1. IDENTIFICATION

Product Identifier: Diesel Fuel

Synonyms: Diesel Fuel, Motor Vehicle Diesel Fuel, Dyed Diesel, * DieselOne®, * DieselOne® w/Platinum Plus DFX, Low Sulfur Diesel (LSD), Ultra Low Sulfur Diesel (ULSD)

Intended use of the product: Fuel

Contact:
Global Companies LLC
Water Mill Center
800 South St.
Waltham, MA 02454-9161
www.globalp.com

Contact Information: EMERGENCY TELEPHONE NUMBER (24 hrs): CHEMTREC (800) 424-9300
COMPANY CONTACT (business hours): 800-542-0778

2. HAZARD IDENTIFICATION

According to OSHA 29 CFR 1910.1200 HCS

Classification of the Substance or Mixture

Classification (GHS-US):

Flam. Liquid	Category 3	H226
Skin Corrosion/Irritation	Category 2	H315
Aspiration Hazard	Category 1	H304
STOT SE	Category 3	H336
Carcinogenicity	Category 2	H350
Aquatic Chronic	Category 2	H411
Serious Eye Damage/ Irritation	Category 2B	H319

Labeling Elements

Signal Word (GHS-US): **Danger**

Hazard Statements (GHS-US):
H226 – Flammable liquid and vapor.
H315 – Causes Skin irritation.
H304 – May be fatal if swallowed and enters airways.
H336 – May cause drowsiness or dizziness.
H350 – May cause cancer.
H411 – Toxic to aquatic life with long lasting effects.
H319 – May cause eye damage/irritation.

Precautionary Statements (GHS-US):
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 - Keep container tightly closed.
P240 – Ground/bond container and receiving equipment.

P241 – Use explosion-proof electrical/ventilating/lighting equipment pursuant to applicable electrical code.
P242 – Use only non-sparking tools.
P243 – Take precautionary measures against static discharge.
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 – Wash skin thoroughly after handling.
P271 – Use only outdoors or in a well-ventilated area.
P273 – Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P303+361+353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse with water/shower.
P308+311 - If exposed or concerned: Get medical advice/attention.
P301+310 - If swallowed: Immediately call a poison center/doctor/…
P331 - Do NOT induce vomiting.
P370+P378 – In case of fire use firefighting foam or other appropriate media for Class B fires to extinguish.
P403+235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 – Dispose of contents/container in accordance with local/regional/national/international regulation.

Other information:

NFPA 704
Health: 1
Fire: 2
Reactivity: 0

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Composition Information
Mixture

Name	Product Identifier (CAS#)	% (w/w)	Classification
Diesel Fuel	68476-34-6	100	Flam Liq. 3, H226; Skin Irrit. 2, H315; Aspiration 1, H304; STOT SE 3, H336; Carc.2. H350; Aquatic chronic 2, H411
Naphthalene	91-20-3	<0.1	Carc. 2, H351; Acute Tox. 4, H302; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

Additional Formulation Information:
Diesel Fuel consists of C9+ hydrocarbons resulting from distillation of crude oil.

Low Sulfur Diesel Fuel typically contains less than 500 ppm of sulfur

Ultra Low Sulfur Diesel Fuel typically contains less than 15 ppm of sulfur

4. FIRST AID MEASURES

Route	Measures
Inhalation	Remove person to fresh air. If person is not breathing, ensure an open airway and provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.
Ingestion	Aspiration Hazard: DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Ingestion may cause gastrointestinal disturbances including irritation, nausea, vomiting, and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory failure, and death.
Eye Contact	In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention. In case of contact lenses, remove immediately.
Skin Contact	Remove contaminated clothing and shoes. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and of the area of the body burned.

Most Important Symptoms
Contact with eyes and face may cause irritation. Long-term exposure may cause dermatitis (itching, irritation, pain and swelling).

Inhalation may cause irritation and significant or long term exposure could cause respiratory insufficiency and pulmonary edema.

Ingestion may cause aspiration, gastrointestinal disturbance, and CNS effects.

Immediate Medical Attention and Special Treatment
For contact with skin or eyes, immediately wash or flush contaminated eyes with gently flowing water. If possible, irrigate each eye continuously with 0.9% saline (NS). If ingested, rinse mouth. Do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

If inhaled, administer oxygen or establish a patent airway if breathing is labored. Suction if necessary. Monitor closely, anticipate seizures. Consider orotracheal or nostracheal intubation of airway control if patient is unconscious or is in severe respiratory distress.

Discard any clothing or shoes contaminated as they may be flammable.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Foam, carbon dioxide, dry chemical are most suitable

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, C02, water spray, firefighting foam, or Halon. Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other firefighting equipment.

LARGE FIRES: Foam, carbon dioxide, dry chemical. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Specific Hazards / Products of Combustion
Moderate fire hazard when exposed to heat or flame with a very low flash point. Product is flammable and easily ignited when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Combustion may produce smoke, carbon monoxide and other products of incomplete combustion.

Special Precautions and Protective Equipment for Firefighters
Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water.

For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied firefighting foam.

Fighting Equipment/Instructions
Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH- approved pressure-demand self-contained breathing apparatus with full face piece and protective clothing.

Refer to Section 9 for fire properties of this chemical including flash point, auto ignition temperature, and explosive limits.

6. ACCIDENTAL RELEASE MEASURES

ACTIVATE FACILITY SPCC, SPILL CONTINGENCY or EMERGENCY PLAN.

Personal Precautions
Due to high vapor density, flammable / toxic vapors may be present in low lying areas, dikes, pits, drains, or trenches. Vapors may accumulate in low lying areas and reach ignitable concentrations. Ventilate the area. Use of non-sparking tools and intrinsically safe equipment is recommended. Potential for flammable atmosphere should be monitored using a combustible gas indicator positioned downwind of the spill area. Refer to Sections 2 and 7 for further hazard warnings and handling instructions.

Use appropriate personal protective equipment to prevent eye/skin contact and absorption. Use NIOSH approved respiratory protection, if warranted, to prevent exposures above permissible limits. Refer to Section 8. Contaminated clothing should not be near sources of ignition.

Emergency Measures
As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Consider wind direction. Secure all ignition sources (flame, spark, hot work, hot metal, etc.) from area. Evaluate the direction of product travel, diking sewers, etc. to confirm spill areas. Do not touch or walk-through spilled material. For large spills, isolate initial action distance downwind 1,000 ft. (300 m).

Environmental Precautions
Stop the spill to prevent environmental release if it can be done safely. Product is toxic to aquatic life. Take action to isolate environmental receptors including drains, storm sewers and natural water bodies. Keep on impervious surface if at all possible. Use water sparingly to prevent product from spreading. Foam and absorbents may be used to reduce / prevent airborne release.

Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Follow federal, state or local requirements for reporting environmental release where necessary. Refer to Section 15 for further information.

Containment and Clean-Up Methods
Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of firefighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with dry earth, sand or other non-combustible, inert oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container with clean, non-sparking tools for reclamation or disposal. Response and cleanup crews must be properly trained and must utilize proper protective equipment. Refer to Section 8 for appropriate protective equipment.

7. HANDLING AND STORAGE

USE ONLY AS A FUEL.
DO NOT SIPHON BY MOUTH.

Handling Precautions
Handle as a flammable liquid. Keep away from heat, sparks, and open flame. No smoking. Electrical equipment should be approved for classified area. Bond and ground containers during product transfer pursuant to NFPA 70 and API RP 2003 to

reduce the possibility of static-initiated fire or explosion. Follow precautions to prevent static initiated fire.

Use good personal hygiene practices. Use only with protective equipment specified in Section 8. Avoid repeated and/or prolonged skin exposure. Use only outdoors or in well ventilated areas. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API RP 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage
Large quantities of diesel fuel are stored in tanks or portable containers at an ambient storage temperature. Separate from incompatible chemicals (Refer to Section 10) by distance or secondary containment. Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers that are clearly labeled. Label all secondary containers that this material is transferred into with the chemical name and associated hazard(s). Empty product containers or vessels may contain flammable vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Storage tanks should have a venting system. If stored in small containers, the area should be well ventilated, away from ignition sources and protected from potential damage or vehicular traffic. Post “No Smoking” signs in product storage areas. This storage area should comply with NFPA 30 “Flammable and Combustible Liquid Code” or applicable building code. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 “Cleaning Mobile Tanks in Flammable and Combustible Liquid Service” and API RP 2015 “Safe Entry and Cleaning of Petroleum Storage Tanks”.

