3.2993</u>

**#2 ULTRA LOW SULFUR DIESEL – CLEAR & DYED**

	#2 ULTRA LOW SULFUR DIESEL CLEAR	#2 ULTRA LOW SULFUR DIESEL DYED
BASE PRICE* PER GALLON	<u>\$ 3.1447</u>	<u>\$ 3.1476</u>
VENDOR MARKUP PER GALLON (EXCLUDING TAX)	<u>+\$0.2889</u>	<u>+\$0.2889</u>
TOTAL PER GALLON	<u>\$ 3.4336</u>	<u>\$ 3.4365</u>

\*The "Base" price per gallon will be filled in by the vendor and will be based upon the average Tampa, Florida price as reported in the "Oil Price Information Service" ("OPIS") on the opening date of this Bid (stated on the cover sheet of this bid package) at 10:00 a.m.

**SECTION B TOTAL (ALL 4 GRADES):** \$ 13.3504



Mansfield Oil Company  
 1025 Airport Parkway, S.W.  
 Gainesville, GA 30501

THE FUEL WILL BE DELIVERED WITHIN 1 CALENDAR DAYS AFTER ORDER IS PLACED BY DEPARTMENT.

Cost of the OPIS Subscription: \$ 68/month/agency EACH

**NOTE: THE COST OF THE OPIS SUBSCRIPTION IS AN ADDITIONAL PRICE ITEM AND WILL NOT BE FACTORED INTO THE BASIS OF AWARD. THE COUNTY RESERVES THE RIGHT AT ITS SOLE DISCRETION TO PURCHASE THE SUBSCRIPTION ON ITS OWN.**

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?  
YES  NO  We will use our own vehicles for some deliveries as well as a common carrier.

**PLEASE SEE ATTACHMENT A FOR SITE LOCATIONS AND VOLUMES.**

**OPTION A – GENERATOR FUELING:**

**SEE ATTACHMENT B TO PROVIDE PRICING**

THE COUNTY HAS NUMEROUS EMERGENCY GENERATORS AT VARIOUS LOCATIONS THROUGHOUT LEE COUNTY. IN THE SPACE PROVIDED ON ATTACHMENT B, PLEASE STATE YOUR COST PER GALLON FOR TANK WAGON DELIVERY TO EACH OF THE LISTED SITES ON AN AS-NEEDED BASIS.

Does your firm have a location/office/facility in Lee County?  
YES \_\_\_\_\_ NO

Address:  
\_\_\_\_\_

Bidders should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the bid may be grounds to reject the bid.

Are there any modifications to the bid or specifications?  
YES  NO \_\_\_\_\_

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the bidder being declared nonresponsive or to have the award of the bid rescinded by the County.

**MODIFICATIONS:**

As to Item 14, Authority to Piggyback, we would like to add the condition that the agreement be honored upon mutual consent of all parties.

Bidder shall submit his/her bid on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Bidder/Bid being declared non-responsive by the County.



ANTI-COLLUSION STATEMENT

**THE BELOW SIGNED BIDDER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS BID WITH OTHER BIDDERS AND HAS NOT COLLUDED WITH ANY OTHER BIDDER OR PARTIES TO A BID WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE).**

FIRM NAME Mansfield Oil Company of Gainesville, Inc.

BY (Printed): David Zarfoss

BY (Signature): 

TITLE: Director of Pricing

FEDERAL ID # OR S.S.# 58-1091383

ADDRESS: 1025 Airport Parkway SW

Gainesville, GA 30501

PHONE NO.: (800) 255 - 6699

FAX NO.: (678) 450 - 2242

CELLULAR PHONE/PAGER NO.: \_\_\_\_\_

EMERGENCY PHONE NO.: (800) 255 - 6699

DUNS #: 03-372-3990

LEE COUNTY LOCAL BUSINESS TAX ACCOUNT NUMBER:  
\_\_\_\_\_

E-MAIL ADDRESS: mocbids@mansfieldoil.com

DISADVANTAGED BUSINESS ENTERPRISE (DBE): \_\_\_\_\_ Yes  No



Mansfield Oil Company  
1025 Airport Parkway, S.W.  
Gainesville, GA 30501

**ADDITIONAL INFORMATION**

Number of tank wagons owned and based locally: 0

Total fuel capacity of all owned tank wagon trucks in gallons: n/a

Mansfield has access to pull from all terminals and suppliers in the Tampa/Orlando, FL area. We also

Capacity in gallons of fixed fuel storage tanks at local supply point: have inventory in Tampa at 2 locations, which totals 750,000 - 1M gallons at any given time.

Is your supply point equipped with an emergency generator? Yes



**Mansfield Oil Company**  
**1025 Airport Parkway, S.W.**  
**Gainesville, GA 30501**



**ATTACHMENT A**  
**LOCAL VENDOR PREFERENCE QUESTIONNAIRE**  
**(LEE COUNTY ORDINANCE NO. 08-26)**

Instructions: Please complete either Part A or B whichever is applicable to your firm

**PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN  
LEE/COLLIER COUNTY (Only complete Part A if your principal place of business is  
located within the boundaries of Lee/Collier County)**

1. What is the physical location of your principal place of business that is located within the boundaries of Lee/Collier County, Florida?

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2. What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)

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**PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN  
LEE/COLLIER COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN  
LEE/COLLIER COUNTY (Please complete this section.)**

1. How many employees are available to service this contract? 6

2. Describe the types, amount and location of equipment you have available to service this contract.

Mansfield will use Common Carriers, along with our own vehicles to make  
deliveries.

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LOCAL VENDOR PREFERENCE QUESTIONNAIRE CONTINUED

3. Describe the types, amount and location of material stock that you have available to service this contract.

Mansfield has access to pull from all terminals and suppliers in the Tampa/Orlando, FL area. We also have inventory in Tampa, at 2 locations, which totals 750,000 to 1 million gallons at any given time.

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive three years?

Yes \_\_\_\_\_

No  \_\_\_\_\_

If yes, please provide your contractual history with Lee County for the past three, consecutive years. Attach additional pages if necessary.

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Mansfield Oil Company  
1025 Airport Parkway, S.W.  
Gainesville, GA 30501



# LEE COUNTY

SOUTHWEST FLORIDA

Lee County Ordinance No. 08-26

Local Bidder's Preference

## AFFIDAVIT PRINCIPAL PLACE OF BUSINESS

Principal place of business is located within the boundaries of Lee County.



Company Name: Mansfield Oil Company of Gainesville, Inc.

David Zarfoss March 25, 2013

Signature Date

STATE OF Georgia

COUNTY OF Hall

The foregoing instrument was signed and acknowledged before me this 25th day of

March, 2013, by David Zarfoss who has produced

(Print or Type Name)

Personally known to me as identification.

(Type of Identification and Number)

Cortney Wheeler  
Notary Public Signature

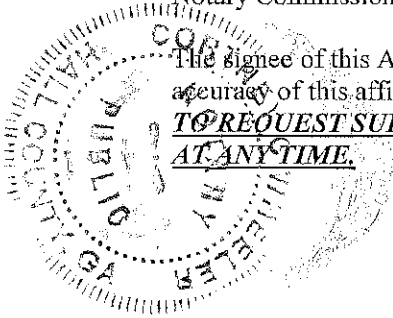
Cortney Wheeler

Printed Name of Notary Public

W-00091688 / September 2, 2014

Notary Commission Number/Expiration

The signee of this Affidavit guarantees, as evidenced by the sworn affidavit required herein, the truth and accuracy of this affidavit to interrogatories hereinafter made. **LEE COUNTY RESERVES THE RIGHT TO REQUEST SUPPORTING DOCUMENTATION, AS EVIDENCE OF SERVICES PROVIDED, AT ANYTIME.**



Mansfield Oil Company  
1025 Airport Parkway, S.W.  
Gainesville, GA 30501

AFFIDAVIT CERTIFICATION  
IMMIGRATION LAWS

SOLICITATION NO.: B-130173 PROJECT NAME: Annual Purchase of Fuel

LEE COUNTY WILL NOT INTENTIONALLY AWARD COUNTY CONTRACTS TO ANY CONTRACTOR WHO KNOWINGLY EMPLOYS UNAUTHORIZED ALIEN WORKERS, CONSTITUTING A VIOLATION OF THE EMPLOYMENT PROVISIONS CONTAINED IN 8 U.S.C. SECTION 1324 a(e) {SECTION 274A(e) OF THE IMMIGRATION AND NATIONALITY ACT ("INA").

LEE COUNTY MAY CONSIDER THE EMPLOYMENT BY ANY CONTRACTOR OF UNAUTHORIZED ALIENS A VIOLATION OF SECTION 274A(e) OF THE INA. SUCH VIOLATION BY THE RECIPIENT OF THE EMPLOYMENT PROVISIONS CONTAINED IN SECTION 274A(e) OF THE INA SHALL BE GROUNDS FOR UNILATERAL CANCELLATION OF THE CONTRACT BY LEE COUNTY.

BIDDER ATTESTS THAT THEY ARE FULLY COMPLIANT WITH ALL APPLICABLE IMMIGRATION LAWS (SPECIFICALLY TO THE 1986 IMMIGRATION ACT AND SUBSEQUENT AMENDMENTS).

 Company Name: Mansfield Oil Company of Gainesville, Inc.  
David Zarfoss, Director of Pricing March 25, 2013  
Signature Title Date

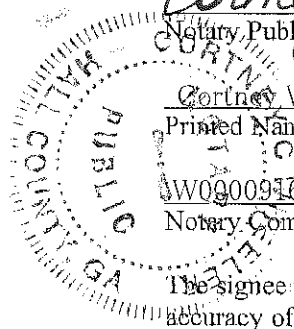
STATE OF Georgia  
COUNTY OF Hall

The foregoing instrument was signed and acknowledged before me this 25th day of March 20 13, by David Zarfoss who has produced  
(Print or Type Name)  
Personally known to me as identification.  
(Type of Identification and Number)

  
Notary Public Signature

Cortney Wheeler  
Printed Name of Notary Public

JW000091688 / September 2, 2014  
Notary Commission Number/Expiration



The signee of this Affidavit guarantee, as evidenced by the sworn affidavit required herein, the truth and accuracy of this affidavit to interrogatories hereinafter made. **LEE COUNTY RESERVES THE RIGHT TO REQUEST SUPPORTING DOCUMENTATION, AS EVIDENCE OF SERVICES PROVIDED, AT ANY TIME.**



Mansfield Oil Company  
1025 Airport Parkway, S.W.  
Gainesville, GA 30501

LEE COUNTY PROCUREMENT MANAGEMENT - BIDDERS CHECK LIST

**IMPORTANT:** Please read carefully and return with your bid proposal. Please check off each of the following items as the necessary action is completed:

