No. 9954 P. Fax transmittal sheet Corporate Headquarters 2696 Chicago Drive Warehouse 1619 Chicago Drive WYOMING, MICHIGAN 49509 (616) 245-1114 FAX (616) 245-0618 TO: <u>Evelyn</u> Dick Vogel FROM: _ DATE: 11/19/13 MSDS Sheets NOTE: NUMBER OF PAGES:

MATERIAL SAFETY DATA SHEET

No. 9954

P. 19/31

1. Product and Company Identification

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1. Product and Company le	dentification
Material name	DIESEL FÜELS
Version #	03
Issue date	09-November-2010
Revision date.	25-June-2013
Supersedes date	04-November-2012
MSDS Number	102
Product use	Refinery feedstock.
Synonym(s)	Diesel Fuels All Grades, Diesel Fuel No.2, Fuel Oil No.2, High Sulfur Diesel Fuel, Low Sulfur
	Diesel Fuel, Ultra Low Sulfur Diesel Fuel, CARB (California Air Resource Board) Diesel Fuel, Off-Road Diesel Fuel, Dyed Diesel Fuel, X Grade Diesel Fuel, X-1 Diesel Fuel, R5 ULSD, B5 ULS D See section 16 for complete information.
Manufacturer/Supplier	Valero Marketing & Supply Company and Affiliates P.O. Box 696000
Concern Annintenas	San Antonio, TX 78269-6000
General Assistance	210-345-4593 04 Januar Emperature 200 E05 E020
Emergency	24 Hour Emergency 866-565-5220 1-800-424-9300 (CHEMTREC USA)
2. Hazards Identification	
Physical state	Liquid.
Appearance	Liquid (may be dyed red).
Emergency overview	WARNING
	Combustible liquid and vapor. May be ignited by heat, sparks or flames. Heat may cause the containers to explode.
	Harmful if inhaled or swallowed. May be harmful if absorbed through skin. Aspiration may cause lung damage. Irritating to eyes, respiratory system and skin. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea. Suspect cancer hazard - may cause cancer. Prolonged exposure may cause chronic effects. Diesel exhaust has been reported to be an occupational hazard due to NIOSH-reported potential carcinogenic properties. Hydrogen sulfide, a highly toxic gas, may be present or released. Signs and symptoms
	of overexposure to hydrogen sulfide include respiratory and eye irritation, dizziness, nausea, coughing, a sensation of dryness and pain in the nose, and loss of consciousness. Odor does not provide a reliable indicator of the presence of hazardous levels in the atmosphere. Toxic to aquatic organisms, May cause long-term adverse effects in the aquatic environment. The toxicological properties of this material have not been fully investigated. Static accumulating flammable materials can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite material and vapor may cause flash fire (or explosion).
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation, Ingestion, Skin contact, Eye contact.
Eyes	Contact may irritate or burn eyes. Eye contact may result in corneal injury,
Skin	 May be harmful if absorbed through skin. Irritating to skin, Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Inhalation	Harmful if inhaled. Irritating to respiratory system. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea. May cause breathing disorders and lung damage. May cause cancer by inhalation, Prolonged inhalation may be harmful.
Ingestion	Harmful if swallowed. Ingestion may result in vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even small quantities may result in aspiration pneumonitis. Irritating to mouth, throat, and stomach.
Target organs	Blood, Eyes, Liver, Respiratory system, Skin, Kidneys, Central nervous system.

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Chronic effects

Suspect cancer hazard - may cause cancer. Liver injury may occur. Kidney injury may occur. Exposure may cause lung cancer and also noted a positive association with an increased risk of bladder cancer. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dematitis.

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Signs and symptoms

Imitation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Decrease in motor functions. Behavioral changes, Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash. The toxicological properties of this product have not been thoroughly investigated. Use appropriate precautions.

Potential environmental effects Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Fuels, diesel, no. 2	68476-34-6	85 - 100
Biodiesel - Fatty acid methyl esters	67762-38-3	0-5
Fuels, diesel, C9-18-alkane branched and linear	1159170-26-9	0-5
n-Nonane	111-84-2	1-3
Octane (All isomers)	111-65-9	1-2
Hexané (Other isomers)	96-14-0	0-1
Naphthalene	91-20-3	0 - 1
n-Heptane	142-82-5	0 - 1
n-Hexane	110-54-3	0 - 1
	······································	· · · · · · · · · · · · · · · · · · ·

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Skin contact	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Ingestion	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Do not give mouth-to-mouth resuscitation. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Get medical attention immediately.
Notes to physician	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed. The toxicological properties of this material have not been fully investigated.
General advice	If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.
5. Fire Fighting Measures	
Flammable properties	Combustible liquid and vapor. Containers may explode when heated.
Extinguishing media	
Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Protection of firefighters	
Protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

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Fire fighting . equipment/instructions

Specific methods Hazardous combustion products

6. Accidental Release Measures

Personal precautions

Environmental precautions

Methods for containment

Methods for cleaning up

Other information

7. Handling and Storage

Handling

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Storage

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hase holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hase holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.

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In the event of fire and/or explosion do not breathe fumes.

Carbon monoxide. Carbon Dioxide. Sulfur oxides. Nitrogen oxides (NOx). Hydrocarbons. Hydrogen sulfide.

Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.

If facility or operation has an "oil or hazardous substance contingency plan"; activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Flammable. Review Firefighting Measures, Section 5, before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Use compatible foam to minimize vapor generation as needed. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact Chemtrec at 1-800-424-9300.

Eliminate all ignition sources (no smoking, flares, sparks, or flarnes in immediate area). Local authorities should be advised if significant spillages cannot be contained. Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Use non-sparking tools and explosion-proof equipment:

Small Spills: Absorb spill with verniculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste.

Large Spills: Use a non-combustible material like verniculite, sand or earth to soak up the product, and place into a container for later disposal. Prevent product from entering drains. Do not allow material to containinate ground water system. Should not be released into the environment.

Clean up in accordance with all applicable regulations.

Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity.

Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. Avoid release to the environment.

Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under the influence of heat. Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

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8. Exposure Controls / Personal Protection

Occupational exposure limits

Components	Туре	Value	Form
Fuels, diesel, no. 2 (CAS 58476-34-6)	TWA	100 mg/m3	Inhalable fraction and vapor.
Hexane (Other isomers) (CAS 96-14-0)	STEL	1000 ppm	
	TWA	500 ppm	
Naphthalene (CAS 91-20-3)	STEL	15 ppm	
· .	TWA	⁷ 10 ppm	
n-Heptane (CAS 142-82-5)	STEL	500 ppm 🔪 .	
	TWA	400 ppm	•
-Hexane (CAS 110-54-3)	TWA	50 ppm	
-Nonane (CAS 111-84-2)	TWA	200 ppm	
Octane (All isomers) (CAS I11-65-9)	TWA	300 ppm	
JS. OSHA Table Z-1 Limits for Air	Contaminants (29 CFR 1910.1000)	· · · · · · · · · · · · · · · · · · ·	
Components	Туре	Value	
laphthalene (CAS 91-20-3)	PEL	50 mg/m3	· · · · · · · · · · · · · · · · · · ·
· ,	•	10 ppm	
-Heptane (CAS 142-82-5).	PEL	2000 mg/m3	
. · · ·		500 ppm	
⊢Hexane (CAS 110-54-3)	PEL	1800 mg/m3	
· .		500 ppm	· · · · · · · · · · · · · · · · · · ·
Octane (All isomers) (CAS 11-65-9)	PEL	2350 mg/m3	
		500 ppm	• ••
anada. Alberta OELs (Occupation	al Health & Safety Code, Schedule	e 1, Table 2)	
Components	Туре	Value	
uels, diesel, no. 2 (CAS 8476-34-6)	TWA	100 mg/m3	
lexane (Other isomers) CAS 96-14-0)	STEL	3500 mg/m3	· · · · · ·
		1 000 pp m	
•	TWA	1760 mg/m3	· ·
и 		500 ppm	
laphthalene (CAS 91-20-3)	STEL	79 mg/m3	
· · · ·	· . ·	15 ppm	
	TWA	52 mg/m3	
•		10 ppm	· ·
	· ·	· · · · · · · · ·	· · · ·

n-Heptane (CAS 142-82-5)

n-Hexane (CAS 110-54-3) n-Nonane (CAS 111-84-2) Octane (All isomers) (CAS . 111-65-9)

300 ppm

2050 mg/m3 500 ppm

1640 mg/m3 400 ppm

176 mg/m3 50 ppm _

1050 mg/m3 200 pom

1400 mg/m3

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

STEL

TWA

TWA

τWA

TWA

Components	Туре	Value	Form
Fuels, diesel, no. 2 (CA\$ 68476-34-6)	TWA	100 mg/m3	Vapor and aerosol.
DIESEL FUELS	· · · · · · · · · · · · · · · · · · ·		······································

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Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

	Components	Туре	Value	Form
'	Hexane (Other isomers) (CAS 96-14-0)	TWA	200 ppm	· · · · · · · · · · · · · · · · · · ·
	Naphthalene (CAS 91-20-3)	STEL	15 ppm	
		TWA	10 ppm	
	n-Heptane (CAS 142-82-5)	STEL	500 ppm	
		TŴA	400 ppm	
	n-Hexane (CAS 110-54-3)	TWA	20 ppm	
•	n-Nonane (CAS 111-84-2)	TWA	200 ppm	
	Octane (All isomers) (CAS 111-65-9)	TWA	300 ppm	· , ·

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Туре	Value	Form	
Fuels, diesel, no. 2 (CAS 68476-34-6)	TWA	100 mg/m3	Inhalable fraction and vapor.	-
Hexane (Other isomers) (CAS 96-14-0)	STEL	1000 ppm		
	TWA	500 pom	· .	
Naphthalene (CAS 91-20-3)	STEL	15 ppm		•
	TWA	10 ppm		
n-Heptane (CAS 142-82-5)	STEL	500 ppm		
•	TWA	400 ppm		
n-Hexane (CAS 110-54-3)	TWA	50 ppm		
n-Nonane (CAS 111-84-2)	TWA	200 ppm		
Octane (All isomers) (CAS 111-65-9)	TWA	300 ppm		

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Туре	Value	
Hexane (Other isomers)	STEL	3500 mg/m3	
(CAS 96-14-0)	· · · · · · · · · · · · · · · · · · ·		·
		1000 ppm	
	TWA	1760 mg/m3	
		500 ppm	
Naphthalene (CAS 91-20-3)	STEL	79 mg/m3	
		15 ppm	
· · ·	TWA	52 mg/m3	
		10 ppm	
n-Heptane (CAS 142-82-5)	STEL	2050 mg/m3	
•	·	500 ppm	
	TWA .	1640 mg/m3	
	. · ·	400 ppm	
n-Hexane (CAS 110-54-3)	TWA	176 mg/m3	
,		50 ppm	
n-Noriane (CAS 111-84-2)	TWA	1050 mg/m3	
		200 ppm	
Octane (All isomers) (CAS 111-65-9)	STEL	1750 mg/m3	
		375 ppm	
	TWA	1400 mg/m3	
		300 ppm	
Mexico. Occupational Exposure Lin	nit Values		
Components	Туре	Value	
Hexane (Other isomers) (CAS 96-14-0)	STEL	3500 mg/m3	
. ,		1000 ppm	
	TWA	1760 mg/m3	
ISEL FUELS			
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Mexico. Occupational Exposure Limit Values