Incompatibles
Keep away from strong oxidizers, ignition sources and heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits

Component	CAS #	List	Value
Diesel Fuel	68476-34-6	ACGIH TLV-TWA	100 mg/m3*
Naphthalene	91-20-3	ACGIH TLV-TWA OSHA PEL ACGIH STEL	10 ppm 10 ppm 15 ppm

*Critical effects; Skin; A3; CNS impairment.

Engineering Controls
Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Intrinsically safe equipment and non-sparking tools shall be used in circumstances where concentrations may exceed lower flammable limits. Grounding and bonding shall be used to prevent accumulation and discharge of static electricity. Emergency shower and eyewash should be provided in proximity to handling areas in the event of exposure to decontaminate.

Personal Protective Equipment

Exposure	Equipment
Eye / Face	Wear appropriate chemical protective glasses or goggles or face shields to prevent skin and eye contact especially caused from splashing.
Skin	Wear appropriate personal protective clothing to prevent skin contact. Gloves constructed of nitrile, neoprene or PVC are recommended when handling this material. Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure.

Exposure	Equipment
Respiratory	A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection and limitations. Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.
Thermal	Product is stored at ambient temperature. No thermal protection is required except for emergency operations involving actual or potential for fire. Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value	
Appearance	Clear or straw-colored liquid. May be dyed red for distribution.	
Odor	Mild characteristic petroleum distillate odor.	
Odor Threshold	<1 ppm	
pH	Not available	
Melting Point	-22 to -0.4 ˚F (-30 to -18 ˚C)	
Boiling Point Range	320 to 690 ˚F (160 to 366 ˚C)	
Flash Point	> 125.6 ˚F (52 ˚C) PMCC	
Evaporation Rate	Slow, varies with conditions	
Flammability	Flammable liquid	
Flammable Limits	0.6 % - 6.5%	
Vapor Pressure	0.009 psia @ 70 ˚F	
Vapor Density	> 1	(air=1)
Specific Gravity	0.83-0.86 @ 60 ˚F (16 ˚C)	(water=1)
Solubility	Insoluble in water; miscible with other petroleum solvents.	
Partition Coefficient (N-octanol/water)	Log Kow range of 3.3 to >.6.0	
Autoignition Temperature	494 ˚F (257 ˚C)	
Decomposition Temperature	When heated it emits acrid smoke and irritating vapors.	
Viscosity	>3 cSt	
Percent Volatiles	100	

10. STABILITY AND REACTIVITY

Stability
This is a stable material that is flammable liquid (OSHA/GHS hazard category 3). Stable during transport.

Reactivity
Material is not self-reacting. Flammable concentrations may be present in air. Compound can react with oxidizing materials.

Possibility of Hazardous Reactions
Hazardous polymerization will not occur.

Incompatibility
Keep away from strong oxidizers such as nitric and sulfuric acids.

Conditions to Avoid
Avoid high temperatures, open flames, sparks, static electricity, welding, smoking and other ignition sources.

Hazardous Decomposition Products
Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:
Acute Toxicity (Inhalation LC50)
Diesel Fuel (68476-34-6)
LC50 Inhalation Rat >6 mg/l/4h

Acute Toxicity (Dermal LD50)
Diesel Fuel (68476-34-6)
LD50 Dermal Rabbit >5000 mg/kg

Acute Toxicity (Oral LD50)
Diesel Fuel (68476-34-6)
LD50 Oral Rabbit >5000 mg/kg

Skin Corrosion/Irritation: Prolonged and repeated contact may cause skin irritation leading to dermatitis. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: OSHA: NO, IARC: Group 3, NTP: NO, ACGIH: NOIC:A3, NIOSH: NO

IARC: Group 3 – Not classifiable as to their carcinogenicity to humans

ACGIH: A3 – Confirmed animal carcinogen with unknown relevance to humans.

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

IARC classifies whole diesel fuel exhaust particulates (byproduct of combustion of this material) carcinogenic to humans (Group 1) and NIOSH regards diesel fuel exhaust particulate as a potential occupational carcinogen.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Specific Target Organ Toxicity (Single Exposure): Inhalation exposure may cause drowsiness or dizziness by inhalation exposure.

Aspiration Hazard: The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Potential Health Effects: Vapor irritating to skin, eyes, nose, and throat. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

WARNING: The burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of

combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

12. ECOLOGICAL INFORMATION

Toxicity:
This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

Data for Component: Diesel Fuel (68476-34-6)

Material is toxic to aquatic organisms based on an acute basis (LC50/EC50 >1 but ≤ 10 mg/L in the most sensitive species tested).

Material is a long-term aquatic hazard based on a chronic basis (LC50/EC50 >1 but ≤ 10 mg/L in the most sensitive species tested).

Persistence and Degradation: This material is not expected to be readily biodegradable.

Bioaccumulative Potential: Not available

Mobility in Soil: Not available

Other Adverse Effects: None known

Other Information: Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options. May be considered a hazardous waste if disposed. Direct solid waste (landfill) or incineration at a solid waste facility is not permissible. Do not discharge to sanitary or storm sewer. Personnel handling waste containers should follow precautions provided in this document.

Shipping containers must be DOT authorized packages. Follow licensure and regulations for transport of hazardous material and hazardous waste as applicable.

14. TRANSPORT INFORMATION

US DOT

UN Identification Number	NA 1993 / UN 1202
Proper Shipping Name	Diesel Fuel
Hazard Class and Packing Group	3, PGIII
Shipping Label	Combustible liquid
Placard / Bulk Package	Combustible liquid, 1993
Emergency Response Guidebook Guide Number	128

IATA Information

UN Identification Number	UN 1202
Proper Shipping Name	Combustible-Liquid, N.O.S. (Fuel, Diesel)
Hazard Class and Packing Group	3, PGIII
ICAO Label	3
Packing Instructions Cargo	310
Max Quantity Per Package Cargo	220L
Packing Instructions Passenger	309Y
Max Quantity per Package	60L

ICAO

UN Identification Number	UN 1202
Shipping Name / Description	Combustible-Liquid, N.O.S. (Fuel, Diesel)
Hazard Class and Packing Group	3, PG III
IMDG Label	3

IMDG

UN Identification Number	UN 1202
Shipping Name / Description	Combustible-Liquid, N.O.S. (Fuel, Diesel)
Hazard Class and Packing Group	3, PGIII
IMDG Label	3
EmS Number	F-E-S-E
Marine Pollutant	Yes

15. REGULATORY INFORMATION

U.S. Federal, State, and Local Regulatory Information
Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other federal, state, or local regulations; consult those regulations applicable to your facility/operation.

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning And Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Clean Water Act (Oil Spills)
Any spill or release of this product to “navigable waters” (Essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA Section 103 and SARA Section 304 (Release to the Environment)
The CERCLA definition of hazardous substances contains a “petroleum exclusion” clause which exempts this material. This product does not contain any chemicals subject to the reporting requirements of CERCLA Section 103 or SARA 304.

SARA Section 313- Supplier Notification
This product does not contain any chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

EPA Notification (Oil Spills)
If the there is a discharge of more than 1,000-gallons of oil into or upon navigable waters of the United States, or if it is the second spill event of 42 gallons or more of oil into water within a twelve (12) month period, a written report must be submitted to the Regional Administrator of the EPA within sixty days of the event.

Pennsylvania Right to Know Hazardous Substance list:
The following product components are cited in the Pennsylvania Special Hazardous Substance List, and are present at levels which require reporting.

Component	CAS	Amount
Diesel Fuel	68476-34-6	100%

New Jersey Right to Know Hazardous Substance list:
The following product components are cited in the New Jersey Right to Know Hazardous Substance List, and are present at levels which require reporting.

Component	CAS	Amount
Diesel Fuel	68476-34-6	100%

California Proposition 65 WARNING: This product contains chemicals known to the State of California to cause Cancer or Reproductive Toxicity.

Component	CAS	Amount
Naphthalene	91-20-3	<0.1%

U.S. Toxic Substances Control Act
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

CEPA - Domestic Substances List (DSL)
All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

Canadian Regulatory Information (WHMIS)
Class B3 – Combustible Liquid
Class D2A – Materials causing other toxic effects. (Very Toxic)

16. OTHER INFORMATION

Version	4
Issue Date	May 20, 2016
Prior Issue Date	May 3, 2015

Description of Revisions
Revised to meet Globally Harmonized System for chemical hazard communication requirements pursuant to OSHA regulatory revisions 77 FR 17884, March 26, 2012.