- 1. The Solicitation has been signed and with corporate seal (if applicable).
- 2. The Solicitation prices offered have been reviewed (if applicable).
- 3. The price extensions and totals have been checked (if applicable).
- 4. Substantial and final completion days inserted (if applicable).
- 5. The original (must be manually signed) and 1 hard copy original and others as specified of the Solicitation has been submitted.
- 6. Two (2) identical sets of descriptive literature, brochures and/or data (if required) have been submitted under separate cover.
- 7. All modifications have been acknowledged in the space provided.
- 8. All addendums issued, if any, have been acknowledged in the space provided.
- N/A 9. Licenses (if applicable) have been inserted.
- 10. Erasures or other changes made to the Solicitation document have been initialed by the person signing the Solicitation.
- 11. Contractor's Qualification Questionnaire and Lee County Contractor History (if applicable).
- 12. DBE Participation form completed and/or signed or good faith documentation.
- N/A 13. Bid Bond and/or certified Check, (if required) have been submitted with the Solicitation in amounts indicated.
- 14. Any Delivery information required is included.
- 15. Affidavit Certification Immigration Signed and Notarized
- 16. Local Bidder Preference Affidavit (if applicable)
- 17. The mailing envelope has been addressed to:
 

<b>MAILING ADDRESS</b>	<b>PHYSICAL ADDRESS</b>
Lee County Procurement Mgmt.	Lee County Procurement Mgmt.
P.O. Box 398	or
Ft. Myers, FL 33902-0398	1825 Hendry St 3 <sup>rd</sup> Floor
	Ft. Myers, FL 33901
- 18. The mailing envelope **MUST** be sealed and marked with:  
Solicitation Number  
Opening Date and/or Receiving Date
- 19. The Solicitation will be mailed or delivered in time to be received no later than the specified opening date and time. (Otherwise Solicitation cannot be considered or accepted.)
- 20. If submitting a "NO BID" please write Solicitation number here \_\_\_\_\_ and check one of the following:  
 Do not offer this product       Insufficient time to respond.  
 Unable to meet specifications (why)  
 Unable to meet bond or insurance requirement.  
 Other: \_\_\_\_\_

Company Name and Address:  
\_\_\_\_\_  
\_\_\_\_\_



Mansfield Oil Company  
1025 Airport Parkway, S.W.  
Gainesville, GA 30501

**ATTACHMENT B – GENERATOR LOCATIONS**

NOTE: The County reserves the right to add additional sites to this list as they come on line over the term of this quote.

**OPTION A GENERATOR FUELING**

(Please provide the cost/gallon)

**PLEASE NOTE THE ADDITION OF THREE 12,000 GALLON  
TANKS AT THE NEW EOC.**

**Located at: 2675 Ortiz Ave, Ft. Myers 33905**

Cost/gallon \$ No Bid



**Mansfield Oil Company  
1025 Airport Parkway, S.W.  
Gainesville, GA 30501**

CERTIFICATE OF LIABILITY INSURANCE

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER: J. Smith Lanier & Co.-Atlanta, 11330 Lakefield Drive, Bldg 1, Suite 100, Duluth, GA 30097. CONTACT NAME: J. Smith Lanier & Co.-Atlanta. PHONE (A/C, No, Ext): 770 476-1770. FAX (A/C, No): 770 476-3651. INSURED: Mansfield Oil Company of Gainesville, Inc., 1025 Airport Parkway, SW, Gainesville, GA 30501. INSURERS: Farmland Mutual Ins. Co. (13838), Ironshore Specialty Insurance C (25445), Twin City Fire Insurance Co. (29459), Allied World Assurance Companie (19489), Interstate Fire & Casualty (22829).

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Table with columns: INSR LTR, TYPE OF INSURANCE, ADDL INSR, SUBR WVD, POLICY NUMBER, POLICY EFF (MM/DD/YYYY), POLICY EXP (MM/DD/YYYY), LIMITS. Rows include: A GENERAL LIABILITY (CPP119529A), A AUTOMOBILE LIABILITY (CPP119529A), B UMBRELLA LIAB (000194803), C WORKERS COMPENSATION AND EMPLOYERS' LIABILITY (20WEOG6025), D Pollution (03059391), E Excess Umbrella (HFX00024220261).

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Empty box for description of operations, locations, and vehicles.

CERTIFICATE HOLDER CANCELLATION

For Information Purposes Only. SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE: [Signature]



**MANSFIELD**

Mansfield Oil Company  
1025 Airport Parkway, S.W.  
Gainesville, Georgia 30501

(878) 450-2000  
FAX (878) 450-2200

## DRUG-FREE WORKPLACE and SUBSTANCE ABUSE POLICY STATEMENT

Mansfield Oil Company of Gainesville, Inc. is committed to providing a safe work environment and to fostering the well-being and health of its employees. That commitment is jeopardized when any Mansfield Oil Company employee illegally uses drugs on the job, comes to work under their influence, possesses, distributes or sells drugs in the workplace, or abuses alcohol on the job. Therefore, Mansfield Oil Company has established the following policy:

1. It is a violation of Mansfield Oil Company policy for any employee to use, possess, sell, trade, offer for sale, or offer to buy illegal drugs or otherwise engage in the illegal use of drugs on the job.
2. It is a violation of Mansfield Oil Company company policy for anyone to report to work under the influence of illegal drugs or alcohol.
3. It is a violation of Mansfield Oil Company company policy for anyone to use prescription drugs illegally. (However, nothing in this policy precludes the appropriate use of legally prescribed medications.)
4. Violations of this policy are subject to disciplinary action up to and including termination.



An employee reporting to work visibly impaired will be deemed unable to properly perform required duties and will not be allowed to work. If possible, the employee's supervisor will first seek another supervisor's opinion to confirm the employee's status. Next the supervisor will consult privately with the employee to determine the cause of the observation, including whether substance abuse has occurred. If, in the opinion of the supervisor, the employee is considered impaired, the employee will be sent home or to a medical facility by taxi or other safe transportation alternative - depending on the determination of the observed impairment - and accompanied by the supervisor or another employee if necessary. A drug test may be in order. An impaired employee will not be allowed to drive.

### Pre-Employment Testing

All job applicants at Mansfield Oil Company will undergo testing for the presence of illegal drugs as a condition of employment. Any applicant with a confirmed positive test result will be denied employment. Applicants will be required to submit voluntarily to a urinalysis test at a laboratory chosen by Mansfield Oil Company, and by signing a consent agreement, will release Mansfield Oil Company from liability.

If the physician, nurse or lab personnel has reasonable suspicion to believe that the job applicant has tampered with the specimen, the applicant will not be considered for employment.

Individuals who have failed a pre-employment test may initiate another inquiry with Mansfield Oil Company after a period of not shorter than six (6) months; but they must present themselves drug-free as demonstrated by urinalysis or other test selected by Mansfield Oil Company.

Mansfield Oil Company will not discriminate against applicants for employment because of a past history of





drug abuse. It is the current abuse of drugs, preventing employees from performing their jobs properly, that Mansfield Oil Company will not tolerate.

## Employee Drug Testing

Mansfield Oil Company has adopted testing practices to identify employees who use illegal drugs on or off the job. It shall be a condition of employment for all employees to submit to drug testing under the following circumstances:

1. Where there is a reasonable suspicion to believe that an employee is using illegal drugs. The following circumstances could cause reasonable suspicion:
  - a. Observed drug abuse.
  - b. Apparent physical state of impairment.
  - c. Incoherent mental state.
  - d. Marked changes in personal behavior that are otherwise unexplainable.
  - e. Deteriorating work performance that is not attributable to other factors.
  - f. Accidents or other actions that provide reasonable cause to believe the employee is under the influence of drugs.

Note: Reasonable suspicion is not limited to the facts and inferences listed above.
2. Where employees are involved in on-the-job accidents where personal injury is involved; or where damage to or loss of company property exceeds:
  - a. \$500 for company owned vehicles;
  - b. \$100 for all other company property.
3. As part of a follow-up program to treatment for drug abuse.
4. As part of a regularly scheduled, random participant program.
5. ~~When a substance abuse test is conducted as part of a routinely scheduled employee fitness-for-duty medical examination that is part of Mansfield Oil Company's established policy or that is scheduled routinely for all members of an employment classification or group.~~
6. Annually, on a random basis, for all employees who drive company vehicles at any time or who provide maintenance or repair for such vehicles.

Any employee refusing to consent to drug screening in the above circumstances shall be subject to disciplinary action, up to and including termination. An employee tested based on reasonable suspicion may be suspended without pay pending receipt of the test results and completion of any investigation conducted by Mansfield Oil Company, Inc.

Employees with a confirmed positive test result may, at their option and expense, have a second confirmation test made on the same specimen. An employee will not be allowed to submit another specimen for testing.

Mansfield Oil Company may test for any or all of the following substances; amphetamines, cannabinoids, cocaine, phencyclidine (PCP), methadone, methaqualene, opiates, barbiturates, benzodiazepines, propoxyphene, or a metabolite of any such substances.

Employees and job applicants are advised that O.C.G.A. §34-9-414 requires that all employees and job applicants be given notice of testing prior to testing.

## Procedures for Specimen Collection, Testing, and Confirmation Tests

1. Specimens will be collected with due regard to the privacy of the individual providing the specimen and in a manner reasonably calculated to prevent substitution or contamination of the specimen.
2. Specimen collection will be documented, and the documentation procedures shall include:
  - a. Labeling of specimen containers so as to reasonably preclude the likelihood of erroneous identification of test results; and
  - b. An opportunity for the employee or job applicant to record any information he or she considers relevant to the test, including identification of currently or recently used prescription or nonprescription medication or other relevant medical information. The providing of information will not preclude the administration of the test, but will be taken into account in interpreting any positive confirmed test results;
3. Specimen collection, storage, and transportation to the testing site will be performed in a manner which will reasonably preclude specimen contamination or adulteration;
4. A specimen for a test may be taken or collected by any of the following persons:
  - a. A physician, a physicians assistant, a registered professional nurse, a licensed practical nurse, a nurse practitioner, or a certified paramedic who is present on the scene of an accident for the purpose of rendering emergency medical service or treatment;
  - b. A qualified person certified or employed by a laboratory certified by the National Institute on Drug Abuse, the College of American Pathologists, or the Georgia Department of Human Resources; or
  - c. A qualified person certified or employed by a collection company.
5. Within five working days after receipt of a positive confirmed test result from the laboratory, Mansfield Oil Company will inform an employee or job applicant in writing of such positive test result, the consequences of such results, and the options available to the employee or job applicant.
6. Mansfield Oil Company will provide the employee or job applicant, upon request, a copy of the test results.
7. An initial test having a positive result must be verified by a confirmation test;
8. Mansfield Oil Company will, when performing drug testing or specimen collection, use chain of custody procedures to ensure proper record keeping, handling, labeling, and identification of all specimens to be tested;
9. Mansfield Oil Company will pay the cost of all drug tests, initial and confirmation, which Mansfield Oil Company requires of employees;
10. Employees or job applicants will pay the cost of any additional tests not required by Mansfield Oil Company, and
11. If testing is conducted based on reasonable suspicion, Mansfield Oil Company will promptly detail in writing the circumstances which formed the basis of the determination that reasonable suspicion existed to warrant the testing. A copy of this documentation shall be given to the employee upon request and the original documentation will be kept confidential by Mansfield Oil Company pursuant to O.C.G.A. §34-9-420 and retained by Mansfield Oil Company for at least one year.
12. If an initial drug test is negative, Mansfield Oil Company may in its sole discretion seek a confirmation test.
13. All positive initial tests shall be confirmed using the gas chromatography/mass spectrometry (GC/MC) method or an equivalent or more accurate scientifically accepted methods approved by the National Institute on Drug Abuse as such technology becomes available in a cost-effective form.