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Components	Туре		Value		
· · · · · · · · · · · · · · · · · · ·			500 ppm		
Naphthalene (CAS 91-20-3)	STEL		75 mg/m3		
			15 ppm		
	TWA		50 mg/m3		
			10 ppm		
n-Heptane (CAS 142-82-5)	STEL		2000 mg/m3		
·····			500 ppm		
	TWA		1600 mg/m3		
	, ,		400 ppm		
n-Hexane (CAS 110-54-3)	TWA		176 mg/m3		
			50 ppm		
n Nanana (CAE 111 94 3)	STEI		• •	•	
n-Nonane (CAS 111-84-2)	STEL		-1300 mg/m3		
	-	,	250 ppm	· .	
••••	TWA .		1050 mg/m3	• ,	
· ·	•		200 ppm	· ·	
Octane (All isomers) (CAS	STEL	. •	1800 mg/m3		
111-65-9)	· · ·			· ·	
			375 ppm		
	TWA		1450 mg/m3	· · · · · ·	
· · ·			- 300 ppm	•	
osure guidelines			• •	• • • • • • • •	
. –		•			
Canada - Alberta OELs: Skin d	-			· .	
 Naphthalene (CAS 91-20-3) 			rbed through the skin.		
n-Hexane (CAS 110-54-3)		Can be abso	rbed through the skin.		
Canada - British Columbia OE	Ls: Skin designation			· '.	
Fuels, diesel, no. 2 (CAS 68	476-34-6)	Can be abso	rbed through the skin.		
Naphthalene (CAS 91-20-3)			rbed through the skin.		
n-Hexane (CAS 110-54-3)			rbed through the skin.		
Canada - Manitoba OELs: Skin	designation		······································	• • •	
Fuels, diesel, no. 2 (CAS 68	-	Can be abso	rbed through the skin.		
Naphthalene (CAS 91-20-3)			rbed through the skin."		
n-Hexane (CAS 110-54-3)			rbed through the skin.		
Canada - Ontario OELs: Skin o	legionation		ibea allioagii the ann.	. • •	
-		.		•	
Fuels, diesel, no. 2 (CAS 68			rbed through the skin.		
Naphthalene (CAS 91-20-3)			rbed through the skin.		
n-Hexane (CAS 110-54-3)		Can be abso	rbed through the skin.		
Canada - Quebec OELs: Skin d	lesignation	,		•	
n-Hexane (CAS 110-54-3)	• •	Can be abso	roed through the skin.	· ·	
Canada - Saskatchewan OELs	: Skin designation			, ·	
Fuels, diesel, no, 2 (CAS 68	476-34-6)	Can be abso	rbed through the skin.		
Naphthalene (CAS 91-20-3)			rbed through the skin.	•	
n-Hexane (CAS 110-54-3)	•		rbed through the skin.		
Mexico OELs: Skin designatio	n				
n-Heptane (CAS 142-82-5)	'	Can be about	mand them when she	• .	
	-impation -		rbed through the skin.	1	
US - California OELs: Skin des	ngrration	_			
n-Hexane (CAS 110-54-3)		Can be abso	rbed through the skin.	•	
US ACGIH Threshold Limit Val	lues: Skin designation			i i	
Fuels, diesel, no. 2 (CAS 68	476-34-6)	Can be abso	rbed through the skin.		
Naphthalene (CAS 91-20-3)			rbed through the skin.		
n-Hexane (CAS 110-54-3)			rbed through the skin.		
	Invide adequate central		*	s enclosures, local exhaust	
		and local extiguist	venillation. Use Droces	a enciusures, iocai exneusi	
				elow recommended exposu	rø

Eye / face protection

Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

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Skin protection	Wear chemical-resistant, impervious gloves. Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.
Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.
General hygiene considerations	Consult supervisor for special handling instructions, Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	
Physical state	Liquid (may be dyed red). Liquid.
Form	Liquid.
Color	Clear. Straw.
Ödor	Kerosene (strang)
Odor threshold	Not available.
рH	Not available.
Vapor pressure	< 1 mm Hg (20°C)
Vapor density	3 (Air = 1)
Boiling point	325 - 700 °F (162.78 - 371.11 °C)
Melting point/Freezing point	-60.07 °F (-51.15 °C) Estimated
Solubility (water)	Not available.
Specific gravity	0.82 - 0.87 (60°F)
Flash point	> 100.0 °F (> 37.8 °C) Closed Cup
Flammability limits in air, upper, % by volume	8%
Flammability limits in air, lower, % by volume	0.4 %
Auto-ignition temperature	494.96 °F (257.2 °C)
Evaporation rate	O
Viscosity	2 - 4.5 mm²/s
Other data	
Flash point class	Combustible II
d0 Chamical Stability 8 [AAAtiritar latawaatian

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal temperature conditions and recommended use.
Conditions to avoid	Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Sulfur oxides. Nitrogen oxides (NOx). Hydrocarbons. Hydrogen sulfide.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