Abbreviations

˚F	Degrees Fahrenheit (temperature)
<	Less than
=	Equal to
>	Greater than
AP	Approximately
C	Centigrade (temperature)
kg	Kilogram
L	Liter
mg	Milligrams
mL	Milliliter
mm^2	Square millimeters
mmHg	Millimeters of mercury (pressure)
N/A	Not applicable
N/D	Not determined
ppm	Parts per million
sec	Second
ug	Micrograms

Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
AL	Action Level
ANSI	American National Standards Institute
API	American Petroleum Institute
CAS	Chemical Abstract Service
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
EC50	Ecological concentration 50%
EPA	U.S. Environmental Protection Agency
ERPG	Emergency Response Planning Guideline
GHS	Global Harmonized System
HMIS	Hazardous Materials Information System
IARC	International Agency for Research On Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
Koc	Soil Organic Carbon
LC50	Lethal concentration 50%
LD50	Lethal dose 50%
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change

NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety & Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act Reauthorization Act of 1986 Title III
REL	Recommended Exposure Limit (NIOSH)
RVP	Reid Vapor Pressure
SARA	Superfund Amendments and
SCBA	Self Contained Breathing Apparatus
SPCC	Spill Prevention, Control, and Countermeasures
STEL	Short Term Exposure Limit (generally 15 minutes)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average (8 hr.)
UN	United Nations
UNECE	United Nations Economic Commission for Europe
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Canadian Workplace Hazardous Materials Information System

Disclaimer of Expressed and Implied Warranties

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

** End of Safety Data Sheet **

SAFETY DATA SHEET
Ethanol 99,8%

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Date issued 26.11.2013

1.1. Product identifier

Product name	Ethanol 99,8%
Chemical name	Ethyl alcohol
Synonyms	methyl carbinol
REACH Reg No.	01-2119457610-43-0000
CAS no.	64-17-5
EC no.	200-578-6
Index no.	603-002-00-5
Article no.	12110000

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

Use of the substance/preparation	For the preparation of paints and as a solvent. Disinfectant. Antiseptic. Antifreeze liquid. General purpose cleaner.

1.3. Details of the supplier of the safety data sheet

Company name	Fred Holmberg & Co AB
Office address	Geijersgatan 8
Postal address	Box 60056
Postcode	S-216 10
City	Limhamn
Country	Sweden
Tel	+46 (0)40 15 79 20
Fax	+46 (0)40 16 22 95
E-mail	info@holmberg.se
Website	http://www.holmberg.se/en/

1.4. Emergency telephone number

Emergency telephone	112 (Europe)

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

Classification according to 67/548/EEC or 1999/45/EC	F; R11
Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]	Flam. Liq. 2; H225;

2.2. Label elements

Hazard Pictograms (CLP)

Signal word	Danger
Hazard statements	H225 Highly flammable liquid and vapour.

Precautionary statements	P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting//equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P280 Wear protective gloves/protective clothing/eye protection/face protection. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P370 + P378 In case of fire: Use for extinction. P403 + P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/container to

2.3. Other hazards

Other hazards	Not known.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance	Identification	Classification	Contents
Ethanol	CAS no.: 64-17-5 EC no.: 200-578-6 Index no.: 603-002-00-5 Synonyms: Ethanol	F; R11 Flam. Liq. 2; H225	99,8 %
Column headings	CAS no. = Chemical Abstracts Service; EU (Einecs or Elincs number) = European inventory of Existing Commercial Chemical Substances; Ingredient name = Name as specified in the substance list (substances that are not included in the substance list must be translated, if possible). Contents given in; %, %wt/wt, %vol/wt, %vol/vol, mg/m3, ppb, ppm, weight%, vol%		
HH/HF/HE	T+ = Very toxic, T = Toxic, C = Corrosive, Xn = Harmful, Xi = Irritating, E = Explosive, O = Oxidizing, F+ = Extremly flammable, F = Very flammable, N = Environmental hazard		

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothes and rinse skin thoroughly with water.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if any discomfort continues.
Ingestion	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Do not induce vomiting. Rinse mouth with water. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

Information for health personnel	Treat Symptomatically. Do not give victim anything to drink if he is unconscious.

4.3. Indication of any immediate medical attention and special treatment needed

Specific details on antidotes	No recommendation given.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	HIGHLY FLAMMABLE! Solvent vapours may form explosive mixtures with air.
Hazardous combustion products	Fire creates: Carbon monoxide (CO). Carbon dioxide (CO2).

5.3. Advice for firefighters

Fire fighting procedures	No specific fire fighting procedure given.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. Ventilate well. Stop leak if possible without risk. Avoid contact with skin and eyes. Do not breathe vapour.

6.2. Environmental precautions

Environmental precautionary measures	Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Cleaning method	Dam and absorb spillages with sand, earth or other non-combustible material.

6.4. Reference to other sections

Other instructions	No recommendation given.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Keep away from heat, sparks and open flame. Take precautionary measures against static discharges. Mechanical ventilation may be required.

Protective Safety Measures

Advice on general occupational hygiene	Provide easy access to water supply and eye wash facilities.

7.2. Conditions for safe storage, including any incompatibilities

Storage	Keep away from heat, sparks and open flame. Ground container and transfer equipment to eliminate static electric sparks. Store in a cool and well-ventilated place.

7.3. Specific end use(s)

Specific use(s)	Not entered.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Other Information about threshold limit values	Norske grenseverdier; FOR-2011-12-06-1358 vedlegg 1. Etanol: 8 t.: 500ppm, 950 mg/m3 (2003)

DNEL / PNEC

Exposure guidelines	Country of origin: Sverige Limit value type: KTV OEL Short Term Value: 1900 mg/m3 Source: Nationella hygieniska gränsvärden, AFS 2005:17
Other Information	NGV, 1000 mg/m3

8.2. Exposure controls

Occupational exposure limits	Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours. Protective gloves and goggles are recommended. Provide eyewash, quick drench.

Safety signs

Respiratory protection

Respiratory protection	Respiratory protection must be used if air contamination exceeds acceptable level. Use respiratory equipment with gas filter, type A2.

Hand protection

Hand protection	Use protective gloves. Chemical resistant gloves required for prolonged or repeated contact. Gloves of nitrile rubber, PVA or Viton are recommended.

Eye / face protection

Eye protection	Use safety goggles or face shield in case of splash risk.

Skin protection

Skin protection (except hands)	Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene / Environmental

Specific hygiene measures	Wash hands after contact.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Colour	Colourless.
Odour	Odour of alcohol.
Comments, pH (as supplied)	Not applicable.
Melting point/melting range	Value: -115 °C
Boiling point / boiling range	Value: 78 °C
Flash point	Value: 12 °C
Explosion limit	Value: 3,5-15 %
Vapour pressure	Value: 5,9 kPa Test temperature: 20 °C
Vapour density	Value: 1,6
Specific gravity	Value: 789 kg/m3 Test temperature: 20 °C
Solubility description	Completely soluble in water. Soluble in: Organic solvents.
Partition coefficient: n-octanol/water	Value: -0,32
Spontaneous combustability	Value: 425 °C
Viscosity	Value: 1,2 mPas Test temperature: 20 °C

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Heating may cause a fire.

10.2. Chemical stability

Stability	Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not known.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid	Avoid contact with oxidising agents (e.g. nitric acid, peroxides and chromates). Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products	Fire creates: Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological Information:

Other toxicological data	Acute Toxicity (Oral LD50): mg/kg (oral rat) 7060 Acute Toxicity (Inhalation LC50): mg/l (vapours) (4h) 124,7 Acute Toxicity (Dermal LD50): mg/kg (ipr-rat) > 20 000

Potential acute effects

Inhalation	In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea. Icke klassificerad som aspirationstoxisk (Not classified as asp. tox.)
Skin contact	Prolonged or frequent contact may cause redness, itching, eczema and skin cracking. Defats the skin.
Eye contact	Causes serious eye irritation.
Ingestion	Ingestion of large amounts may cause unconsciousness. However, ingestion may cause nausea, headache, dizziness and intoxication. Ingestion may cause irritation of the gastrointestinal tract, vomiting and diarrhoea. May cause irritation to the mouth and throat.