## Consequences of Positive Test Results

In cases where a drug screen indicates violation of this policy, the following steps will be taken:

1. The employee will be suspended without pay.

2. The employee will be required to seek treatment within 30 days, at the employees expense, for drug abuse from a recognized professional or institution. Refusal to do so will be viewed as misconduct, and is grounds for discharge or suspension, without pay, from employment.
3. The employee will be required to provide documentation of attendance and of successful completion of the treatment program.
4. The treatment provider shall determine a period of time within which the employees' system should be free of all traces of controlled substances. The employee must provide a negative test result within such time. If the employee fails to do so within such period, the employee will be discharged.
  - a. Follow-up testing will be conducted upon successful completion of a rehabilitation program. The frequency of such testing will be at least once a month on a random basis for a two-year period.
  - b. Employees who have been suspended and allowed to work in accordance with this procedure, and who are subsequently found to violate this policy shall be terminated.

Employees and job applicants who have a positive confirmed test result may explain or contest the result to Mansfield Oil Company, Inc. within five (5) working days, after Mansfield Oil Company contacts the employee and presents the positive test result as it was received from the laboratory in writing.

Employees must, as a condition of employment, report any conviction under a criminal drug statute for violations occurring on or off Mansfield Oil Company, Inc. premises while conducting company business. A report of a conviction must be made within five (5) days after the conviction.

It is the responsibility of the company's supervisors to counsel employees whenever they see changes in performance or behavior that suggest an employee has a drug problem. Although it is not the supervisor's job to diagnose personal problems, the supervisor should encourage such employees to seek help and advise them about available resources for getting help. Everyone shares responsibility for maintaining a safe work environment, and co-workers should encourage anyone who has a drug problem to seek help.

#### On-Call Personnel

Due to the nature of our business, many employees are called upon in emergency situations to report to work. It is the sole responsibility of the employee being called upon to inform their immediate supervisor if they are impaired and unable to perform job duties. An employee whose normal faculties are impaired due to the consumption of alcoholic beverages, or whose blood alcohol level tests .08 or higher - while on duty/company business shall be guilty of misconduct. Failure to submit to required medical or physical examinations or tests is misconduct, and is grounds for discharge or suspension, without pay, from employment. The consumption or possession of alcoholic beverages by employees while on Mansfield Oil Company premises is prohibited.

#### Mansfield Oil Company Resource Program

Mansfield Oil Company offers a Resource Program for employees. The Resource Program Coordinator will maintain a resource file of information on various means of employee assistance in the community, including but not limited to drug and alcohol abuse programs. Employees are encouraged to use this resource file, which is located in the Mansfield Oil Company Training Department or obtained through the company nurse. In addition, Mansfield Oil Company will distribute this information to all Mansfield Oil Company employees for their confidential use, and post the resource file in each store and office location in a conspicuous place. The Resource Program Coordinator may

also help provide assessment, referral and short-term counselling for employees who need or request it. If a Resource Coordinator referral to a treatment provider is necessary, costs may be covered by the employee's medical insurance; but the cost of such outside services are the employee's responsibility.

Confidentiality will be maintained except as permitted or required by law. NO information regarding the nature of the personal problem will be made available to the supervisors, nor will it be included in the permanent personnel file. Participation will not affect an employee's career advancement or employment, nor will it protect an employee from disciplinary action for substandard job performance. The Resource Program is used in conjunction with discipline, not a substitute for discipline. The Resource Program is available to all employees through self-referral or referral by a supervisor.

#### Employee Education Programs

Mansfield Oil Company will provide all employees with a semiannual education program on substance abuse, in general, and its effects on the workplace, specifically. An education program for a minimum of one hour includes but is not limited to the following information:

1. The explanation of the disease model of addiction for alcohol and drugs;
2. The effects and dangers of the commonly abused substances in the workplace; and
3. Mansfield Oil Company's policies and procedures regarding substance abuse in the workplace and how employees who wish to obtain substance abuse treatment can do so.

#### Supervisor Education Programs

Mansfield Oil Company will also provide all supervisory personnel with a minimum of two hours of supervisory training, includes but is not limited to the following information:

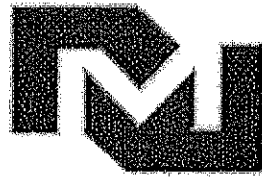
1. How to recognize signs of employee substance abuse;
2. How to document and collaborate signs of employee substance abuse; and
3. How to refer substance abusing employees to the proper treatment providers.

#### Summary

The goal of this policy is to balance respect for individuals with the need to maintain a safe, productive and drug-free environment. The intent of this policy is to offer a helping hand to those who need it, while sending a clear message that the illegal use of drugs and the abuse of alcohol are incompatible with employment at Mansfield Oil Company.

The confidentiality of any information received by Mansfield Oil Company, through a substance abuse testing program shall be maintained, except as otherwise permitted or required by law.

The Mansfield Oil Company, Drug-Free Workplace program is certified by the Georgia Workers' Compensation Board in accordance with Title 34, Chapter 9, Article 11 of the Official Code of Georgia Annotated.



**Mansfield**

Local Service. Nationwide.

# **Mansfield Oil Company**

Emergency Plan 2013

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## I. Assumptions

Given that this plan is for natural disasters, and the scope of its affect is impossible to predict, Mansfield must make certain assumptions and caveats to any relief plan put into action. Mansfield will make every possible effort to maintain service levels at locations after a hurricane has passed, while working with regulatory authorities and under any executive order that has been issued. For planning purposes, the following assumptions must be made:

- Fuel is readily available from terminals suppliers that we would normally use to pull fuel. Mansfield is authorized to pull at nearly every major terminal off of every major supplier. If providers have to travel non-standard distances to procure fuel, capabilities to fueling locations will be reduced.
- FEMA and state disaster agencies have not taken control of a Mansfield provider's capacity.
- Providers are able to reposition drivers and equipment in a timely manner in the aftermath of the natural disaster.

Given the increased demand for supply before and after hurricanes, capacity is extremely finite. If any of the above assumptions are not met, capacity to fulfill customer needs will further be diminished. With this in mind, Mansfield will do everything possible to make sure that locations are fueled.

## II. Procedure

Currently, Mansfield uses a number of resources to monitor the progress of tropical storms throughout the season. As Mansfield monitors storm activity the following statuses will be used by our operational staff to prepare for hurricane related issues:

- **Status green**- no imminent threats present; normal operations.
- **Status orange**- threats of storms or presence of storms indicated with expected landfall 5-7 days out.
- **Status red**- storm expected to make landfall within 3 days or less, or hurricane has already impacted certain regions. Group Supervisors will meet daily with the Disaster Response Team to asses supply, carrier availability and other operational concerns.

Depending on the type of fueling location and the perceived impact of the event, the following procedures will be used during status orange and status red scenarios:

### Bulk Locations

- Mansfield works with all bulk sites in the projected strike region. Mansfield will either look at inventory readings or call sites in the area to schedule loads before the storm arrives to top site tanks off.
- Top-off deliveries will consist of short loads and full loads. It is better to pay for a short load of fuel and top off because fuel and resource availability after an event are unknown.

- Mansfield constantly interacts with carriers to monitor delivery schedules in order to meet all location needs. If for some reason loads cannot be delivered before the storm strikes, these loads are first out once terminals and carriers commence operations after the storm passes.

#### Mobile Locations Currently Being Fueled

- Mansfield interacts with providers to get providers' plans for the storm. Estimated operability is assessed and communicated to Mansfield customers.
- Sites will remain on same delivery schedule.
- Three days before the storm makes landfall, Mansfield would request a conference call with corporate and sites that are in the projected strike area. Conference calls will be used to confirm information provided to Mansfield and to gather additional needed contact information.
- Mansfield will use information provided from the call to interact with mobile providers to begin post storm planning.
- Other contracted mobile refuelers that might be moving equipment into the region- Mansfield will use the information from the conference call to try and get service commitments before the storm strikes. In some cases, Mansfield will ask corporate if it wishes to purchase capacity understanding it will have a cost even if it goes unused.
- After the storm has passed, Mansfield will attempt to contact appropriate personnel at sites to ascertain fueling needs.
- If a Mansfield contracted mobile provider cannot service these locations, Mansfield will try to reach out to non-contracted providers. If Mansfield is able to locate a non-contracted provider, Mansfield will have the provider contact and bill the location directly.

### **III. Mansfield Recommendations**

Given the expected severity of the storm, Mansfield will poll all contracted providers in the area to ascertain feasibility of the plan to deal with the storm. Mansfield has evaluated similar events in recent years and, based on our experiences, would make the following recommendations:

- Top off all vehicles at site locations before parking them for the storm. This will benefit sites by having all vehicles fueled and tanks at maximum capacity to facilitate additional time before needing to be refueled.
- Review and distribute all internal emergency contact information. This list should include local and corporate contact information. Where possible, this list should also include individual cell numbers of local operations personnel for use when land lines are unavailable. A list of Mansfield personnel and their contact information is listed on the last page of this document.
- Prior to hurricane season, we recommend that all sites in hurricane areas should purchase water tight seal caps for all tanks.

### **IV. Hurricane Action Timelines**

Below are the suggested action timelines:

### **96 Hours Prior to Expected Landfall- Status Orange**

Mansfield to update Corporate of anticipated landfall location.

Non-Inventory Management sites in projected storm path should evaluate inventory levels and order full or part loads to ensure tanks are topped off.

### **72 Hours Prior to Expected Landfall- Status Red**

Mansfield to update Corporate of anticipated landfall location.

Mansfield will monitor sites on Inventory Management and schedule deliveries to ensure tanks are topped off.

Non-Inventory Management sites in projected storm path will continue to monitor inventory levels and order as appropriate to ensure tanks are topped off prior to hurricane. Non-Inventory Management sites should place orders for any loads needed prior to hurricane.

Conference call with Mansfield, Corporate, and sites in the anticipated affected region to discuss operational details.

### **48 Hours Prior to Expected Landfall- Status Red**

Mansfield to update Corporate of anticipated landfall location.

Mansfield will schedule final deliveries prior to landfall for Inventory Management sites.

Sites in affected area should begin fueling at retail locations if possible so that their bulk tanks are full after the storm has passed.

Mansfield will coordinate with Corporate and individual sites to establish priority list of sites for receiving deliveries after hurricane makes landfall.

### **24 Hours Prior to Expected Landfall-Status Red**

Mansfield to update Corporate of anticipated landfall location.

Terminals in affected region will begin to shut down. Carriers may begin to move assets out of project hurricane path.

Final deliveries will be made to sites as conditions permit and if possible given terminal and carrier storm preparation / evacuation plans.

Sites should place water-tight caps on product fill pipes to reduce chance of water entering tanks.



### **12 Hours Prior to Expected Landfall- Status Red**

Most terminals in region will likely be shut down and carriers will begin to pull equipment off road as safety precautions.

Deliveries will most likely not be possible until after hurricane has passed.