	tion	
Toxicological data		
Components	Species	Test Results
Fuels, diesel, no. 2 (CAS 68476-3	4-6)	
Acute		
Inhalation	Det	A A would be because
LC50	Rat	4.1 mg/l, 4 hours
Naphthalene (CAS 91-20-3)		
Acute		
Dermal LD50	Rabbit	> 2 g/kg
· · ·	Nabbit	~ 2 ging
Orai LD50	Rat	490 mg/kg
		490 mg/kg
n-Heptane (CAS 142-82-5)		
Acute Inhalation		
LC50	Rat	103 mg/l, 4 Hours
n-Hexane (CAS 110-54-3)	2 NG(8)	roo nign, a noura
Acute	·	
, Oral		
LD50	Rat	28710 mg/kg
n-Nonane (CAS 111-84-2)	· · · ·	
Acute	e de la companya de l	· · · · ·
Inhalation	· · ·	
LC50	Rat	3200 mg/l, 4 Hours
Octane (All isomers) (CAS 111-65		
Acute	· · · · · · · · · · · · · · · · · · ·	· ·
Inhalation		
LC50	Rat	118 mg/l, 4 Hours
Sensitization	This substance may have a potential for	sensitization which may provoke an allergic reaction
	among sensitive individuals.	
Acute effects		n, or swallowed. Harmful: may cause lung damage if
	swattowed. Irritating to eyes, respiratory spray mists are parcotic and may cause	system and skin. In high concentrations, vapors and headache, fatigue, dizziness and nausea. Hydrogen
	sulfide, a highly toxic gas, may be prese	nt. Signs and symptoms of overexposure to hydrogen
· · · · · · · · · · · · · · · · · · ·		on, dizziness, nausea, coughing, a sensation of dryne ousness. Odor does not provide a reliable indicator of
		osphere. The toxicological properties of this material r
	not been fully investigated.	
Chronic effects		of overexposure may depress the central nervous sys
	 causing dizziness and intoxication. Repeating allergic skin rashes, destruction of red bit 	eated exposure to naphthalene may cause cataracts, ood cells, and anemia, jaundice, kidney and liver
		ealth by prolonged exposure. Prolonged or repeated
· · · · · · · · · · · · · · · · · · ·		and a prototiges appeared in topologica
		s system, kidney, liver, and lung damage.
Subchronic effects		s system, kidney, liver, and lung damage.
Subchronic effects Carcinogenicity	 overexposure may cause central nervou Liver and kidney damage may occur after International Agency for Research on Ca 	s system, kidney, liver, and lung damage. In prolonged and repeated exposure. Ancer (IARC): Whole diesel engine exhaust – IARC Gi
	 overexposure may cause central nervou Liver and kidney damage may occur after International Agency for Research on Ca Exposure may cause lung cancer and 	s system, kidney, liver, and lung damage. In prolonged and repeated exposure.
	 overexposure may cause central nervou Liver and kidney damage may occur after International Agency for Research on Ca 1. Exposure may cause lung cancer and of bladder cancer. Diesel exhaust has been reported to be 	s system, kidney, liver, and lung damage. In prolonged and repeated exposure. Ancer (IARC): Whole diesel engine exhaust – IARC Gi
	 overexposure may cause central nervou Liver and kidney damage may occur after International Agency for Research on Ca 1. Exposure may cause lung cancer and of bladder cancer. 	s system, kidney, liver, and lung damage. In prolonged and repeated exposure. Ancer (IARC): Whole diesel engine exhaust – IARC Gi d also noted a positive association with an increased r
	 overexposure may cause central nervou Liver and kidney damage may occur after International Agency for Research on Ca 1. Exposure may cause lung cancer and of bladder cancer. Diesel exhaust has been reported to be 	s system, kidney, liver, and lung damage. In prolonged and repeated exposure. Ancer (IARC): Whole diesel engine exhaust – IARC Gi d also noted a positive association with an increased r
Carcinogenicity	overexposure may cause central nervou Liver and kidney damage may occur after International Agency for Research on Ca 1. Exposure may cause lung cancer and of bladder cancer. Diesel exhaust has been reported to be carcinogenic properties. S 68476-34-6) A3 Confi	s system, kidney, liver, and lung damage. er prolonged and repeated exposure. ancer (IARC): Whole diesel engine exhaust – IARC G d also noted a positive association with an increased r an occupational hazard due to NIOSH-reported poten immad animal carcinogen with unknown relevance to
Carcinogenicity ACGIH Carcinogens Fuels, diesel, no. 2 (CAS	overexposure may cause central nervou Liver and kidney damage may occur after International Agency for Research on Ca 1. Exposure may cause lung cancer and of bladder cancer. Diesel exhaust has been reported to be carcinogenic properties. S 68476-34-6) A3 Confine	s system, kidney, liver, and lung damage. er prolonged and repeated exposure, ancer (IARC): Whole diesel engine exhaust – IARC Gi d also noted a positive association with an increased r an occupational hazard due to NIOSH-reported poten immed animal carcinogen with unknown relevance to
Carcinogenicity ACGIH Carcínogens Fuels, diesel, no. 2 (CAS Naphthalene (CAS 91-20	overexposure may cause central nervou Liver and kidney damage may occur after International Agency for Research on Ca 1. Exposure may cause lung cancer and of bladder cancer. Diesel exhaust has been reported to be carcinogenic properties. S 68476-34-6) A3 Confine 0-3) A4 Not confine	s system, kidney, liver, and lung damage. er prolonged and repeated exposure. ancer (IARC): Whole diesel engine exhaust – IARC G d also noted a positive association with an increased r an occupational hazard due to NIOSH-reported poten immad animal carcinogen with unknown relevance to
Carcinogenicity ACGIH Carcínogens Fuels, diesel, no. 2 (CAS Naphthalene (CAS 91-20	overexposure may cause central nervou Liver and kidney damage may occur after International Agency for Research on Ca 1. Exposure may cause lung cancer and of bladder cancer. Diesel exhaust has been reported to be carcinogenic properties. S 68476-34-6) A3 Confine D-3) A4 Not of Evaluation of Carcinogenicity	s system, kidney, liver, and lung damage. er prolonged and repeated exposure, ancer (IARC): Whole diesel engine exhaust – IARC Gi d also noted a positive association with an increased r an occupational hazard due to NIOSH-reported poten immed animal carcinogen with unknown relevance to

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	v. 19. 2013 12:04 PM v. 19. 2013 12:17PM	. 22/26		No. 9954	P. 2	27/31
	Naphthalene (CAS 91-20- US NTP Report on Carcinog	-3) ens: Anticipated carcinogen	2B Possibly carcinogenic to hur	nans.		
	Naphthalene (CAS 91-20-	-3)	Reasonably Anticipated to be a	Human Carcino	gen.	
	Epidemiology		spontaneous abortions in women ancy. Pre-existing skin conditions s product.			
	Mutagenicity	No component of this product mutagen by OSHA.	present at levels greater than or e	equal to 0.1% is i	identifie	id as a
	Neurological offects	polyneuropathy (peripheral ne numbness in the extremities, I conduction velocity. Numerou exposures to a petroleum frac	centrations of various hydrocarbo rve damage), characterized by pr oss of deep tendon reflexes and r s cases of polyneuritis have beer tion containing various isomers of stem disorder (e.g., narcosis invo nage.	ogressive weakr reduction of moto n reported followi f heptane as maj	tess and or nerve ing prok or ingre	≱ onged edients.
	Reproductive effects		bryo development in experimenta excessive exposure to this agent i			
	Teratogenicity		ct are not reported to cause terate ere is no known teratogenicity as			
•.	Further information	Symptoms may be delayed. T investigated.	oxicological properties of this mat	erial have not be	en fully	1