Delayed effects / repeated exposure

Sensitisation	Not known.
Chronic effects	None known.

Carcinogenic, Mutagenic or Reprotoxic

Carcinogenicity	None.
Mutagenicity	Not known.
Teratogenic properties	Not known.
Reproductive toxicity	Not known.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic, fish	Value: 13500 mg/l Method of testing: LC50 Fish, species: Pimephales promelas Duration: 96h
Acute aquatic, algae	Value: 5000 mg/l Method of testing: IC50 Algae, species: Scenedesmus subspicatus Duration: 7d
Acute aquatic, Daphnia	Value: 5400 mg/l Method of testing: EC50 Daphnia, species: D. magna Duration: 72h

12.2. Persistence and degradability

Degradation half life	Lättnedbrytbart. 85% bryts ned på 28 dygn OECD 301D
Chemical oxygen demand (COD)	Value: 0,4-0,8 Method of testing: COD
Biological oxygen demand (BOD)	Value: 0,4-0,8 Method of testing: BOD

12.3. Bioaccumulative potential

Bioaccumulative potential	Will not bio-accumulate.
Bioconcentration factor (BCF)	Value: 0,66 Method of testing: BCF

12.4. Mobility in soil

Mobility	The product is water soluble and may spread in water systems.

12.5. Results of PBT and vPvB assessment

PBT assessment results	This substance is not classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects / Remarks	None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Specify the appropriate methods of disposal	Confirm disposal procedures with environmental engineer and local regulations. Absorb in vermiculite or dry sand and dispose of at a licenced hazardous waste collection point. Liquid components can be disposed of by incineration.
Product classified as hazardous waste	Yes
Packaging classified as hazardous waste	No

SECTION 14: Transport information

14.1. UN number

ADR	1170
RID	1170
IMDG	1170
ICAO/IATA	1170

14.2. UN proper shipping name

ADR	ETHANOL
RID	ETHANOL
IMDG	ETHANOL
ICAO/IATA	ETHANOL

14.3. Transport hazard class(es)

ADR	3
Hazard no.	33
RID	3
ADN	33
IMDG	3
ICAO/IATA	3

14.4. Packing group

ADR	II
RID	II
IMDG	II
ICAO/IATA	II

14.5. Environmental hazards

Comment	Not relevant.

14.6. Special precautions for user

EmS	F-E, S-D

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

EC no.	200-578-6

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

Other Label Information	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

Legislation and regulations	Dangerous Substance Directive 67/548/EEC. The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). The List of Wastes (England) (Amendment) Regulations 2005. (SI 2005 No. 895). Avfallsförordningen (2011:927).

15.2. Chemical safety assessment

SECTION 16: Other information

Hazard symbol

Highly flammable

R-phrases	R11 Highly flammable.
S-phrases	S2 Keep out of the reach of children. S7 Keep container tightly closed. S16 Keep away from sources of ignition - No smoking.
Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]	Flam. Liq. 2; H225;
List of relevant R-phrases (under headings 2 and 3).	R11 Highly flammable.
List of relevant H-phrases (Section 2 and 3).	H225 Highly flammable liquid and vapour.
Responsible for safety data sheet	Fred Holmberg & Co AB

JP-4 Fuel (MIL-T-5624)

Version 1.4 Revision Date 2016-05-11

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information

Product Name : JP-4 Fuel (MIL-T-5624)
Material : 1061880, 1028366, 1024271, 1024270, 1024269, 1105003

Use : Fuel

Company : Chevron Phillips Chemical Company LP
Specialty Chemicals
10001 Six Pines Drive
The Woodlands, TX 77380

Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)
Transport:
CHEMTREC 800.424.9300 or 703.527.3887(int'l)
Asia: +800 CHEMCALL (+800 2436 2255) China:+86-21-22157316
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Responsible Department : Product Safety and Toxicology Group
E-mail address : SDS@CPChem.com
Website : www.CPChem.com

SECTION 2: Hazards identification

Classification of the substance or mixture
This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Emergency Overview

Danger

Form: Liquid **Physical state**: Liquid **Color**: Clear to amber **Odor**: Mild

OSHA Hazards : Flammable Liquid, Moderate skin irritant, Carcinogen, Mutagen, Target Organ Effects, Aspiration hazard

Classification

: Flammable liquids , Category 1

Skin irritation , Category 2
Germ cell mutagenicity , Category 1B
Carcinogenicity , Category 1B
Specific target organ systemic toxicity - single exposure , Category 3
Specific target organ systemic toxicity - repeated exposure , Category 1 , Eyes, Blood
Aspiration hazard , Category 1

Labeling

Symbol(s) :

Signal Word : Danger

Hazard Statements : H224: Extremely flammable liquid and vapor.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H340: May cause genetic defects.
H350: May cause cancer.
H336: May cause drowsiness or dizziness.
H372: Causes damage to organs (Eyes, Blood) through prolonged or repeated exposure.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapor/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans	
	Naphthalene	91-20-3
NTP	Reasonably anticipated to be a human carcinogen	
	Naphthalene	91-20-3
ACGIH	Confirmed animal carcinogen with unknown relevance to humans	
	Kerosene C9-C16	8008-20-6

SECTION 3: Composition/information on ingredients

Synonyms : Petroleum Naphtha
JP-4 AVIATION TURBINE FUEL
JP-4 (MIL-T-5624)

Molecular formula : Mixture

Component	CAS-No.	Weight %
Kerosene C9-C16	8008-20-6	70 - 90
Hydrodesulfurized Naphtha	64742-73-0	5 - 10
Isopentane	78-78-4	5 - 10
Naphthalene	91-20-3	1 - 5

SECTION 4: First aid measures

General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled : Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.

In case of skin contact : If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point	:	-23 °C (-9 °F) estimated
Autoignition temperature	:	No data available
Suitable extinguishing media	:	Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.
Unsuitable extinguishing media	:	High volume water jet.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Fire and explosion protection	:	Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Hazardous decomposition products	:	Carbon oxides.

SECTION 6: Accidental release measures

Personal precautions	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods for cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7: Handling and storage

Handling

Advice on safe handling : Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

US

Ingredients	Basis	Value	Control parameters	Note
Kerosene C9-C16	ACGIH	TWA	200 mg/m3	CNS impair, URT irr, skin irr, P, A3, Skin, varies,
	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	(b),
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
Isopentane	ACGIH	TWA	600 ppm,	peripheral neuropathy, (),
Naphthalene	ACGIH	TWA	10 ppm,	hematologic eff, URT irr, eye irr, eye dam, (), A4, Skin,
	ACGIH	STEL	15 ppm,	hematologic eff, URT irr, eye irr, eye dam, (), A4, Skin,
	OSHA Z-1	TWA	10 ppm, 50 mg/m3	(b),
	OSHA Z-1-A	TWA	10 ppm, 50 mg/m3	
	OSHA Z-1-A	STEL	15 ppm, 75 mg/m3	

() Adopted values or notations enclosed are those for which changes are proposed in the NIC
(b) The value in mg/m3 is approximate.
A3 Confirmed animal carcinogen with unknown relevance to humans
A4 Not classifiable as a human carcinogen
CNS impair Central Nervous System impairment
eye dam Eye damage
eye irr Eye irritation
hematologic eff Hematologic effects
P Application restricted to conditions in which there are neglible aerosol exposures
peripheral neuropathy Peripheral neuropathy
Skin Danger of cutaneous absorption
skin irr Skin irritation
URT irr Upper Respiratory Tract irritation
varies varies

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update

Naphthalene	91-20-3	Immediately Dangerous to Life or Health Concentration Value 250 ppm	1995-03-01

Engineering measures

Adequate ventilation to control airborned concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as:. Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate:. Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

Protective measures : Wear full protective clothing and self-contained breathing apparatus.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Form : Liquid
Physical state : Liquid
Color : Clear to amber
Odor : Mild

Safety data

Flash point	:	-23 °C (-9 °F) estimated
Lower explosion limit	:	1.3 %(V)
Upper explosion limit	:	8 %(V)
Oxidizing properties	:	no
Autoignition temperature	:	No data available
Thermal decomposition	:	No data available
Molecular formula	:	Mixture
Molecular weight	:	No data available
pH	:	No data available
Pour point	:	No data available
Boiling point/boiling range	:	22 °C (72 °F)
Vapor pressure	:	2.00 - 3.00 PSI at 37.8 °C (100.0 °F)
Relative density	:	0.751 at 15.6 °C (60.1 °F)
Water solubility	:	Negligible
Partition coefficient: n-octanol/water	:	No data available
Viscosity, kinematic	:	No data available
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Percent volatile	:	> 99 %

SECTION 10: Stability and reactivity

Chemical stability	:	This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid	:	Heat, flames and sparks.