### **0 Hour – Landfall- Status Red**

No delivery activity

Mansfield will be in contact with carriers and terminals in effected area to evaluate damage and time until assets are back on-line and operational.

### **12 Hours after Landfall- Status Red**

Mansfield will coordinate with Corporate to assess the site damages in affected area and verify the priority list for first deliveries.

Mansfield will notify Corporate of the operational status of terminals and carriers in the affected region, any anticipated disruptions to deliveries, and anticipated time lines until supply & deliveries will return to normal.

Mansfield will attempt to make contact with sites in affected area in order to assess operational status and fuel delivery needs.

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Mansfield will schedule deliveries to highest priority sites. Deliveries may be scheduled from non-traditional origins if terminals/carriers in region are not operable.

### **24 Hours after Landfall- Status Red**

Mansfield will notify Corporate of the operational status of terminals and carriers in the affected region, any anticipated disruptions to deliveries, and anticipated time lines until supply & deliveries will return to normal.

Mansfield will continue to attempt to contact sites in the affected area and schedule deliveries on priority basis in accordance to safety considerations and any applicable local, state, or federal mandates.

Mansfield will inform the site and Corporate if there are issues prohibiting delivery to any locations.

Sites placing orders should do so at least 48 hours in advance, rather than the standard 24 hours in advance.

Mansfield will schedule deliveries to highest priority sites. Deliveries may be scheduled from non-traditional origins if terminals/carriers in region are not operable.

#### **48 Hours after Landfall-Status Red**

Mansfield will update Corporate on a conference call as to the operational status of terminals and carriers in the affected region, any anticipated disruptions to deliveries, and anticipated time lines until supply and deliveries will return to normal.

Mansfield will notify Corporate of any sites with whom Mansfield has **NOT** been able to make contact. This includes Inventory Management locations that no longer have readings coming in.

Mansfield and Corporate will re-evaluate the delivery priority list if disruptions to supply remain significant in the affected region.

Deliveries will be scheduled as needed in accordance to safety considerations and any applicable local, state, or federal mandates.

Mansfield will inform the site and Corporate if there are issues prohibiting delivery to any locations.

#### **72 Hours after Landfall-Status Red**

~~Mansfield will update Corporate on a conference call as to the operational status of terminals and carriers in the affected region and if disruptions to deliveries in the area continue.~~

Sites should continue to place orders 48 hours in advance.

Mansfield will inform Corporate of status of scheduled deliveries, and evaluate the established priority list.

Deliveries will be scheduled as needed in accordance to safety considerations and any applicable local, state, or federal mandates.

Mansfield will inform the sites and Corporate if there are issues prohibiting delivery to any locations.

Mansfield will schedule deliveries to highest priority sites. Deliveries may be scheduled from non-traditional origins if terminals/carriers in region are not operable.

Mansfield pledges to do everything possible to facilitate the fueling of locations during disaster times.

## **96 Hours + After Landfall- Status Orange**

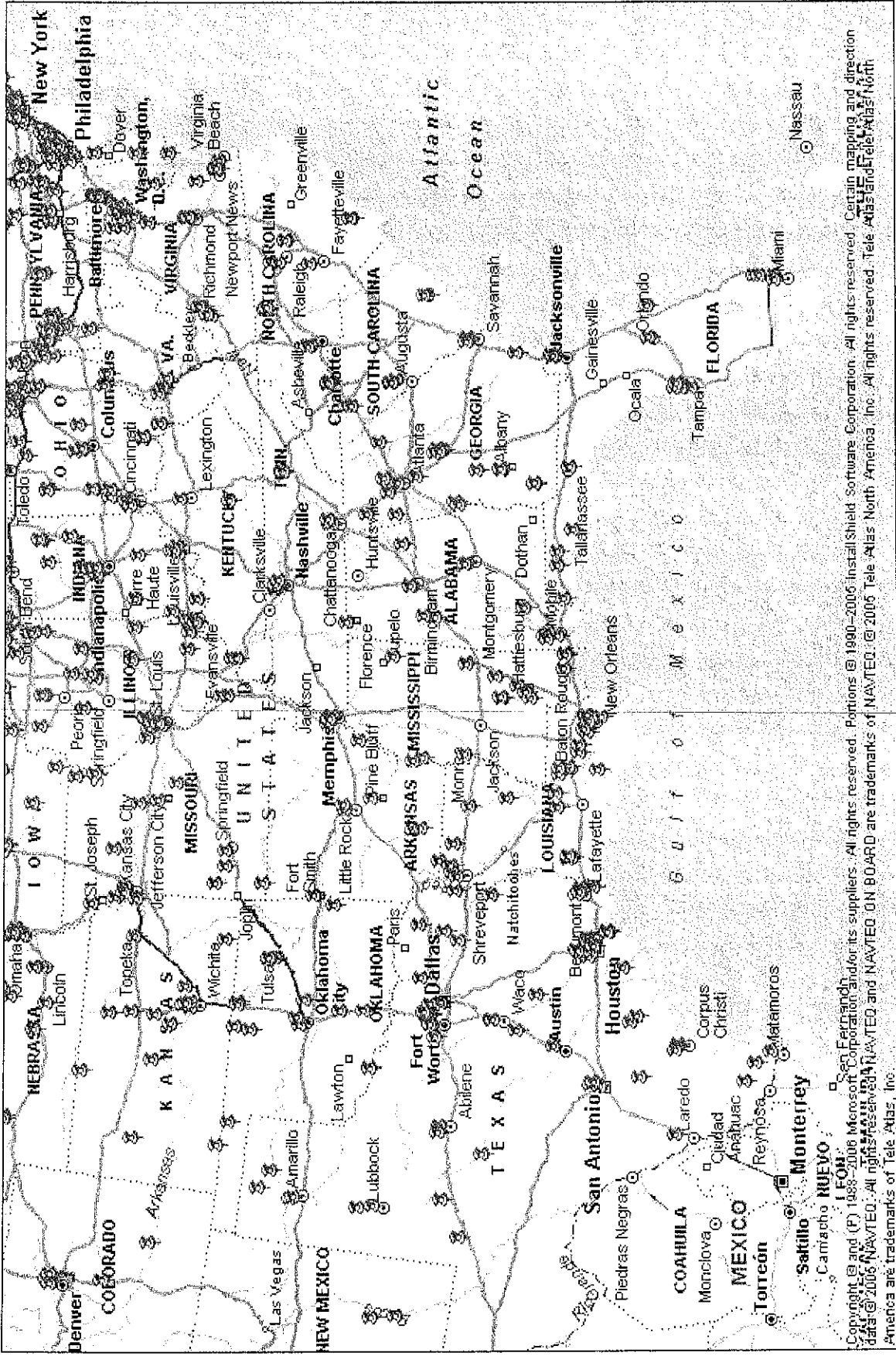
Mansfield will update Corporate of overall status of operations and delivery options in affected areas.

Mansfield will co-ordinate with Corporate as to non-typical operational processes that will need to continue.

Delivery schedules will revert to normal as quickly as possible.

Mansfield pledges to do everything possible to facilitate the fueling of locations during disaster times.

VI. Terminal Access Each pushpin represents a terminal. At any of these terminals, Mansfield has access to between one and four suppliers.



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# Ethanol

## Material Safety Data Sheet

CITGO Petroleum Corporation  
 P.O. Box 4689  
 Houston, TX 77210

MSDS No. 03201  
 Revision Date 3/14/2006

**IMPORTANT:** Prepared in accordance with 29 CFR 1910.1200. Read this MSDS before handling or disposing of this product and pass this information on to employees, customers and users of this product.

Hazard Rankings		
	HMIS	NFPA
Health Hazard	* 1	1
Fire Hazard	3	3
Reactivity	0	0

\* = Chronic Health Hazard

### Emergency Overview

**Physical State** Liquid.

**Color** Clear to light amber **Odor** Hydrocarbon (Strong.)

**DANGER! Extremely flammable liquid mixture; vapor may cause flash fire or explosion!**

**Deliberate Ingestion may be harmful or fatal!**

**Mist or vapor may irritate the eyes, mucous membranes, and respiratory tract!**

**Liquid contact may cause minimal to severe eye irritation and/or**

**mild to severe skin irritation and inflammation!**

**May be harmful if inhaled or absorbed through the skin!**

**Overexposures may cause central nervous system (CNS) depression and**

**target organ effects like blood or blood-forming tissue damage.**

**Aspiration into the lungs may cause**

**pulmonary edema and chemical pneumonia!**

**Prolonged and/or repeated inhalation may increase the heart's susceptibility to arrhythmias (irregular beats)!**

**Contains low levels of Benzene! Cancer hazard; may cause leukemia**

**and other blood disorders!**

**Mutagenic hazard; may cause genetic damage!**

**Based on component animal testing, may adversely affect reproduction!**

### Protective Equipment

Minimum Recommended  
 See Section 8 for Details



## SECTION 1. PRODUCT IDENTIFICATION

<b>Trade Name</b>	Ethanol	<b>Technical Contact</b>	(800) 525-4692 or (713) 321-4269 (M-F)
<b>Product Number</b>	03201	<b>Medical Emergency</b>	(918) 495-4700
<b>CAS Number</b>	Mixture	<b>CHEMTREC Emergency (United States Only)</b>	(800) 424-9300
<b>Product Family</b>	Ethanol + natural gasoline		
<b>Synonyms</b>	Denatured Ethanol; Denatured Industrial Ethanol.		

# Ethanol

## SECTION 2. COMPOSITION

Component Name(s)	CAS Registry No.	Concentration (%)
Ethanol	64-17-5	95 - 99
C4-C12 Hydrocarbons (Natural Gasoline)	8006-61-9	<5

## SECTION 3. HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry Skin Contact. Eye Contact. Absorption. Inhalation.

### Signs and Symptoms of Acute Exposure

**Inhalation** Breathing high concentrations of vapor may cause respiratory irritation, euphoria, excitation or giddiness, headache, nausea, vomiting, abdominal pain, loss of appetite, fatigue, muscular weakness, staggering gait, and central nervous system (CNS) depression. CNS effects include dizziness, drowsiness, disorientation, vertigo, memory loss, visual disturbances, difficulty with breathing, convulsions, unconsciousness, paralysis, coma, and even death, depending upon level of exposure concentration and/or duration. Vapors can reduce the oxygen content in air.

**Eye Contact** Animal test results and actual human exposures of this material's components suggest that this product can cause minimal to severe eye irritation upon short-term exposure. Symptoms include stinging, watering, redness, and swelling.

**Skin Contact** Animal test results and actual human exposures of this material's components suggest that this product can cause minimal to moderate skin irritation. Short-term contact symptoms include redness, itching, and burning of the skin. This material may also be absorbed through the skin and produce CNS depression effects (see "Inhalation" above). If the skin is damaged, absorption increases. Prolonged and/or repeated contact may cause moderate to severe dermatitis. Chronic symptoms may include drying, swelling, scaling, blistering, cracking, and severe tissue damage.

**Ingestion** If swallowed, this material may irritate the mucous membranes of the mouth, throat, and esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms include a burning sensation of the mouth and esophagus, nausea, abdominal pain, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, and delirium, as well as additional central nervous system (CNS) effects (see "Inhalation" above).