12. Ecological Information

Ecotoxicological data Components		Species	Test Results
Fuels, diesel, no. 2 (CAS 68476-34	4-6)		
Aquatic	,		
Acute			
Crustacea	EL50	Daphnia magna	68 mg/l, 48 hours
. Fish	LL50	Oncorhynchus mykiss	65 mg/l, 96 hours
Naphthalene (CAS 91-20-3)			
Aquatic		• • • •	
Crustacea	EC50	Water flea (Daphnia magna)	1.09 - 3.4 mg/l, 48 hours
Fish .	LC50	Pink salmon (Oncorhynchus gorbuscha	 1.11 - 1.68 mg/l, 96 hours
n-Heptane (CAS 142-82-5)			· ·
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affini	s) 4924 mg/l, 96 hours
n-Hexane (CAS 110-54-3)			
Aquatic			
Fish	LCSO	Fathead minnow (Pimephales promela	s) 2.101 - 2.981 mg/l, 96 hours
Ecotoxicity	Toxic to aquat	ic organisms, may cause long-term adve	erse effects in the aquatic environment.
Aquatic toxicity	'Toxic to aquat	ic organisms, may cause long-term adve	erse effects in the aquatic environment.
		•	
Persistence and degradability	Not available,		
Persistence and degradability Bioaccumulation /	Not available, Not available,		
Bioaccumulation /		n an an Arrange ann a Arrange ann an Arrange	
Bioaccumulation / Accumulation Partition coefficient	Not available,	26	
Bioaccumulation / Accumulation Partition coefficient Hexane (Other isomers) (CAS	Not available, 6 96-14-0)	3.6 5.18	
Bioaccumulation / Accumulation Partition coefficient Hexane (Other isomers) (CAS Octane (All isomers) (CAS 11 n-Heptene (CAS 142-82-5)	Not available, 6 96-14-0)	3.6 5.18 4.66	
Bioaccumulation / Accumulation Partition coefficient Hexane (Other isomers) (CAS Octane (All isomers) (CAS 11 n-Heptane (CAS 142-82-5) n-Hexane (CAS 110-54-3)	Not available, 6 96-14-0)	5.18 4.66 3.9	
Bioaccumulation / Accumulation Partition coefficient Hexane (Other isomers) (CAS Octane (All isomers) (CAS 11 n-Heptane (CAS 142-82-5) n-Hexane (CAS 110-54-3) n-Nonane (CAS 111-84-2)	Not available, 5 96-14-0) 1-65-9)	5.18 4.66 3.9 5.46	
Bioaccumulation / Accumulation Partition coefficient Hexane (Other isomers) (CAS Octane (All isomers) (CAS 11 n-Heptane (CAS 142-82-5) n-Hexane (CAS 110-54-3)	Not available, 6 96-14-0)	5.18 4.66 3.9 5.46	
Bioaccumulation / Accumulation Partition coefficient Hexane (Other isomers) (CAS Octane (All isomers) (CAS 11 n-Heptane (CAS 142-82-5) n-Hexane (CAS 110-54-3) n-Nonane (CAS 111-84-2) Mobility in environmental	Not available, 96-14-0) 1-65-9) No data availa	5.18 4.66 3.9 5.46	

Waste codes	D001: Waste Flammable material with a flash point <140 °F					
DIESEL FUELS 3541 Prepared by 3E Company	Version #: 03	Revison date: 25-June-2013	Print date: 25-June-2013			

US RCRA Hazardous Waste U List: Reference

Naphthalene (CAS 91-20-3)

Disposal instructions

U165

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Dispose in accordance with all applicable regulations. Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

14. Transport Information

DOT

Basic shipping requirements: **UN number** UN1202 Proper shipping name Diesel fuel Hazard class Combustible Liquid Packing group Ш **Environmental hazards** Marine pollutant Yes Additional information: 144, B1, IB3, T2, TP1 Special provisions Packaging exceptions 150 203 Packaging non bulk 242 Packaging bulk IATA UN1202 UN number Diesel fuel UN proper shipping name 3 Transport hazard class(es) Ш Packing group Yes Environmental hazards 3 Labels required ERG code ЗL Special precautions for user Read safety instructions, SDS and emergency procedures before handling. IMDG **UN number** UN1202 UN proper shipping name DIESEL FUEL Transport hazard class(es) 3 Ш Packing group Environmental hazards Marine pollutant Yes Labels required 3 EmS F-E. S-E Not applicable. However, this product is a liquid and if transported in bulk covered under Transport in bulk according MARPOL 73/78, Annex I. to Annex II of MARPOL 73/78 and the IBC Code TDG UN1202 UN number DIESEL FUEL Proper shipping name Compustible Liquid Hazard class Packing group Ш Marine pollutant Yes Special provisions 82, 88 15. Regulatory Information US federal regulations TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) n-Nonane (CAS 111-84-2) 1.0 % One-Time Export Notification only. Clean Air Act (CAA) Section 112 Hazardous Air Poilutants (HAPs) List Naphthalene (CAS 91-20-3) n-Hexane (CAS 110-54-3) US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration Naphthalene (CAS 91-20-3) 0.1 % n-Hexane (CAS 110-54-3) 1.0 % DIESEL FUELS

Revison date: 25-June-2013 Print date: 25-June-2013 3541 Version #: 03 Prepared by 3E Company