Materials to avoid	:	May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Thermal decomposition	:	No data available
Hazardous decomposition products	:	Carbon oxides
Other data	:	No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

JP-4 Fuel (MIL-T-5624)
Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute inhalation toxicity

Kerosene C9-C16 : LC50: > 5.2 mg/l
Exposure time: 4 h
Species: Rat

Isopentane LC50: > 25.3 mg/l
Exposure time: 4 h
Species: Rat
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Information given is based on data obtained from similar substances.

Acute dermal toxicity

Kerosene C9-C16 : LD50: >2000 milligram per kilogram
Species: Rabbit

JP-4 Fuel (MIL-T-5624)
Skin irritation : May cause skin irritation in susceptible persons.

JP-4 Fuel (MIL-T-5624)
Eye irritation : Vapors may cause irritation to the eyes, respiratory system and the skin.

Sensitization

Kerosene C9-C16 : Did not cause sensitization on laboratory animals.

Isopentane Did not cause sensitization on laboratory animals.

Naphthalene	Classification: Did not cause sensitization on laboratory animals. Did not cause sensitization on laboratory animals.

Repeated dose toxicity

Kerosene C9-C16	:	Species: Rabbit Application Route: Dermal Dose: 0, 200, 1000, 2000 mg/kg Exposure time: 28 day Number of exposures: 3 times/wk Lowest observable effect level: 1,000 mg/kg
Isopentane		Species: Rat, male and female Sex: male and female Application Route: Inhalation Dose: 668, 2220, 6646 ppm Exposure time: 13 wk Number of exposures: 6 h/d, 5 d/wk NOEL: > 2220 ppm Lowest observable effect level: > = 6646 ppm Method: OECD Guideline 413 Target Organs: Kidney Information given is based on data obtained from similar substances.

Carcinogenicity

Kerosene C9-C16	:	Species: Mouse Dose: 0, 28.5, 50, 100% Exposure time: 104 wks Number of exposures: 2, 4, or 7 times/wk Remarks: Weak dermal carcinogen
Naphthalene		Species: Mouse Sex: male Dose: 10, 30 ppm Exposure time: 105 weeks Number of exposures: 6 hours/day, 5 days/week Test substance: yes Print Date: No information available. Remarks: No evidence of carcinogenicity

Species: Mouse
Sex: female
Dose: 10, 30 ppm
Exposure time: 105 weeks
Number of exposures: 6 hours/day, 5 days/week
Test substance: yes
Print Date: No information available.
Remarks: increased incidence of alveolar/bronchiolar adenomas

Species: Rat
Sex: male and female
Dose: 10, 30, 60 ppm
Exposure time: 105 weeks
Number of exposures: 6 hours/day, 5 days/week
Test substance: yes
Print Date: No information available.
Remarks: nose respiratory epithelial adenoma, increased incidence of olfactory neuroblastomas

Reproductive toxicity

Isopentane : Species: Rat
Sex: male and female
Application Route: inhalation (vapor)
Dose: 0, 500, 2000, 7000 ppm
Number of exposures: 6 h/d 5 d/wk
Method: OECD Test Guideline 416
NOAEL Parent: 7000 ppm
NOAEL F1: 2000 ppm
NOAEL F2: 2000 ppm
Information given is based on data obtained from similar substances.

Species: Rat
Sex: female
Application Route: oral gavage
Dose: 0, 100, 300, 1000 mg/kg/d
Method: OECD Test Guideline 415
NOAEL Parent: >= 1,000 mg/kg
NOAEL F1: >= 1,000 mg/kg

Species: Rat
Sex: male
Application Route: oral gavage
Dose: 0, 100, 300, 1000 mg/kg/d
Method: OECD Test Guideline 415
NOAEL Parent: >= 300 mg/kg

Developmental Toxicity

Kerosene C9-C16 : Species: Rat
Application Route: Inhalation
Dose: 0, 106, 364 ppm
Exposure time: 6 hrs/d
Test period: GD 6-15
NOAEL Teratogenicity: 364 ppm
NOAEL Maternal: 364 ppm

Isopentane	Species: Rat Application Route: oral gavage Dose: 0, 100, 500, 1000 mg/kg/d Exposure time: GD 6-15 Number of exposures: daily Method: OECD Guideline 414 NOAEL Teratogenicity: 1,000 mg/kg NOAEL Maternal: 1,000 mg/kg Information given is based on data obtained from similar substances. Species: Rat Application Route: Inhalation Dose: 0, 500, 2000, 7000 ppm Exposure time: GD 6-15 Number of exposures: 5 d/wk Method: OECD Guideline 414 NOAEL Teratogenicity: 7000 ppm NOAEL Maternal: 500 - 2000 ppm Information given is based on data obtained from similar substances. Species: Rabbit Application Route: Inhalation Dose: 0, 500, 2000, 7000 ppm Exposure time: GD 6-18 Method: OECD Guideline 414 NOAEL Teratogenicity: 7000 ppm NOAEL Maternal: 7000 ppm Information given is based on data obtained from similar substances.
Naphthalene	Species: Rabbit Application Route: oral gavage Dose: 40, 200, 400 mg/kg Test period: 29 d, GD 6-18 NOAEL Teratogenicity: 400 mg/kg

JP-4 Fuel (MIL-T-5624)

Aspiration toxicity : May be fatal if swallowed and enters airways.
Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

CMR effects

Hydrodesulfurized Naphtha	: Carcinogenicity: Possible human carcinogen Mutagenicity: In vivo tests showed mutagenic effects
Isopentane	Carcinogenicity: Not available Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects., In vivo tests did not show mutagenic effects Teratogenicity: Animal testing did not show any effects on fetal development. Reproductive toxicity: Animal testing did not show any effects on fertility.
Naphthalene	Carcinogenicity: Limited evidence of carcinogenicity in animal

studies

JP-4 Fuel (MIL-T-5624)
Further information : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

SECTION 12: Ecological information

Toxicity to fish

Kerosene C9-C16	: LL50: 2 - 5 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) Method: OECD Test Guideline 203
Isopentane	LC50: 4.26 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) semi-static test Method: OECD Test Guideline 203 Information given is based on data obtained from similar substances.
Naphthalene	LC50: 3.2 mg/l Exposure time: 96 h Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates

Kerosene C9-C16	: EL50: 1.4 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
Isopentane	EC50: 2.3 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) static test Method: OECD Test Guideline 202
Naphthalene	LC50: 2.16 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea)

Toxicity to algae

Kerosene C9-C16	: EL50: 1 - 3 mg/l Exposure time: 72 h Species: Raphidocellus subcapitata (algae) Method: OECD Test Guideline 201
Isopentane	EC50: 7.51 mg/l Exposure time: 72 h Species: Scenedesmus capricornutum (fresh water algae) Growth inhibition Method: OECD Test Guideline 201 Information given is based on data obtained from similar

substances.

Naphthalene	EC50: 2.96 mg/l Exposure time: 48 h Species: Selenastrum capricornutum (algae)

Elimination information (persistence and degradability)

Bioaccumulation

Isopentane	:	Accumulation in aquatic organisms is unlikely.

Biodegradability	:	Expected to be ultimately biodegradable

Ecotoxicology Assessment

Acute aquatic toxicity

Kerosene C9-C16	:	Toxic to aquatic life.
Isopentane	:	Toxic to aquatic life.
Naphthalene	:	Very toxic to aquatic life.

Chronic aquatic toxicity

Kerosene C9-C16	:	Toxic to aquatic life with long lasting effects.
Isopentane	:	Toxic to aquatic life with long lasting effects.
Naphthalene	:	Very toxic to aquatic life with long lasting effects.

Results of PBT assessment

Isopentane	:	Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product.

Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)
UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I, (-23 °C), MARINE POLLUTANT, (KEROSENE, C9-C12)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I, (D/E), ENVIRONMENTALLY HAZARDOUS, (KEROSENE, C9-C12)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I, ENVIRONMENTALLY HAZARDOUS, (KEROSENE, C9-C12)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I, ENVIRONMENTALLY HAZARDOUS, (KEROSENE, C9-C12)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard

Chronic Health Hazard

CERCLA Reportable Quantity : 1667 lbs

Isopentane

SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 313 Ingredients : The following components are subject to reporting levels established by SARA Title III, Section 313:

: Naphthalene - 91-20-3

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

: Isopentane - 78-78-4

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

: Isopentane - 78-78-4

US State Regulations

Pennsylvania Right To Know

: Kerosene C9-C16 - 8008-20-6
Isopentane - 78-78-4
Naphthalene - 91-20-3

New Jersey Right To Know : Kerosene C9-C16 - 8008-20-6
Isopentane - 78-78-4
Naphthalene - 91-20-3

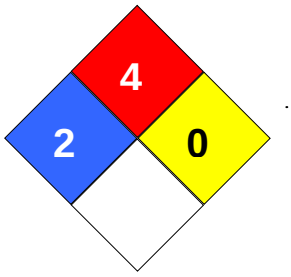
California Prop. 65 Ingredients : WARNING! This product contains a chemical known in the State of California to cause cancer.

Notification status

Europe REACH	:	A substance or substances in this product is not registered or notified to be registered. Importation or manufacture of this product is still permitted provided that it does not exceed the REACH minimum threshold quantity of the non-regulated substances.
United States of America TSCA	:	On the inventory, or in compliance with the inventory
Canada DSL	:	All components of this product are on the Canadian DSL
Australia AICS	:	On the inventory, or in compliance with the inventory
New Zealand NZIoC	:	Not in compliance with the inventory
Japan ENCS	:	Not in compliance with the inventory
Korea KECI	:	On the inventory, or in compliance with the inventory
Philippines PICCS	:	On the inventory, or in compliance with the inventory
China IECSC	:	Not in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 2
Fire Hazard: 4
Reactivity Hazard: 0



Further information

Legacy SDS Number : 001927

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		

1. IDENTIFICATION

Product Identifier: Gasoline, Unleaded With Ethanol

Synonyms: Regular Unleaded Gasoline, Premium Unleaded Gasoline, Mid-grade Unleaded Gasoline, Reformulated Blendstock for Oxygenate Blending (RBOB) w/Ethanol, Premium Blendstock for Oxygenate Blending (PBOB) w/Ethanol, Conventional Blendstock for Oxygenate Blending (CBOB) w/Ethanol, Unleaded Gasoline

Intended use of the product: Fuel

Contact:
Global Companies LLC
Water Mill Center
800 South St.
Waltham, MA 02454-9161
www.globalp.com

Contact Information: EMERGENCY TELEPHONE NUMBER (24 hrs): CHEMTREC (800) 424-9300
COMPANY CONTACT (business hours): 800-542-0778

2. HAZARD IDENTIFICATION

According to OSHA 29 CFR 1910.1200 HCS

Classification of the Substance or Mixture

Classification (GHS-US):

Flammable Liquid	Category 2	H225
Acute Toxicity	Category 4	H332
Skin Corrosion/Irritation	Category 2	H315
Carcinogenicity	Category 1A	H350
Germ Cell Mutagenicity	Category 1B	H340
Reproductive Toxicity	Category 2	H361d
STOT RE	Category 1	H372
Aspiration Hazard	Category 1	H304

Labeling Elements

Signal Word (GHS-US): **Danger**

Hazard Statements (GHS-US):
H225 – Highly flammable liquid and vapor.
H304 - May be fatal if swallowed and enters airways.
H332 - Harmful if inhaled.
H315 - Causes skin irritation.
H350 – May cause cancer.
H340 – May cause genetic defects.
H361 – Suspected of damaging fertility or the unborn child.
H372 – Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements (GHS-US)
P201 - Obtain special instructions before use.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 - Keep container tightly closed.
P240 – Ground/bond container and receiving equipment.
P241 – Use explosion-proof electrical/ventilating/lighting equipment pursuant to applicable electrical code.
P242 – Use only non-sparking tools.
P243 – Take precautionary measures against static discharge.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P303+361+353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse with water/shower.
P308+311 - If exposed or concerned: Get medical advice/attention.
P301+310 - If swallowed: Immediately call a poison center/doctor/…
P331 - Do NOT induce vomiting.
P370+P378 – In case of fire use firefighting foam or other appropriate media for Class B fires to extinguish.
P403 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 – Dispose of contents/container in accordance with local/regional/national/international regulation.

Other information:

NFPA 704
Health: 1
Fire: 3
Reactivity:0

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Composition Information

Name	Product Identifier (CAS#)	% (w/w)	Classification
Gasoline	8006-61-9	100	Carc 1B, H350; Muta 1B, H340; Asp 1, H304
Benzene	71-43-2	0.1 to 4.9 (0.1 to 1.3*)	Flam liq 2, H225; Carc 1A, H350; Muta 1B H340; STOT RE 1, H372; Asp 1, H304; Eye Irrit 2, H319; Skin Irrit 2, H315
Ethyl Alcohol (Ethanol)	64-17-5	0 – 10	Flam Liq 2 H225
Toluene	108-88-3	0 - 15	Flam liq 2, H225; Repro 2, H361d; STOT RE 2, H373; Asp 1, H304; Skin Irrit 2, H315; STOT SE 3, H336
Xylene, mixed isomers	1330-20-7	0 - 15	Flam Liq 3, H226; Acute Tox 4, H332; Acute Tox 4, H312; Skin Irrit 2, H315
Ethyl Benzene	100-41-4	< 4	Flam Liq 2, H225; Acute Tox 4, H332; STOT RE 2, H373; Asp 1, H304
1,2,4- Trimethylbenzene	95-63-6	<5	Flam Liq 3, H226; Acute Tox 4, H332; Acute Tox 4, H312; Skin Irrit 2, H315; Eye Irrit 2, H319; STOT SE 3, H335; Acute Aquatic 2, H411

*for reformulated gasoline

Additional Formulation Information
A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. Butane is often added to increase volatility, especially in winter. May contain antioxidant and multifunctional additives. Oxygenated and reformulated gasoline will have legally-required amounts of oxygenates (Ethanol) to increase octane levels.

RBOB and PBOB are gasoline base stocks and do not contain any Oxygenates (Ethanol).

*Also see Section 15 for list of SARA Section 313 toxic chemicals.

4. FIRST AID MEASURES

Route	Measures
Inhalation	Remove person to fresh air. If person is not breathing, ensure an open airway and provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.
Ingestion	Aspiration Hazard: DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.
Eye Contact	If present, remove contact lenses. In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 mm. Hold eyelids open to ensure adequate flushing. Seek medical attention.
Skin Contact	Remove contaminated clothing and shoes. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.
Absorption	As with skin contact, remove contaminated clothing and flush with copious amounts of water. Flush affected area for at least 15 minutes to minimize potential for further absorption. Seek medical attention if significant portions of skin have been exposed.

Most Important Symptoms
Contact may cause eye, skin and mucous membrane irritation. Harmful if absorbed through the skin. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects.

Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

Immediate Medical Attention and Special Treatment
If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

Application of epinephrine may cause cardiac arrhythmia in persons exposed to large quantities of hydrocarbon vapor or due to skin absorption. Observe for development of symptoms leading to cardiac arrhythmia.

Urine samples may be obtained to determine biological effects of benzene exposure and should be collected in accordance with the medical surveillance criteria in 29 CFR 1910.1028.

Contaminated clothing, including shoes may present a fire hazard and should be discarded

Medical Conditions Aggravated by Exposure
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Chronic respiratory disease, liver or kidney dysfunction, or pre-existing central nervous system disorders may be aggravated by exposure.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, C02, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

During certain times of the year and/or in certain geographical locations, gasoline may contain additional additives. Firefighting

foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration - refer to NFPA 11 'Low Expansion Foam -1994 Edition."

Specific Hazards / Products of Combustion
Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Combustion may produce smoke, carbon monoxide and other products of incomplete combustion.

Special Precautions and Protective Equipment for Firefighters
Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other firefighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full face piece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 9 for fire properties of this chemical including flash point, autoignition temperature, and explosive limits

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
ACTIVATE FACILITY SPCC, SPILL CONTINGENCY or EMERGENCY PLAN.