Due to its light viscosity, there is a danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death. Progressive CNS depression, respiratory insufficiency, and ventricular fibrillation may also result in death.

**Chronic Health Effects Summary** Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction.

Reports have associated repeated and prolonged occupational overexposure to solvent naphthas with irreversible brain and nervous system damage (sometimes referred to as "Solvent or Painter's Syndrome"). And, altered mental state, drowsiness, menstrual problems, peripheral motor neuropathy, irreversible brain damage (so-called "Petrol Sniffers Encephalopathy"), delirium, seizures, and sudden death have been common results for naphtha abusers. Intentional misuse by deliberately concentrating and inhaling the gasoline portion of this material may be harmful or fatal.

**Benzene** is considered to be a cancer causing agent. It damages blood cells, the bone marrow, and other blood-forming tissues causing leukopenia, aplastic anemia, and/or acute myelogenous leukemia (AML). Benzene is also capable of causing changes in genetic material (chromosomes). Chronic overexposures have caused vaginal bleeding, heavy menstrual bleeding, and hemorrhagic complications during pregnancy. Available information indicates that benzene is NOT teratogenic, but is fetotoxic at exposure levels which result in mild maternal toxicity. In limited animal tests, high inhaled doses of benzene have caused

## Ethanol

decreased fetal body weights, increased skeletal variations, and alterations in the formation and development of blood cells in the bone marrow of rodents. (See Section 11.)

**Conditions Aggravated by Exposure**

Personnel with pre-existing central nervous system (CNS) disease, neurological conditions, skin disorders, liver or kidney function, blood disorders, or chronic respiratory diseases, and women attempting to conceive should avoid exposure. Special precautions are necessary for pregnant women and nursing mothers.

Exposure to high concentrations of this material may increase the sensitivity of the heart to **epinephrine (adrenalin) and catecholamine-like drugs** Personnel with pre-existing cardiac disorders may be more susceptible to this effect (see Section 4, "Note to Physicians").

**Target Organs**

This substance is toxic to lungs, central nervous system, brain, mucous membranes, skin, eyes, and possibly, the blood, bone marrow and other blood-forming tissues, heart, liver, kidneys, and reproductive systems.

**Carcinogenic Potential**

**CARCINOGENIC EFFECTS** Classified 1 (Proven for human.) by IARC, + (Proven.) by OSHA [Benzene].

OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA Health Hazard Classification				OSHA Physical Hazard Classification			
Irritant	<input checked="" type="checkbox"/>	Sensitizer	<input checked="" type="checkbox"/>	Combustible	<input type="checkbox"/>	Explosive	<input type="checkbox"/>
Toxic	<input type="checkbox"/>	Highly Toxic	<input type="checkbox"/>	Flammable	<input checked="" type="checkbox"/>	Oxidizer	<input type="checkbox"/>
Corrosive	<input type="checkbox"/>	Carcinogenic	<input checked="" type="checkbox"/>	Compressed Gas	<input type="checkbox"/>	Organic Peroxide	<input type="checkbox"/>
						Pyrophoric	<input type="checkbox"/>
						Water-reactive	<input type="checkbox"/>
						Unstable	<input type="checkbox"/>

### SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

- Inhalation**                      Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately.
- Eye Contact**                      Check for and remove contact lenses. If irritation or redness develops, flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. Do not use eye ointment. Seek medical attention immediately.
- Skin Contact**                      Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.
- Ingestion**                              Do not induce vomiting or give anything by mouth. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.
- Notes to Physician**                      **INHALATION:** Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required.

**SKIN:** In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in

## Ethanol

ischemia and gangrene. Early symptoms may be minimal.

**INGESTION:** If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

### SECTION 5. FIRE FIGHTING MEASURES

<b>NFPA Flammability Classification</b>	NFPA Class-IB flammable liquid.		
<b>Flash Point</b>	Open cup: -5°C (23°F).		
<b>Lower Flammable Limit</b>	AP 1.3 %	<b>Upper Flammable Limit</b>	AP 19 %
<b>Autoignition Temperature</b>	>316°C (>600°F)		
<b>Hazardous Combustion Products</b>	Burning or excessive heating may produce smoke, carbon monoxide, carbon dioxide, and possibly other harmful gases/vapors.		
<b>Special Properties</b>	Extremely Flammable Liquid! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. May create vapor/air explosion hazard in confined spaces such as sewers. If container is not properly cooled, it can rupture in the heat of a fire.		
<b>Extinguishing Media</b>	SMALL FIRE: Use dry chemicals, carbon dioxide (CO <sub>2</sub> ), foam, water fog, or inert gas (nitrogen). LARGE FIRE: Use foam, water fog, or waterspray. Water fog and spray are effective in cooling containers and adjacent structures but might cause frothing and/or may not achieve extinguishment. A water jet may be used to cool the vessel's external walls to prevent pressure build-up, autoignition, or explosion. NEVER use a water jet directly on the fire because it may spread the fire to a larger area.		
<b>Protection of Fire Fighters</b>	Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from venting safety devices or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities if liquid(s) enter sewers/waterways.		

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Extremely Flammable Liquid! Release causes an immediate fire or explosion hazard. Evacuate all non-essential personnel from immediate area and establish a "regulated zone" with site control and security. A vapor-suppressing foam may be used to reduce vapors. Eliminate all ignition sources. All equipment used when handling this material must be grounded. Stop the leak if it can be done without risk. Do not touch or walk through spilled material. Remove spillage immediately from hard, smooth walking areas. Prevent its entry into waterways, sewers, basements, or confined areas. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to appropriate waste containers. Use clean, non-sparking tools to collect absorbed material.

For large spills, secure the area and control access. Dike far ahead of a liquid spill to ensure



## Ethanol

complete collection. Water mist or spray may be used to reduce or disperse vapors; but, it may not prevent ignition in closed spaces. This material will float on water and its run-off may create an explosion or fire hazard. Verify that responders are properly HAZWOPER-trained and wearing appropriate respiratory equipment and fire-resistant protective clothing during cleanup operations. In an urban area, cleanup spill as soon as possible; in natural environments, cleanup on advice from specialists. Pick up free liquid for recycle and/or disposal if it can be accomplished safely with explosion-proof equipment. Collect any excess material with absorbent pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal. Comply with all laws and regulations.

## SECTION 7. HANDLING AND STORAGE

### Handling

A spill or leak can cause an immediate fire/explosion hazard. Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Bond and ground all equipment before transferring this material from one container to another. Do not contact with oxidizable materials. Do not breathe vapor. Use only with adequate ventilation/personal protection. Never siphon by mouth. Avoid contact with eyes, skin, and clothing. Prevent contact with food, chewing, or smoking materials. Do not take internally.

When performing repairs and maintenance on contaminated equipment, keep unnecessary persons away from the area. Eliminate all potential ignition sources. Drain and purge equipment, as necessary, to remove material residues. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide ventilation to maintain exposure potential below applicable exposure limits. Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

Empty containers may contain material residues which can ignite with explosive force. Misuse of empty containers can be dangerous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers can cause fire, explosion, or release of toxic fumes from residues. Do not pressurize or expose empty containers to open flame, sparks, or heat. Keep container closed and drum bungs in place. All label warnings and precautions must be observed. Return empty drums to a qualified reconditioner. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling, or disposing of empty containers and/or waste residues of this material.

### Storage

Store and transport in accordance with all applicable laws. Keep containers tightly closed and store in a cool, dry, well-ventilated place, plainly labeled, and out of closed vehicles. Keep away from all ignition sources! Ground all equipment containing this material. Containers should be able to withstand pressures expected from warming and cooling in storage. This flammable liquid should be stored in a separate safety cabinet or room, and preferably refrigerated. All electrical equipment in areas where this material is stored or handled should be installed in accordance with applicable requirements of the N.F.P.A.'s National Electrical Code (NEC).

## SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Engineering Controls

Provide ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below. All electrical equipment should comply with the National Electric Code. An emergency eye wash station and safety shower should be located near the work-station.

### Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.

## Ethanol



- Eye Protection** Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. A suitable emergency eye wash water and safety shower should be located near the work station.
- Hand Protection** Avoid skin contact. Use heavy duty gloves constructed of chemical resistant materials such as Viton® or heavy nitrile rubber. Wash hands with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners.
- Body Protection** Avoid skin contact. It is recommended that fire-retardant garments (e.g. Nomex™) be worn while working with flammable and combustible liquids. If splashing or spraying is expected, chemical-resistant protective clothing (Tyvek®, nitrile, or neoprene) should be worn. This might include long-sleeves, apron, slicker suit, boots, and additional facial protection. If general contact occurs, IMMEDIATELY remove soaked clothing and take a shower. Contaminated leather goods should be removed promptly and discarded.
- Respiratory Protection** For known vapor concentrations above the occupational exposure guidelines (see below), use a NIOSH-approved organic vapor respirator if adequate protection is provided. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134). For airborne vapor concentrations that exceed the recommended protection factors for organic vapor respirators, use a full-face, positive-pressure, supplied air respirator. Due to fire and explosion hazards, do not enter atmospheres containing concentrations greater than 10% of the lower flammable limit of this product.
- General Comments** Warning! Odor is an inadequate warning for hazardous conditions, especially since the odor threshold of **benzene** is several ppm above the occupational exposure guideline levels. Released vapors may cause extremely flammable, explosive, and/or oxygen-deficient atmospheres. Do not enter such areas or confined spaces without taking special safety precautions including monitoring for oxygen deficiency and flammability.

### Occupational Exposure Guidelines

Substance	Applicable Workplace Exposure Levels
Ethanol	<b>ACGIH (United States).</b> TWA: 1000 ppm 8 hour(s). <b>OSHA (United States).</b> TWA: 1000 ppm 8 hour(s).
Benzene	<b>ACGIH (United States). Skin</b> TWA: 0.5 ppm 8 hour(s). STEL: 2.5 ppm 15 minute(s). <b>OSHA (United States). Skin Notes: See Table Z-2 for exclusions in 20 CFR 1910.1028 to the PEL.</b> TWA: 1 ppm 8 hour(s). STEL: 5 ppm 15 minute(s).
Petroleum Hydrocarbons	<b>ACGIH (United States, 2000).</b> TWA: 300 ppm STEL: 500 ppm <b>OSHA (United States, 1989).</b> TWA: 300 ppm STEL: 500 ppm

## Ethanol

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

<b>Physical State</b>	Liquid.	<b>Color</b>	Clear to light amber	<b>Odor</b>	Hydrocarbon (Strong.)
<b>Specific Gravity</b>	AP 0.8	<b>pH</b>	6.0 to 7.0	<b>Vapor Density</b>	1.6 (Air = 1)
<b>Boiling Range</b>	78.5°C (173.3°F)			<b>Melting/Freezing Point</b>	-160° to 13°C (-255° to 55°F)
<b>Vapor Pressure</b>	Not available.			<b>Volatility</b>	785 g/l VOC (w/v)
<b>Solubility in Water</b>	Partially soluble in water			<b>Viscosity (cSt @ 40°C)</b>	0.1 to 0.5
<b>Flash Point</b>	Open cup: -5°C (23°F).				
<b>Additional Properties</b>	No additional information.				