					No. 9954	P. 29/31
			11.4			
US EPCRA (SARA Title III) \$		ac Chemical:		ce		
Naphthalene (CAS 91-20 n-Hexane (CAS 110-54-3			Listed. Listed.			
CERCLA (Superfund) reportable	e quantity (lbs) (40 CFR 302.4))			
n-Nonane: 100 Octane (All isomers): 100 Hexane (Other isomers): 100 Naphthalene: 100 n-Hexane: 5000	·					
Superfund Amendments and Re	A notization	ct of 1986 (54				
Hazard categories	Immediate Haz					
nazaru categorico	Delayed Hazar					
	Fire Hazard - Y	es.				
	Pressure Haze		•		· .	
	Reactivity Haz	ard – No				
Section 302 extremely	No	· .		۰.		
hazardous substance (40 CFR 355, Appendix A)		•	••*	. '		
	Var	1		. •		
SARA 311/312 Hazardous chemical	Yes	· · · ·				
•••••	المعلمية معامد					
Drug Enforcement Administration (DEA) (21 CFR	 Not controlled 		•		•	
1308.11-15)				1 × 11 × 1		,
WHMIS status	Controlled			•		
WHMIS classification	B3 - Combusti	No Liouida	•	·		
	D2A - Other To D2B - Other To	oxic Effects-VE				•
WHMIS labeling			• . •	;		
		÷.,				
Inventory status			•		<u> </u>	
Country(s) or region	Inventory nan	16 .			Un in	iventory (yes/r
Australie	Artetrolion inve	ntony of Chem	ical Substances	ZAICS)		
Australia		-	tical Substances	(AICS)		
Canada	Domestic Sub:	stances List (D	OSL)	(AICS)		
Canada Canada	Domestic Sub: Non-Domestic	stances List (D Substances Li	DSL) .ist (NDSL)		· ·	
Canada	Domestic Sub Non-Domestic Inventory of Ex	stances List (D Substances Li kisting Chemic	DSL) ist (NDSL) al Substances in	China (IECSC	·. ;)	
Canada Canada	Domestic Sub Non-Domestic Inventory of Ex	stances List (D Substances Li disting Chemic entory of Existin	DSL) .ist (NDSL)	China (IECSC	·. ;)	
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Canada Canada China Europe	Domestic Subs Non-Domestic Inventory of Ex European Inve Substances (E European List Inventory of Ex	stances List (D Substances Li disting Chemic entory of Existin INECS) of Notified Che kisting and New	DSL) ist (NDSL) al Substances in ng Commercial C emical Substance w Chemical Subs	China (IECSC Themical es (ELINCS)	•	
Canada Canada China Europe Europe Japan Korea	Domestic Subs Non-Domestic Inventory of Ex European Inve Substances (E European List Inventory of Ex Existing Chem	stances List (D Substances Li kisting Chemic entory of Existin INECS) of Notified Che kisting and New icals List (ECL	DSL) ist (NDSL) al Substances in ng Commercial C emical Substance w Chemical Subs	China (IECSC Themical es (ELINCS)	•	•
Canada Canada China Europe Europe Japan Korea New Zealand	Domestic Sub Non-Domestic Inventory of E: European Inve Substances (E European List Inventory of E: Existing Chem New Zealand I	stances List (D Substances Li disting Chemic entory of Existin INECS) of Notified Che kisting and Nev licals List (ECL Inventory	DSL) ist (NDSL) al Substances in ng Commercial C emical Substance w Chemical Subs -)	China (IECSO Chemical es (ELINCS) stances (ENCS	3)	
Canada Canada China Europe Europe Japan Korea	Domestic Sub- Non-Domestic Inventory of E: European Inve Substances (E European List Inventory of E: Existing Chem New Zealand I Philippine Inve (PICCS)	stances List (D Substances Li disting Chemic antory of Existin iINECS) of Notified Che kisting and New icals List (ECL inventory entory of Chem	DSL) ist (NDSL) al Substances in ng Commercial C emical Substanc w Chemical Subs -) nicals and Chemi	China (IECSC Chemical es (ELINCS) stances (ENCS cal Substances	3)	•
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Canada Canada China Europe Europe Japan Korea New Zealand Philippines United States & Puerto Rico *A "Yes" indicates this product of A "No" indicates that one or more	Domestic Sub- Non-Domestic Inventory of E: European Inve Substances (E European List Inventory of E: Existing Chem New Zealand I Philippine Inve (PICCS) Toxic Substan	stances List (D Substances Li disting Chemic entory of Existiv iINECS) of Notified Che disting and New iccals List (ECL inventory entory of Chemic ces Control Ac ventory requirem	DSL) ist (NDSL) al Substances in ng Commercial C emical Substance w Chemical Subs -) nicals and Chemi ct (TSCA) Invento nents administered	China (IECSC Chemical es (ELINCS) stances (ENCS cal Substances ory by the governing	s s g country(s).	
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Canada Canada China Europe Japan Korea New Zealand Philippines United States & Puerto Rico *A "Yes" indicates this product of A "No" indicates this product of A "No" indicates this product of Country(s). State regulations	Domestic Subs Non-Domestic Inventory of Ex- European Inve Substances (E European List Inventory of Ex- Existing Chem New Zealand I Philippine Inve (PICCS) Toxic Substan omplies with the im- e components of th WARNING: T birth defects o Substances (Dir	stances List (D Substances Li isting Chemic intory of Existin iNECS) of Notified Che visting and Nev icals List (ECL inventory entory of Chem ces Control Ac ventory requirem e product are no his product con r other reprodu	DSL) ist (NDSL) al Substances in ng Commercial C emical Substance w Chemical Subs -) hicals and Chemi ct (TSCA) Invent to (TSCA) Invent to (TSCA) Invent to the chemicals uctive harm.	China (IECSC Chemical es (ELINCS) stances (ENCS cal Substances ory by the governing from listing on th	s) s g country(s). re inventory administere	ed by the governi
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Canada Canada China Europe Europe Japan Korea New Zealand Philippines United States & Puerto Rico *A "Yes" indicates this product or A "No" indicates this product or A "No" indicates this product or A "No" indicates this product or Country(s). State regulations US - California Hazardous \$ Hexane (Other isomers) Naphthalene (CAS 91-20 n-Heptane (CAS 142-82-	Domestic Subs Non-Domestic Inventory of Ex- European Inve Substances (E European List Inventory of Ex- Existing Chem New Zealand I Philippine Inve (PICCS) Toxic Substan omples with the im e components of th WARNING: T birth defects o Substances (Dir (CAS 96-14-0) D-3)	stances List (D Substances Li isting Chemic intory of Existin iNECS) of Notified Che visting and Nev icals List (ECL inventory entory of Chem ces Control Ac ventory requirem e product are no his product con r other reprodu	DSL) ist (NDSL) al Substances in ng Commercial C emical Substance w Chemical Substance w Chemical Substance -) hicals and Chemi ct (TSCA) Invento nents administered of listed or exempt intains chemicals uctive harm. ed substance Listed. Listed.	China (IECSC Chemical es (ELINCS) stances (ENCS cal Substances ory by the governing from listing on th	s) s g country(s). re inventory administere	ed by the governi
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n-Hexane (CAS 110-54-3) n-Nonane (CAS 111-84-2)		Listed. Listed				٠	
Octane (All isomers) (CAS		Listed.					
US - California Proposition 6			: Listed subs	tance			
Benzene (CAS 71-43-2)		Listed.					
Toluene (CAS 108-88-3)		Listed.					
US - California Proposition 6	5 - CRT: Listed date/Card	inogenic substance					
Benzene (CAS 71-43-2)		Listed; February:	27, 1987 Card	inogenic.	•		
US - California Proposition 6	i5 - CRT: Listed date/Deve	opmental toxin					
Benzene (CAS 71-43-2)		Listed; December			in.		
Toluene (CAS 108-88-3)		Listed: January 1		pmental toxin.			
US - California Proposition 6	5 - CRT: Listed date/Fem						
. Toluene (CAS 108-88-3)		Listed: August 7,	2009 Female	reproductive to:	xin.		
US - California Proposition 6	5 - CRT: Listed date/Male			والمتعادية والمتعادية والمتعادية والمتعادية والمتعاد والمتعاد والمتعاد والمتعاد والمتعاد والمتعاد والمتعاد	4		
Benzene (CAS 71-43-2)		Listed: Decembe	F 26, 1997 Wa	e reproductive	ioxin.		
US - New Jersey RTK - Subs	•		· .				
Naphthalene (CAS 91-20- n Hentane (CAS 142-82-9		Listed. Listed.		•			
n-Heptane (CAS 142-82-5 n-Hexane (CAS 110-54-3		Listed.			• •		
n-Nonane (CAS 111-84-2		Listed.					
Octane (All isomers) (CAS		Listed.					
US. Massachusetts RTK - Su	ibstance List	•		·			
Hexane (Other isomers) (CAS 96-14-0)	Listed.		,		• .	
Naphthaiene (CAS 91-20-		Listed.				· · .	
n-Heptane (CAS 142-82-5		Listed.					
n-Hexane (CAS 110-54-3 n-Nonane (CAS 111-84-2		Listed. Listed.					
Octane (All isomers) (CAS		Listed.			• •	· .	
US. New Jersey Worker and		w Act		_			
Fuels, diesel, no. 2 (CAS	68476-34-6)	10000 lbs	·			.•	
Naphthalene (CAS 91-20		500 lbs		•	•	· .	
n-Hexane (CAS 110-54-3		500 lbs					
US. Pennsylvania RTK - Haz		a A No A Cold					
Fueis, diesel; no. 2 (CAS		Listed.		•			
Hexane (Other isomers) (Naphthalene (CAS 91-20		Listed.					
n-Heptane (CAS 142-82-		Listed.					
n-Hexane (CAS 110-54-3		Listed.		,		· .	
n-Nonane (CAS 111-84-2		Listed.					
Octane (All isomers) (CA		Listed.		••••			
Mexico regulations	This safety data sheet wa	as prepared in accordar	nce with the O	fficial Mexican S	Standar	rd' ·	
• • •	(NMX-R-019-\$CFI-2011)	a ,	· · ·	·			
16. Other Information	· · ·			• ••	· ·		
Further information	HMIS® is a registered tra	de and service mark of	the NPCA.				
Other information	Note: This material Safet			ducts and syno	ovm de	scriptions fo	sr
	Hazard Communication ;	burposes only. Technica	al Specification	is vary greatly o	depend	ing on the	-1
	products and are not refle						
	information.			•	•		
HMIS® ratings	Health: 2*			·		.'	
	Flammability: 2 Physical bazard: 0						
	Physical hazard: 0	·	,				
NFPA ratings	Health: 2 Flammability: 2						
	Instability: 0	•					
					•		
		j.					