Depending on the size of the spill, downwind receptors may need to be notified.

Evacuate nonessential personnel and remove or secure all ignition sources (flame, spark, hot work, hot metal, etc.). Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Do not touch or walk-through spilled material.

Highly flammable material, even small spills may pose a fire danger for emergency responders. Due to high vapor density, flammable / toxic vapors may be present in low lying areas, dikes, pits, drains, or trenches. Ventilate the area. Use of non-sparking tools and intrinsically safe equipment is recommended. Potential for flammable atmosphere should be monitored using a combustible gas indicator positioned downwind of the spill area. See Sections 2 and 7 for further hazard warnings and handling instructions.

Use appropriate personal protective equipment to prevent eye/skin contact and absorption. Use NIOSH approved respiratory protection, if warranted, to prevent exposures above permissible limits (see Section 8). Contaminated clothing should not be near sources of ignition.

Environmental Precautions
Stop the spill to prevent environmental release if it can be done safely. Product is toxic to aquatic life. Take action to isolate environmental receptors including drains, storm sewers and natural water bodies. Keep on impervious surface if at all possible. Use water sparingly to prevent product from spreading. Foam and absorbents may be used to reduce / prevent airborne release.

Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Follow federal, state or local requirements for reporting environmental release where necessary (see Section 15 for further information)

Containment and Clean-Up Methods
Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking absorbents, or absorbent

boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of firefighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with dry earth, sand or other non-combustible, inert oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container with clean, non-sparking tools for reclamation or disposal. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

7. HANDLING AND STORAGE

Handling Precautions
USE ONLY AS A FUEL
DO NOT SIPHON BY MOUTH

Handle as a flammable liquid. Keep away from heat, sparks, and open flame. No smoking. Electrical equipment should be approved for classified area. Bond and ground containers during product transfer pursuant to NFPA 70 and API RP 2003 to reduce the possibility of static-initiated fire or explosion. Follow precautions to prevent static initiated fire.

Use good personal hygiene practices. Use only with protective equipment specified in Section 8. Avoid repeated and/or prolonged skin exposure. Use only outdoors or in well ventilated areas. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.

Vapors are heavier than air and can accumulate in low lying areas (e.g., tanks, pits, vaults, dikes, drains, etc.) Follow specific procedures for confined space entry in areas where product may be present pursuant to OSHA requirements in 29 CFR 1910.146. Atmospheric testing using a combustible gas indicator may be necessary in confined areas where product may be present.

Special slow load procedures for “switch loading” must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, “Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents.

Storage
Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Label all secondary containers that this material is transferred into with the chemical name and associated hazard(s). Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition. Separate from incompatible materials (see Section 10) by distance or secondary containment.

Store in a well-ventilated area. Protect containers from damage and vehicular traffic. Post “No Smoking” signs in product storage areas. This storage area should comply with NFPA 30 “Flammable and Combustible Liquid Code”. Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 “Cleaning Mobile Tanks In Flammable and Combustible Liquid Service” and API RP 2015 “Cleaning Petroleum Storage Tanks”.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits

Component	CAS #	List	Value
Gasoline	8006-61-9	ACGIH TWA ACGIH STEL	300 ppm 500 ppm
Benzene	71-43-2	ACGIH TLV-TWA ACGIH STEL OSHA AL OSHA TWA OSHA STEL	0.5 ppm* Skin; A1; BEI 2.5 ppm* Skin, A1: BEI 0.5 ppm 1 ppm 5 ppm
Ethyl Alcohol (Ethanol)	64-17-5	ACGIH STEL OSHA PEL	1000 ppm 1000 ppm
Toluene	108-88-3	ACGIH TWA OSHA TWA OSHA Ceiling limit OSHA Ceiling limit Peak	20 ppm 200 ppm 300 ppm 500 ppm (10 min)
Xylene, mixed isomers	1330-20-7	ACGIH TWA ACGIH STEL OSHA PEL	100 ppm 150 ppm 100 ppm
Ethyl Benzene	100-41-4	ACGIH TWA OSHA PEL OSHA STEL	20 ppm 100 ppm 125 ppm
1,2,4- Trimethylbenzene	95-63-6	ACGIH TWA	25 ppm

*Skin designation indicates the chemical is skin absorbable

Engineering Controls

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and

Flammability limits, particularly in confined spaces. Intrinsically safe equipment and non-sparking tools shall be used in circumstances where concentrations may exceed lower flammable limits. Grounding and bonding shall be used to prevent accumulation and discharge of static electricity.

Emergency shower and eyewash should be provided in proximity to handling areas in the event of exposure to decontaminate.

Personal Protective Equipment

Exposure	Equipment
Eye / Face	Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.
Skin	Gloves constructed of nitrile or neoprene are recommended when handling this material. If contact with the body is expected, chemical protective clothing such as of E.I. DuPont Tychem ®, Barricade®, or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.
Respiratory	Personal protective equipment (PPE) should meet recommended national standards. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134 and the OSHA Benzene Standard, 29 CFR 1910.1028. Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection. Specific requirements under the OSHA occupational exposure to Benzene may apply if concentrations exceed the action level or permissible limits. Consult 29 CFR 1910.1028 for further information)

Exposure	Equipment
Thermal	Product is stored at ambient temperature. No thermal protection is required except for emergency operations involving actual or potential for fire.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value	Comments
Appearance	A clear, water-like liquid	
Odor	A strong, characteristic aromatic hydrocarbon odor. Oxygenated gasoline with Ethanol may have a alcohol-like odor and is detectable at a lower concentration than non-oxygenated gasoline.	
Odor Threshold	See table below	
pH	Not available	
Melting / Freeze Point	- 150 ˚F	
Boiling Point And Range	85 to 437 ^{0}F (39 to 200 C)	
Flash Point	-45 ^{0}F (-43 C)	
Evaporation Rate	10-11	(n-butyl acetate = 1)
Flammability	Flammable liquid	
Flammability Limits	1.4 – 7.6%	(est)
Vapor Pressure	7-15 RVP @100 ^{0}F (38 C) 275-475mm Hg @ 68 ^{0}F (20 C)	
Vapor Density	AP 3 to 4	
Specific Gravity	0.76	(water =1)
Solubility	Non-oxygenated gasoline-negligible (<0.1% @77^{0}F). Gasoline with 10% Ethanol has greater solubility than other oxygenates	
Partition Coefficient	2-7	as Log P
Autoignition Temperature	highly variable; >530 ^{0}F (>280 C)	
Decomposition Temperature	Evaporation or ignition likely before decomposition will occur	
Viscosity	0.64 – 0.88 mm^2/sec	
Percent Volatiles	100%	

Parameter	Odor Detection	Odor Recognition
Non-oxygenated gasoline	0.5-0.6 ppm	0.8-1.1 ppm
Gasoline with 10% Ethanol	0.2-0.3 ppm	0.4-0.7 ppm

10. STABILITY AND REACTIVITY

Reactivity
Material is not self reacting, flammable concentrations may be present in air.

Stability
Normally stable unless mixed with incompatibles or fire in presence of an ignition source. Material is flammable liquid.

Reactions / Polymerization
Stable. Hazardous polymerization will not occur.

Conditions to Avoid
Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources

Incompatible Materials
Keep away from strong acids and oxidizers.