### SECTION 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable.	<b>Hazardous Polymerization</b>	Not expected to occur.
<b>Conditions to Avoid</b>	Keep away from heat, sparks, and other ignition sources, strong oxidizing conditions, and freezing temperatures.		
<b>Materials Incompatibility</b>	Strong acids, especially nitric acid, alkalis, and oxidizers such as liquid chlorine, many flourides, perchlorates, and other halogens, hydrogen peroxide, and oxygen.		
<b>Hazardous Decomposition Products</b>	No substances are readily identified from composition; but, no degradation data is available.		

### SECTION 11. TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

**Toxicity Data**

**Ethanol:**  
Inhalation exposure to ethanol vapor at concentrations above applicable workplace exposure levels is expected to produce eye and mucus membrane irritation. Human exposure at concentrations from 1000 to 5000 ppm produced symptoms of narcosis, stupor and unconsciousness. Subjects exposed to ethanol vapor in concentrations between 500 and 10,000 ppm experienced coughing and smarting of the eyes and nose. At 15,000 ppm there was continuous lacrimation and coughing. While extensive acute and chronic effects can be expected with ethanol consumption, ingestion is not expected to be a significant route of exposure to this product.

**Benzene:**  
ORAL (LD50): Acute: 930 mg/kg [Rat]. 4700 mg/kg [Mouse].  
INHALATION (LC50):  
(VAPOR): Acute: 10000 ppm 7 hour(s) [Rat]. 9980 ppm 8 hour(s) [Mouse].

**Studies of Workers Over-Exposed to Benzene:**  
Studies of workers exposed to benzene show clear evidence that over-exposure can cause cancer of the blood forming organs (acute myelogenous leukemia) and aplastic anemia, an often fatal disease. Studies also suggest over-exposure to benzene may be associated with other types of leukemia and other blood disorders. Some studies of workers exposed to benzene have shown an association with increased rates of chromosome aberrations in circulating lymphocytes. One study of women workers exposed to benzene suggested a

## Ethanol

weak association with irregular menstruation. However, other studies of workers exposed to benzene have not demonstrated clear evidence of an effect on fertility or reproductive outcome in humans. Benzene can cross the placenta and affect the developing fetus. Cases of aplastic anemia have been reported in the offspring of persons severely over-exposed to benzene.

### Studies in Laboratory Animals:

Studies in laboratory animals indicate that prolonged, repeated exposure to high levels of benzene vapor can cause bone marrow suppression and cancer in multiple organ systems. Studies in laboratory animals show evidence of adverse effects on male reproductive organs following high levels of exposure but no significant effects on reproduction have been observed. Embryotoxicity has been reported in studies of laboratory animals but effects were limited to reduced fetal weight and skeletal variations.

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity** No data.

### Environmental Fate

For additional ecological information concerning components of this product, users should refer to the Hazardous Substances Data Bank® and the Oil and Hazardous Materials/Technical Assistance Data System (OHM/TADS) maintained by the U.S. National Library of Medicine. (See Section 2 for components.)

## SECTION 13. DISPOSAL CONSIDERATIONS

**Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.**

Maximize material recovery for reuse or recycling. If spilled material is introduced into a wastewater treatment system, chemical and biological oxygen demand (COD and BOD) will likely increase. This material is biodegradable if gradually exposed to microorganisms, preferably in an aerobic environment. In sewage-seeded wastewater, at or below concentrations of 0.2 vol.% of this naphtha, there is little or no effect on bio-oxidation and/or digestion. However, at 1 vol.%, it doubles the required digestion period. Higher concentrations interfere with floc formation and sludge settling and also plug filters or exchange beds. Vapor emissions from a bio-oxidation process contaminated by this material might prove to be a health hazard.

Recovered non-usable material may be regulated by US EPA as a hazardous waste due to its ignitibility (D001) and/or its toxic (D018) characteristics. In addition, conditions of use may cause this material to become a hazardous waste, as defined by Federal or State regulations. It is the responsibility of the user to determine if the material is a RCRA "hazardous waste" at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR Parts 260 through 271). State and/or local regulations might be even more restrictive. Contact the RCRA/Superfund Hotline at (800) 424-9346 or your regional US EPA office for guidance concerning case specific disposal issues.


## SECTION 14. TRANSPORT INFORMATION

**The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.**

**US DOT Status** A U.S. Department of Transportation (DOT) regulated material.

**Proper Shipping Name** Alcohol, n.o.s. (Ethanol, Gasoline)

# Ethanol

Hazard Class	3	Packing Group(s)	II
		UN/NA Number	UN1987
Reportable Quantity	A Reportable Quantity (RQ) has not been established for this material.		
Placard(s)		Emergency Response Guide No.	128
		MARPOL III Status	Not a DOT "Marine Pollutant" per 49 CFR 171.8.

## SECTION 15. REGULATORY INFORMATION

TSCA Inventory	This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.
SARA 302/304 Emergency Planning and Notification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.
SARA 311/312 Hazard Identification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: <b>Fire Hazard, Acute (Immediate) Health Hazard, and Chronic (Delayed) Health Hazard.</b>
SARA 313 Toxic Chemical Notification and Release Reporting	This product contains the following components in concentrations above <i>de minimis</i> levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: Benzene [CAS No.: 71-43-2] Concentration: 0.1%
CERCLA	The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: Benzene [CAS No.: 71-43-2] RQ = 10 lbs. (4.536 kg) Concentration: 0.11%
Clean Water Act (CWA)	This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.
California Proposition 65	This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5): Ethanol: 97% Benzene: 0.11%
New Jersey Right-to-Know Label	
Additional Remarks	No additional regulatory remarks.

# Ethanol

## **SECTION 16. OTHER INFORMATION**

Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

### **REVISION INFORMATION**

Version Number 2.0  
Revision Date 3/14/2006  
Print Date Printed on 3/14/2006.

### **ABBREVIATIONS**

AP: Approximately EQ: Equal >: Greater Than <: Less Than NA: Not Applicable ND: No Data NE: Not Established  
ACGIH: American Conference of Governmental Industrial Hygienists AIHA: American Industrial Hygiene Association  
IARC: International Agency for Research on Cancer NTP: National Toxicology Program  
NIOSH: National Institute of Occupational Safety and Health OSHA: Occupational Safety and Health Administration  
NPCA: National Paint and Coating Manufacturers Association HMIS: Hazardous Materials Information System  
NFPA: National Fire Protection Association EPA: US Environmental Protection Agency

### **DISCLAIMER OF LIABILITY**

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THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE, AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

\*\*\*\*\* END OF MSDS \*\*\*\*\*



# CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

## Material Safety Data Sheet

CITGO Petroleum Corporation  
P. O. Box 4689  
Houston, TX 77210

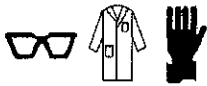
MSDS No. AG2DF  
Revision Date 12/31/2007

**IMPORTANT:** This MSDS is prepared in accordance with 29 CFR 1910.1200. Read this MSDS before transporting, handling, storing or disposing of this product and forward this information to employees, customers and users of this product.

Hazard Rankings		
	HMIS	NFPA
Health Hazard	* 2	0
Fire Hazard	2	2
Reactivity	0	0

\* = Chronic Health Hazard

Emergency Overview			
<b>Physical State</b>	Liquid.		
<b>Color</b>	Transparent, clear to yellow or red.	<b>Odor</b>	Characteristic, kerosene-like.
<b>WARNING!</b>			
Combustible liquid; vapor may cause flash fire.			
Harmful or fatal if swallowed - can enter lungs and cause damage.			
Can cause eye, skin or respiratory tract irritation.			
May be harmful if inhaled or absorbed through the skin.			
Overexposure can cause central nervous system (CNS) depression and/or other target organ effects.			
Possible Cancer Hazard (See Section 3)			
Harmful to aquatic organisms.			

Protective Equipment
Minimum Recommended See Section 8 for Details


### SECTION 1. PRODUCT IDENTIFICATION

<b>Trade Name</b>	CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades	<b>Technical Contact</b>	(832) 486-5940
<b>Product Number</b>	Various	<b>Medical Emergency</b>	(832) 486-4700
<b>CAS Number</b>	68476-34-6	<b>CHEMTREC Emergency (United States Only)</b>	(800) 424-9300
<b>Product Family</b>	Motor fuels.		
<b>Synonyms</b>	No. 2-D Grade Diesel Fuel Oil (defined by ASTM D-975); Treated or Refined Diesel Fuel No. 2; Diesel No. 2; Diesel Motor Fuel No. 2; Diesel Oil (Medium); Grade 2 Distillate Fuel; Hydrodesulfurized (HDS) Light Catalytic Cracked Distillate; Middle Distillates (Petroleum); HDS Diesel; Hydrodesulfurized Medium Distillate; HDS Middle Distillate; C9-C16 Petroleum Hydrocarbons; Ultra Low Sulfur Diesel.		

### SECTION 2. COMPOSITION

This product may be composed, in whole or in part, of any of the following refinery streams:

- Diesel Fuel No. 2 [CAS No.: 68476-34-6]
- Hydrodesulfurized Middle Distillate (petroleum) [CAS No.: 64742-80-9]
- Hydrodesulfurized Light Catalytic Cracked Distillate (Petroleum) [CAS No.: 68333-25-5]
- Kerosene [CAS No.: 8008-20-6]
- Hydrodesulfurized Kerosine (Petroleum) [CAS No.: 64742-81-0]

This product contains the following chemical components:

Component Name(s)	CAS Registry No.	Concentration (%)

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Nonane, all isomers	Mixture	1 - 10
Trimethylbenzenes, all isomers	25551-13-7	0 - 2
Naphthalene	91-20-3	0 - 2
Cumene	98-82-8	0 - 1
Ethylbenzene	100-41-4	0 - 1

### SECTION 3. HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

**Major Route(s) of Entry** Skin contact. Inhalation.

#### Signs and Symptoms of Acute Exposure

<b>Inhalation</b>	Breathing high concentrations may be harmful. Mist or vapor can irritate the throat and lungs. Breathing this material may cause central nervous system depression with symptoms including nausea, headache, dizziness, fatigue, drowsiness, or unconsciousness.
<b>Eye Contact</b>	This material can cause eye irritation with tearing, redness, or a stinging or burning feeling. Further, it can cause swelling of the eyes with blurred vision. Effects may become more serious with repeated or prolonged contact.
<b>Skin Contact</b>	This material can cause skin irritation. Symptoms include redness, itching, and burning of the skin. This material can be absorbed by the skin and produce central nervous system depression (headache, nausea, fatigue and/or other symptoms including unconsciousness). If the skin is damaged, absorption increases. Prolonged and/or repeated contact may cause severe dermatitis and/or more serious skin disorders. Chronic symptoms may include drying, swelling, scaling, blistering, cracking, and/or severe tissue damage.
<b>Ingestion</b>	If swallowed, this material may irritate the mouth, throat, and esophagus. It can be absorbed into the blood stream through the stomach and intestinal tract. Symptoms may include a burning sensation of the mouth and esophagus, nausea and vomiting. In addition, it can cause central nervous system effects characterized by dizziness, staggering, drowsiness, delirium and/or loss of consciousness.