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Disclaimer

This Material Safety Data Sheet (MSDS) was prepared in accordance with 29 CFR 1910.1200 by Valero Marketing & Supply Co., ("VALERO"). VALERO does not assume any liability arising out of product use by others. The information, recommendations, and suggestions presented in this MSDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use , the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.

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Ρ.

Material name	UNLEADED GASOLINE
Version #	03
Issue date	07-28-2011
Revision date	11-13-2012
Supersedes date	09-28-2012
MSDS Number	002
Product use	Motor fuels.
Synonym(s)	Regular/Premium/Midgrade - Unleaded Gasoline, RFG - Reformulated Unleaded Gasoline, Conventional Unleaded Gasoline, Oxygenated Unleaded Gasoline, Non-Oxygenated Unleaded Gasoline, CARB (California Air Resource Board) Unleaded Gasoline, RBOB - Reformulated Blendstock for Oxygenate Blending, CBOB - Conventional Blendstock for Oxygenate Blending, Petrol, Motor Fuel. See section 16 for complete information.
Manufacturer/Supplier	Valero Marketing & Supply Company and Affiliates P.O. Box 696000 San Antonio, TX 78269-6000
General Assistance	210-345-4593
Emergency	24 Hour Emergency 866-565-5220 1-800-424-9300 (CHEMTREC USA)
2. Hazards Identification	n j

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Physical state	Liquid.
Appearance	Light straw to red clear liquid with characteristic strong odor of gasoline.
Emergency overview	DANGER! Extremely flammable liquid and vapor - vapor may cause flash fire. Will be easily ignited by heat, spark or flames. Heat may cause the containers to explode.
	Harmful if inhaled, absorbed through skin, or swallowed. Aspiration may cause lung damage. Initiating to eyes, respiratory system and skin. In high concentrations, vapors and spray mists are narcotic and may cause headache; fatigue, dizziness and nausea. Contains benzene. Cancer hazard - can cause cancer. Mutagen. May cause heritable genetic damage. May cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Static accumulating flammable materials can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite material and vapor may cause flash fire (or explosion).
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910,1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact, Eye contact,
Eyes	Contact may irritate or burn eyes. Eye contact may result in corneal injury.
Skin	Harmful if absorbed through skin. Irritating to skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Inhalation	Harmful if inhaled, Irritating to respiratory system. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea. May cause breathing disorders and lung demage. May cause cancer by inhalation. Prolonged inhalation may be harmful.
Ingestion	Harmful if swallowed. Ingestion may result in vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even small quantities may result in aspiration pneumonitis. Irritating to mouth, throat, and stomach.
Target organs	Blood, Eyes, Liver, Respiratory system. Skin, Kidneys, Central nervous system.