Hazardous Decomposition Products
Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Acute Toxicity (Inhalation LC50)

Gasoline (8006-61-9)	
LC50 Inhalation Human	2000 ppm/1 hr
Benzene (71-43-2)	
LC50 Inhalation Rat	10,000 ppm/7 hr
Ethanol (64-17-5)	
LC50 Inhalation Rat	>20,000 ppm/10 hr
Toluene (108-88-3)	
LC50 Inhalation Mouse	400 ppm/4 hr
1,2,4 Trimethylbenzene (95-63-6)	
LC50 Inhalation Mouse	2000 ppm/48 hr
Xylene (1330-20-7)	
LC50 Inhalation Rat	6350 ppm/4 hr

Acute Toxicity (Oral LC50)

Gasoline (8006-61-9)	
LC50 Oral Rat	14,063 mg/l/4h
Benzene (71-43-2)	
LC50 Oral Rat	3306 mg/kg
Ethanol (64-17-5)	
LC50 Oral Rat	7060 mg/kg
Toluene (108-88-3)	
LC50 Oral Rat	2600 mg/kg
1,2,4 Trimethylbenzene (95-63-6)	
LC50 Oral Rat	3550 mg/kg
Xylene (1330-20-7)	
LC50 Oral Rat	>3500 mg/kg
Ethylbenzene (100-41-4)	
LC50 Oral Rat	3500 mg/kg

Acute Toxicity (Dermal LC50)

Gasoline (8006-61-9)	
LD50 Dermal Rabbit	>5 mL/kg
Benzene (71-43-2)	
LD50 Dermal Rabbit	>8260 mg/kg
Toluene (108-88-3)	
LC50 Dermal Rabbit	12,200 mg/kg
1,2,4 Trimethylbenzene (95-63-6)	
LC50 Dermal Rabbit	>3160 mg/kg

Xylene (1330-20-7)
LC50 Dermal Rabbit >43 g/kg
Ethylbenzene (100-41-4)
LC50 Dermal Rabbit 17,800 mg/kg

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: May cause genetic defects.

Carcinogenicity: OSHA: NO IARC: YES - 2B NTP: NO ACGIH: YES (A3)

IARC has determined that gasoline and byproducts of combustion are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. The NTP, ARC, OSHA and ACGIH list benzene as a human carcinogen.

Reproductive Toxicity: May damage/Suspected of damaging fertility or the unborn child.

Teratogenicity: Not available

Specific Target Organ Toxicity (Repeated Exposure): Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

Specific Target Organ Toxicity (Single Exposure): Single over-exposure likely to cause central nervous system effects (dizziness and drowsiness), excessive exposure could cause paralysis or cardiac arrhythmia.

Aspiration Hazard: This chemical is considered to be an aspiration hazard. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Potential Health Effects: Vapor irritating to eyes, nose, and throat. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur. Inhalation at high concentrations in confined spaces with less than 16% oxygen needed to sustain life, skin and /or eye contact (liquid).

Chronic effects: Human inhalation (chronic) >500 ppm (approx 1.8 mg/L)/ day. Effects: May cause vomiting, diarrhea, insomnia, headache dizziness, anemia, muscle & neurological symptoms.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

12. ECOLOGICAL INFORMATION

Toxicity

Material is toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

EC50 Daphnia	30 mmol/m3 (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish	7.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas)

Persistence and Degradation: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

Other Adverse Effects: None known

Other Information: Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options. May be considered a hazardous waste if disposed. Direct solid waste (landfill) or incineration at a solid waste facility is not permissible. Do not discharge to sanitary or storm sewer. Personnel handling waste containers should follow precautions provided in this document.

Shipping containers must be DOT authorized packages. Follow licensure and regulations for transport of hazardous material and hazardous waste as applicable.

14. TRANSPORT INFORMATION

US DOT

UN Identification Number	UN 1203
Proper Shipping Name	Gasoline
Hazard Class and Packing Group	3, PG II
Shipping Label	Flammable Liquid
Placard / Bulk Package	Flammable / 1203
Emergency Response Guidebook Guide Number	128

IATA Cargo

UN Identification Number	UN1203
Shipping Name / Description	Gasoline
Hazard Class and Packing Group	3, PG II
ICAO Label	3
Packing Instructions Cargo	364, Y341
Max Quantity Per Package Cargo	60 L

IATA Passenger

UN Identification Number	UN1203
Shipping Name / Description	Gasoline
Hazard Class and Packing Group	3, PG II
ICAO Label	3
Packing Instructions Passenger	353, Y341
Max Quantity Per Package	5 L

IMDG

UN Identification Number	UN1203
Shipping Name / Description	Gasoline
Hazard Class and Packing Group	3, PG II
IMDG Label	3
EmS Number	F-E S-E
Marine Pollutant	No

15. REGULATORY INFORMATION

U.S. Federal, State, and Local Regulatory Information

Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other federal, state, or local

regulations; consult those regulations applicable to your facility/operation.

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Clean Water Act (Oil Spills)
Any spill or release of this product to “navigable waters” (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA Section 103 and SARA Section 304 (Release to the Environment)
The CERCLA definition of hazardous substances contains a “petroleum exclusion” clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA Section 313- Supplier Notification
This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

- Benzene (71-43-2)
- Benzene (71-43-2) for reformulated gasoline
- Ethyl benzene (100-41-4)
- n-Hexane (110-54-3)
- Toluene (108-88-3)
- 1,2,4- Trimethylbenzene (95-63-6)
- Xylene, mixed isomers (1330-20-7)
- Ethyl Alcohol (Ethanol)

Information on each ingredient’s concentration can be found in Section 3
Information on each ingredient’s exposure limits can be found in Section 8

EPA Notification (Oil Spills)
If the there is a discharge of more than 1,000-gallons of oil into or upon navigable waters of the United States, or if it is the second spill event of 42 gallons or more of oil into water within a twelve (12) month period, a written report must be submitted to the Regional Administrator of the EPA within sixty days of the event.

Pennsylvania Right to Know Hazardous Substance list:
The following product components are cited in the Pennsylvania Special Hazardous Substance List, and are present at levels which require reporting.

Component	CAS	Amount
Benzene	71-43-2	0.1-4.9%
Xylene	1330-20-7	0-15%
Toluene	108-88-3	0-15%
1,2,4-Trimethylbenzene	95-63-6	<5%
Ethyl Benzene	100-41-4	<4%
Ethyl Alcohol	64-17-5	0-10%

New Jersey Right to Know Hazardous Substance list:
The following product components are cited in the New Jersey Right to Know Hazardous Substance List, and are present at levels which require reporting.

Component	CAS	Amount
Gasoline	8006-61-9	100%
Benzene	71-43-2	0.1-4.9%
Xylene	1330-20-7	0-15%
Toluene	108-88-3	0-15%
1,2,4-Trimethylbenzene	95-63-6	<5%
Ethyl Benzene	100-41-4	<4%
Ethyl Alcohol	64-17-5	0-10%

California Prop. 65
WARNING: This product contains chemicals known to the State of California to cause Cancer or Reproductive Toxicity.

Component	CAS	Amount
Benzene	71-43-2	0.1-4.9%
Toluene	108-88-3	0-15%
Ethyl Benzene	100-41-4	<4%
Ethyl Alcohol	64-17-5	0-10%

U.S. Toxic Substances Control Act
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

CEPA - Domestic Substances List (DSL)
All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

Canadian Regulatory Information (WHMIS)
Class B, Division 2 (Flammable Liquid)
Class D, Division 2A (Very toxic by other means) and Class D, Division 2B (Toxic by other means)

16. OTHER INFORMATION

Version	5
Issue Date	May 20, 2016
Prior Issue Date	March 3, 2015

Description of Revisions
Revised to meet Globally Harmonized System for chemical hazard communication requirements pursuant to OSHA regulatory revisions 77 FR 17884, March 26, 2012.

Abbreviations

˚F	Degrees fahrenheit (temperature)	mg	Milligrams
<	Less than	mL	Milliliter
=	Equal to	mm^2	Square millimeters
>	Greater than	mmHg	Millimeters of mercury (pressure)
AP	Approximately	ppm	Parts per million
C	Centigrade (temperature)	sec	Second
kg	Kilogram	ug	Micrograms
L	Liter		

Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
AL	Action Level
ANSI	American National Standards Institute
API	American Petroleum Institute
CAS	Chemical Abstract Service
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
EC50	Ecological concentration 50%
EPA	U.S. Environmental Protection Agency
ERPG	Emergency Response Planning Guideline
GHS	Global Harmonized System
HMIS	Hazardous Materials Information System
IARC	International Agency for Research On Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
Koc	Soil Organic Carbon
LC50	Lethal concentration 50%
LD50	Lethal dose 50%
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change
NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety & Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act Reauthorization Act of 1986 Title III
REL	Recommended Exposure Limit (NIOSH)
RVP	Reid Vapor Pressure
SARA	Superfund Amendments and
SCBA	Self Contained Breathing Apparatus
SPCC	Spill Prevention, Control, and Countermeasures
STEL	Short-Term Exposure Limit (generally 15 minutes)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average (8 hr.)
UN	United Nations
UNECE	United Nations Economic Commission for Europe
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Canadian Workplace Hazardous Materials Information System

Disclaimer of Expressed and Implied Warranties

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

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** End of Safety Data Sheet **