Because of the low viscosity, this material can enter the lungs directly by aspiration during swallowing or subsequent vomiting. Aspiration of a small amount of liquid can cause severe lung damage and/or death.

**Chronic Health Effects Summary** Secondary effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction.

This product contains petroleum middle distillates similar to those shown to produce skin tumors on laboratory rodents following repeated application. All tumors appeared during the latter portion of the typical 2-year lifespan of the animals. Certain studies have shown that washing the exposed skin of the test animal with soap and water between treatments greatly reduces the potential tumorigenic effects. These data suggest that good personal hygiene is effective in reducing the risk of this potential adverse health effect.

This material and/or its components have been associated with developmental toxicity, reproductive toxicity, genotoxicity, immunotoxicity, and/or carcinogenicity. Refer to Section 11 of this MSDS for additional health-related information.

**Conditions Aggravated by Exposure** Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Respiratory System, Liver, Kidneys, Central Nervous System (CNS)

**Target Organs** May cause damage to the following organs: kidneys, lungs, liver, mucous membranes, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea

**Carcinogenic Potential**



## CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

This material may contain ethylbenzene and naphthalene at concentrations above 0.1%. IARC has identified ethylbenzene and naphthalene as possibly carcinogenic to humans (Group 2B) based on laboratory animal studies. The NTP has determined that naphthalene is *reasonably anticipated to be a human carcinogen* based on sufficient evidence from studies in experimental animals. NTP has determined that exposure to diesel exhaust particulates, a complex mixture of combustion products of diesel fuel, is reasonably anticipated to be a human carcinogen.

OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA Health Hazard Classification				OSHA Physical Hazard Classification			
Irritant	<input checked="" type="checkbox"/>	Sensitizer	<input type="checkbox"/>	Combustible	<input checked="" type="checkbox"/>	Explosive	<input type="checkbox"/>
Toxic	<input type="checkbox"/>	Highly Toxic	<input type="checkbox"/>	Flammable	<input type="checkbox"/>	Oxidizer	<input type="checkbox"/>
Corrosive	<input type="checkbox"/>	Carcinogenic	<input type="checkbox"/>	Compressed Gas	<input type="checkbox"/>	Organic Peroxide	<input type="checkbox"/>
						Pyrophoric	<input type="checkbox"/>
						Water-reactive	<input type="checkbox"/>
						Unstable	<input type="checkbox"/>

### SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

<b>Inhalation</b>	Move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately. Keep the affected individual warm and at rest.
<b>Eye Contact</b>	Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water for at least 15 minutes while occasionally lifting and lowering eyelids. Do not use eye ointment unless directed to by a physician. Seek medical attention if excessive tearing, irritation, or pain persists.
<b>Skin Contact</b>	Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.
<b>Ingestion</b>	Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.
<b>Notes to Physician</b>	<p><b>INHALATION:</b> Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required.</p> <p><b>INGESTION:</b> If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.</p>

## CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

### SECTION 5. FIRE FIGHTING MEASURES

<b>NFPA Flammability Classification</b>	NFPA Class-II combustible liquid.		
<b>Flash Point</b>	Closed cup: AP 52°C (AP 125°F). (Pensky-Martens.)		
<b>Lower Flammable Limit</b>	AP 0.6 %	<b>Upper Flammable Limit</b>	AP 7.5 %
<b>Autoignition Temperature</b>	>254°C (>489°F)		
<b>Hazardous Combustion Products</b>	Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and nitrogen.		
<b>Special Properties</b>	Combustible Liquid! This material releases vapors when heated above ambient temperatures. Vapors can cause a flash fire. Vapors can travel to a source of ignition and flashback. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. Use only with adequate ventilation. If container is not properly cooled, it can rupture in the heat of a fire.		
<b>Extinguishing Media</b>	<b>SMALL FIRE:</b> Use dry chemicals, carbon dioxide, foam, or inert gas (nitrogen). Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces. <b>LARGE FIRE:</b> Use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures. However, water can cause frothing and/or may not extinguish the fire. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition or explosion. DO NOT use a solid stream of water directly on the fire as the water may spread the fire to a larger area.		
<b>Protection of Fire Fighters</b>	Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities of potential fire and explosion hazard if liquid enter sewers or waterways.		

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Combustible Liquid! Release can result in a fire hazard. Evacuate all non-essential personnel from release area. Establish a regulated zone with site control and security. Eliminate all ignition sources. Stop the leak if it can be done without risk. A vapor-suppressing foam may be used to reduce vapors. Properly bond or ground all equipment used when handling this material. Avoid skin contact. Do not walk through spilled material. Verify that responders are properly trained and wearing appropriate personnel protective equipment. Dike far ahead of a liquid spill. Do not allow released material to enter waterways, sewers, basements, or confined areas. This material will float on water. Absorb or cover with dry earth, sand or other non-combustible material. Use clean, non-sparking tools to collect absorbed material. Place spent sorbent materials, free liquids and other clean-up debris into proper waste containers for appropriate disposal. Certain releases must be reported to the National Response Center (800/424-8802) and state or regulatory authorities. Comply with all laws and regulations.

## CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

### SECTION 7. HANDLING AND STORAGE

#### Handling

##### Combustible Liquid!

A static electrical charge can accumulate when this material is flowing through pipes, nozzles or filters and when it is agitated. A static spark discharge can ignite accumulated vapors particularly during dry weather conditions. Always bond receiving containers to the fill pipe before and during loading. Always keep nozzle in contact with the container throughout the loading process. Do not fill any portable container in or on a vehicle. Special precautions, such as reduced loading rates and increased monitoring, must be observed during "switch loading" operations (i.e., loading this material in tanks or shipping compartments that previously containing gasoline or similar low flash point products).

Fire hazard increases as product temperature approaches its flash point. Keep container closed and drum bungs in place. Remove spillage immediately from walking areas. Do not handle or store near heat, sparks or other potential ignition sources. Do not handle or store with oxidizing agents. Avoid breathing mist or vapor. Never siphon by mouth. Do not taste or swallow. Avoid contact with eyes, skin and clothing. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide ventilation to maintain exposure potential below applicable exposure levels. Avoid water contamination. Wash thoroughly after handling. Prevent contact with food or tobacco products.

When performing repairs and maintenance on contaminated equipment, keep unnecessary persons from hazard area. Eliminate heat, flame and other potential ignition sources. Drain and purge equipment, as necessary, to remove material residues. Remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

Do not use this material as fuel for equipment, such as portable heaters, in enclosed areas. Hazardous combustion products can cause death.

Protect the environment from releases of this material. Prevent discharges to surface waters and groundwater. Maintain handling, transfer and storage equipment in proper working order.

Misuse of empty containers can be dangerous. Empty containers may contain material residues which can ignite with explosive force. **Cutting or welding of empty containers can cause fire, explosion, or release of toxic fumes from residues** Do not pressurize or expose empty containers to open flame, sparks, or heat. Keep container closed and drum bungs in place. All label warnings and precautions must be observed. Return empty drums to a qualified reconditioner. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling, or disposing of empty containers and/or waste residues of this material.

#### Storage

Store in a cool, dry, well-ventilated place. Keep containers tightly closed. Do not store this product near heat, flame or other potential ignition sources. Do not store with oxidizers. Do not store this product in unlabeled containers. Do not puncture or incinerate containers. Ground all equipment containing this material. All electrical equipment in areas where this material is stored or handled must meet all applicable requirements of the NFPA's National Electrical Code (NEC). Store and transport in accordance with all applicable laws.

### SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

#### Engineering Controls

Provide ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below. All electrical equipment should comply with the National Electric Code. An emergency eye wash station and safety shower should be located near the work-station.

#### Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.

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- Eye Protection** Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. A suitable emergency eye wash water and safety shower should be located near the work station.
- Hand Protection** Avoid skin contact. Use heavy duty gloves constructed of chemical resistant materials such as Viton® or heavy nitrile rubber. Wash hands with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners.
- Body Protection** Avoid skin contact. Wear long-sleeved fire-retardant garments (e.g., Nomex®) while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist. This may include an apron, boots and additional facial protection. If product comes in contact with clothing, immediately remove soaked clothing and shower. Promptly remove and discard contaminated leather goods.
- Respiratory Protection** Airborne concentration will determine the level of respiratory protection required. Respiratory protection is normally not required unless the product is heated or misted. For known or anticipated vapor or mist concentrations above the occupational exposure guidelines (see below), use a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter if adequate protection is provided. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).
- General Comments** Warning! Use of this material in spaces without adequate ventilation may result in generation of hazardous levels of combustion products and/or inadequate oxygen levels for breathing. Odor is an inadequate warning for hazardous conditions.

### Occupational Exposure Guidelines

Substance	Applicable Workplace Exposure Levels
Nonane, all isomers	<b>ACGIH (United States).</b> TWA: 200 ppm 8 hour(s).
Ethylmethylbenzene, all isomers Trimethylbenzenes, all isomers	Not available. <b>ACGIH (United States).</b> TWA: 25 ppm 8 hour(s).
Naphthalene	<b>ACGIH (United States). Skin</b> TWA: 10 ppm 8 hour(s). STEL: 15 ppm 15 minute(s). <b>OSHA (United States).</b> TWA: 10 ppm 8 hour(s).
Cumene	<b>ACGIH (United States).</b> TWA: 50 ppm 8 hour(s). <b>OSHA (United States). Skin</b> TWA: 50 ppm 8 hour(s).
n-Propylbenzene 1, 2, 4 Trimethylbenzene Ethylbenzene	Not available. Not available. <b>ACGIH (United States).</b> TWA: 100 ppm 8 hour(s). STEL: 125 ppm 15 minute(s). <b>OSHA (United States).</b> TWA: 100 ppm 8 hour(s).
Xylene, all isomers	<b>ACGIH (United States).</b> TWA: 100 ppm 8 hour(s). STEL: 150 ppm 15 minute(s). <b>OSHA (United States).</b> TWA: 100 ppm 8 hour(s).
Diesel exhaust particulate	Not available.

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Benzene	<p><b>ACGIH (United States). Skin</b>  TWA: 0.5 ppm 8 hour(s).  STEL: 2.5 ppm 15 minute(s).  <b>OSHA (United States). Skin Notes: See Table Z-2 for exclusions in 20 CFR 1910.1028 to the PEL.</b>  TWA: 1 ppm 8 hour(s).  STEL: 5 ppm 15 minute(s).</p>
Toluene	<p><b>ACGIH (United States). Skin</b>  TWA: 20ppm 8 hour(s).  <b>OSHA (United States).</b>  TWA: 200 ppm 8 hour(s).  CEIL: 300 ppm  PEAK: 500 ppm</p>
Middle distillates, petroleum Straight-run middle distillate (petroleum)	<p>Not available.  <b>ACGIH (United States, 1998). Skin</b>  TWA: 100 mg/m<sup>3</sup></p>
Distillates, petroleum, light catalytic cracked Kerosene	<p>Not available.  <b>NIOSH REL (United States).</b>  TWA: 100 mg/m<sup>3</sup> 8 hour(s).</p>
Hydrodesulfurized middle distillate (petroleum) Hydrodesulfurized Kerosine (Petroleum) Distillates, petroleum, hydrodesulfurized light catalytic cracked Diesel Fuel No. 2	<p>Not available.  Not available.  Not available.  <b>ACGIH TLV (United States). Skin</b>  TWA: 100 mg/m<sup>3</sup> 8 hour(s).</p>

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

<b>Physical State</b>	Liquid.	<b>Color</b>	Transparent, clear to yellow or red.	<b>Odor</b>	Characteristic, kerosene-like.
<b>Specific Gravity</b>	AP 0.84 (Water = 1)	<b>pH</b>	Not Applicable.	<b>Vapor Density</b>	AP 5 (Air = 1)
<b>Boiling Range</b>	154° C (309° F) to 371° C (700° F)		<b>Melting/Freezing Point</b>	Not available.	
<b>Vapor Pressure</b>	<0.3 kPa (<2 mm Hg) (at 20°C)		<b>Volatility</b>	840 g/l VOC (w/v)	
<b>Solubility in Water</b>	Very slightly soluble in cold water. (<0.1 % w/w)		<b>Viscosity (cSt @ 40°C)</b>	AP 3	
<b>Flash Point</b>	Closed cup: AP 52°C (AP 125°F). (Pensky-Martens.)				
<b>Additional Properties</b>	Density = AP 7.0 lbs/gal. Viscosity (ASTM D2161) = 30 - 40 SUS @ 100° F				

### SECTION 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable.	<b>Hazardous Polymerization</b>	Not expected to occur.
<b>Conditions to Avoid</b>	Keep away from all ignition sources and strong oxidizing conditions.		
<b>Materials Incompatibility</b>	Strong acids, alkalis, and oxidizers such as liquid chlorine, other halogens, hydrogen peroxide and oxygen.		
<b>Hazardous Decomposition Products</b>	No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.		

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### SECTION 11. TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

#### Toxicity Data

##### Diesel Fuel, No. 2

ORAL LD50, Acute: 12,000 to 17,500 mg/kg or 9.0 ml/kg [Rat]  
DERMAL LD50, Acute: >5.0 ml/kg [Rabbit screen level].  
DRAIZE EYE, Acute: Mild irritant [Rabbit]  
DRAIZE DERMAL, Acute: Severe skin irritant [Rabbit].  
BUEHLER DERMAL, Acute: Non-sensitizing [Guinea Pig]  
14-Day DERMAL, Sub-chronic: 0% and 67% mortality at 4.0 and 8.0 ml/kg [Rabbit]  
62-Week DERMAL, Chronic: 0.05 ml/kg 3x/week [Mouse] - Extreme skin irritation.  
97-Week DERMAL, Chronic: 243 g/kg applied 3x/week [Mouse] - Extreme skin irritation.  
Moderate increase in contact-point skin tumors.  
MUTAGENICITY:  
Modified Ames Assay: Negative. [Salmonella typhimurium]  
In-vitro SCE Ovary Assay: Negative. [Chinese Hamster]  
In-vitro Lymphoma Assay: Negative. [Mouse]  
In-vivo Dominant Lethal Assay: Negative. [Mouse]  
In-vivo Bone Marrow Assay: Clastogenic at 2.0 ml/kg and 6.0 ml/kg [Rat]

##### Diesel exhaust particulate

Lung tumor and lymphomas were identified in rats and mice exposed to unfiltered diesel fuel exhaust in chronic inhalation studies. Further, epidemiological studies have identified increase incidences of lung cancer in US railroad workers and bladder cancer in bus and truck drivers possibly associated with exposure to diesel engine exhaust. NTP has determined that exposure to diesel exhaust particulates, a complex mixture of combustion products of diesel fuel, is reasonably anticipated to be a human carcinogen. In addition, NIOSH has identified complete diesel exhaust as a potential carcinogen.

##### Trimethylbenzenes, all isomers

###### Studies of Workers:

Levels of total hydrocarbon vapors present in the breathing atmosphere of these workers ranged from 10 to 60 ppm. The TClO for humans is 10 ppm, with somnolence and respiratory tract irritation noted.

###### Studies in Laboratory Animals:

In inhalation studies with rats, four of ten animals died after exposures of 2400 ppm for 24 hours. An oral dose of 5 mL/kg resulted in death in one of ten rats. Minimum lethal intraperitoneal doses were 1.5 to 2.0 mL/kg in rats and 1.13 to 12 mL/kg in guinea pigs. Mesitylene (1, 3, 5 Trimethylbenzene) inhalation at concentrations of 1.5, 3.0, and 6.0 mg/L for six hours was associated with dose-related changes in white blood cell counts in rats. No significant effects on the complete blood count were noted with six hours per day exposure for five weeks, but elevations of alkaline phosphatase and SGOT were observed. Central nervous system depression and ataxia were noted in rats exposed to 5,100 to 9,180 ppm for two hours.

##### Naphthalene

###### Studies in Humans Overexposed to Naphthalene:

Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from over-exposure to naphthalene. Persons with Glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have also been reported from over-exposure to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect.

###### Studies in Laboratory Animals:

Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory

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tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) *in vitro*.

### Ethylbenzene

Effects from Acute Exposure:

ORAL (LD50), Acute: 3,500 mg/kg [Rat].

DERMAL (LD50), Acute: 17,800 uL/kg [Rabbit].

INTRAPERITONEAL (LD50), Acute: 2,624 mg/kg [Rat].

Effects from Prolonged or Repeated Exposure:

Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). Also, the incidence of tumors was elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

### Middle distillates, petroleum

Long-term repeated (lifetime) skin exposure to similar materials has been reported to result in an increase in skin tumors in laboratory rodents. The relevance of these findings to humans is not clear at this time.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Freshwater Toxicity:

Concentration: 2400 ppm Exposure: 48 hrs. Species: Juven. Am. Shad (*Squalius cephalus*) Assay: TLM

Concentration: >127 ppm Exposure: 96 hrs. Species: Bluegill (*Lepomis macrochirus*) Assay: LC50

#### Saltwater Toxicity

Concentration: 10 ppm Exposure: 96 hrs. Species: Menhaden (*Brevoortia patronus*) Assay: LC50

Concentration: 10 ppm Exposure: 96 hrs. Species: Grass Shrimp Assay: LC50

### Environmental Fate

If spilled, this material will normally evaporate. Hydrocarbon components may contribute to atmospheric smog. If released to the subsoils, petroleum middle distillate fuels will strongly adsorb to soils. Groundwater should be considered as an exposure pathway. Liquid and vapor can migrate through the subsurface and preferential pathways (such as utility line backfill) to downgradient receptors.

Middle distillates are potentially toxic to freshwater and saltwater ecosystems. Distillate fuels will normally float on water. In stagnant or slow-flowing waterways, a hydrocarbon layer can cover a large surface area. As a result, this oil layer can limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway can cause a fish kill or create an anaerobic environment. Also, this coating action can also kill plankton, algae, and water birds.

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### SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Maximize material recovery for reuse or recycling. Recovered non-usable material may be regulated by US EPA as a hazardous waste due to its ignitibility (D001) and/or its toxic (D018) characteristics. In addition, conditions of use may cause this material to become a hazardous waste, as defined by Federal or State regulations. It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR Parts 260 through 271). Contact your regional US EPA office for guidance concerning case specific disposal issues. State and/or local regulations might be even more restrictive.

### SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

**US DOT Status** A U.S. Department of Transportation (DOT) regulated material. The following U. S. DOT hazardous materials shipping description applies to bulk packaged material that is transported by highway or rail. Alternate shipping descriptions may be required for product transported by marine vessel, air or other method and for non-bulk packaged material.

**Proper Shipping Name** Diesel Fuel, Combustible liquid, NA1993, PG III

**Hazard Class** DOT Class: Combustible liquid with a flash point greater than 37.8°C (100°F). **Packing Group** III  
**UN/NA Number** NA 1993

**Reportable Quantity** A Reportable Quantity (RQ) has not been established for this material.

**Placard(s)**



**Emergency Response Guide No.** 128

**MARPOL III Status** Not a DOT "Marine Pollutant" per 49 CFR 171.8.

### SECTION 15. REGULATORY INFORMATION

**TSCA Inventory** This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.

**SARA 302/304 Emergency Planning and Notification** The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.

**SARA 311/312 Hazard Identification** The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories:

fire, Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard



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### SARA 313 Toxic Chemical Notification and Release Reporting

This product contains the following components in concentrations above *de minimis* levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA:

Naphthalene [CAS No.: 91-20-3] Concentration: 2%  
Ethylbenzene [CAS No.: 100-41-4] Concentration: 0.9%

### CERCLA

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are:

Naphthalene [CAS No.: 91-20-3] RQ = 100 lbs. (45.36 kg) Concentration: 2%  
Cumene [CAS No.: 98-82-8] RQ = 5000 lbs. (2268 kg) Concentration: 0.9%  
Ethylbenzene [CAS No.: 100-41-4] RQ = 1000 lbs. (453.6 kg) Concentration: 0.9%  
Xylene, all isomers [CAS No.: 1330-20-7] RQ = 100 lbs. (45.36 kg) Concentration: 0.9%  
Benzene [CAS No.: 71-43-2] RQ = 10 lbs. (4.536 kg) Concentration: 0.045%

### Clean Water Act (CWA)

This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

### California Proposition 65

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

Diesel exhaust particulate  
Naphthalene: <2%  
Ethylbenzene: <1%  
Toluene: <0.1%  
Benzene: <0.1%

### New Jersey Right-to-Know Label

Diesel Fuel

### Additional Remarks

As minimum requirements, CITGO recommends that the following advisory information be displayed on equipment used to dispense diesel fuel. Additional warnings specified by various regulatory authorities may be required: "**Diesel Fuel DANGER: Combustible Liquid. Use as a Motor Fuel Only. DO NOT FILL CONTAINERS THAT HAVE PREVIOUSLY CONTAINED GASOLINE OR OTHER FLAMMABLE LIQUIDS.** Sparks From static electricity can ignite flammable vapor residues. PLACE CONTAINER ON GROUND. DO NOT FILL ANY PORTABLE CONTAINER IN OR ON A VEHICLE. Containers must be metal or other material approved for storing diesel fuel. Keep nozzle spout in contact with the container during the entire filling operation. NO SMOKING! Do not leave nozzle unattended during filling. **HARMFUL OR FATAL IF SWALLOWED** If swallowed, do not induce vomiting. Call Physician Immediately. Keep Out of Reach of Children. Avoid prolonged breathing of vapors. Never siphon by mouth. Do not store in vehicle or living space. Store and use in a well ventilated area. Do not use near heat, spark or flame. Keep container closed."

## SECTION 16. OTHER INFORMATION

Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

### REVISION INFORMATION

Version Number 5.1  
Revision Date 12/31/2007

### ABBREVIATIONS

AP: Approximately EQ: Equal >: Greater Than <: Less Than NA: Not Applicable ND: No Data NE: Not Established

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ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

IARC: International Agency for Research on Cancer

NTP: National Toxicology Program

NIOSH: National Institute of Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

NPCA: National Paint and Coating Manufacturers Association

HMIS: Hazardous Materials Information System

NFPA: National Fire Protection Association

EPA: US Environmental Protection Agency

### **DISCLAIMER OF LIABILITY**

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