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Chronic effects

Cancer hazard. Contains material which may have reproductive toxicity, teratogenetic or mutagenic effects. Liver injury may occur, Kidney injury may occur. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dematitis.

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Signs and symptoms

Initation of nose and throat. Initation of eyes and mucous membranes. Skin irritation. Unconsciousness. Comeal damage. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash.

Potential environmental effects Toxic to aquatic organisms. Harmful to aquatic life with long lasting effects.

3. Composition / Information on Ingredients

Components	CAS#	Percent
Gasoline	86290-81-5	0-100
Toluene	108-88-3	0-30
Hexane (Other Isomers)	96-14-0	5-25
Xylene (o, m, p isomers)	1330-20-7	0-25
Octane (All isomers)	111-65-9	0-18.5
Ethanol	64-1 7-5	0 -10
1,2,4, Trimethylbenzene	95-63-6	0-6
n-Heptane	142-82-5	1-5
Pentane	109-66-0	1-5
Cumene	98-82-8	0-5
Ethylbenzene	100-41-4	0-5
Benzene	71-43-2	0-4,9
n-Hexane	110-54-3	0-3
Cyclohexane	110-82-7	0-3

4. First Aid Measures

First aid procedures-

•	Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
•	Skin contact	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if imitation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.
. •	Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
	Ingestion	Rinse mouth thoroughly, Do not induce vomiting without advice from polson control center. Do not give mouth-to-mouth resuscitation. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Get medical attention immediately.
· ľ	Notes to physician	In case of shortness of breath, give oxygen. Keep victim warm, Keep victim under observation. Symptoms may be delayed.
Ċ	General advice	If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

5. Fire Fighting Measures

Flammable properties	Flammable by OSHA criteria. Containers may explode when heated.
Extinguishing media	
Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.

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Protection of firefighters

Specific hazards arising from the chemical

Protective equipment and precautions for firefighters

Fire fighting equipment/instructions Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

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Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapors may form explosive air mixtures even at room temperature. Prevent buildup of vapors or gases to explosive concentrations. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.

In the event of fire and/or explosion do not breathe fumes. Use water spray to cool unopened containers.

Carbon monoxide, Carbon Dioxide, Sulfur oxides, Nitrogen oxides (NOx). Hydrocarbons.

Hazardous combustion

Specific methods

6. Accidental Release Measures

Personal precautions

Environmental precautions

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Methods for containment

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Methods for cleaning up

Other information

Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. Keep upwind, Keep out of low areas, Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.

Gasoline may contain oxygenated blend products (Ethanol, etc.) that are soluble in water and therefore precautions should be taken to protect surface and groundwater sources from contamination. If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Extremely flammable. Review Firefighting Measures, Section 5, before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Use compatible foam to minimize vapor generation as needed. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authonities and appropriate federal; state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 1-800-424-8802. For highway or railways spills, contact Chemtrec at 1-800-424-9300.

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Use non-sparking tools and explosion-proof equipment.

Small Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste.

Large Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Do not allow material to contaminate ground water system. Should not be released into the environment.

Clean up in accordance with all applicable regulations.

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7. Handling and Storage

Eliminate sources of ignition. Avoid spark promoters, Ground/bond container and equipment. These alone may be insufficient to remove static electricity.

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Wear personal protective equipment. Do not breathe dust/fume/ges/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. Avoid release to the environment.

Storage

Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under the influence of heat. Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs, Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US, ACGIH Threshold Limit Values

1,2,4, Trimethylberzene TWA 25 ppm (CAS 95-63-6) Eenzene (CAS 71-43-2) STEL 2.5 rpm Cumene (CAS 98-82-8) TWA 0.5 ppm Cumene (CAS 98-82-8) TWA 50 ppm Cyclohexane (CAS TWA 100 ppm Cyclohexane (CAS TWA 100 ppm Cyclohexane (CAS TWA 20 ppm Cyclohexane (CAS TWA 20 ppm 100-41-4) StEL 1000 pp Gesoline (CAS 66290-81-5) STEL 500 ppm Hexane (Othei Isomers) STEL 1000 pp (CAS 98-14-0) TWA 300 ppm n-Heptane (CAS 110-54-3) TWA 500 ppm n-Hexane (CAS 110-54-3) TWA 500 ppm Octane (All isomers) (CAS TWA 400 ppn Octane (All isomers) (CAS TWA 300 ppm 111-65-9) Pentane (CAS 108-88-0) TWA 20 ppm Pentane (CAS 108-88-3) TWA 20 ppm Toluene (CAS 108-88-3) TWA 20 ppm Value STEL 150 ppn CAS 1330-20-7) TWA	
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TWA 1 ppm US, OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)	
Components Type Value	
Cumene (CAS 98-82-8) PEL 245 mg 50 ppm	
Cyclohexane (CAS PEL 1050 m 110-82-7)	1/m3
300 pp Ethanol (CAS 64-17-5) PEL 1900 m	gritter

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Toluene (CAS 108-88-3)

US, OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

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Components	Туре	Value
		1000 ppm
Ethylbenzene (CAS 100-41-4)	PEL	435 mg/m3
		100 ppm
n-Heptane (CAS 142-82-5)	PEL	2000 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3
- •		500 ppm
Octane (All isomers) (CAS 111-65-9)	PEL	2350 mg/m3
		500 ppm
Pentane (CAS 109-66-0)	PEL	2950 mg/m 3
, , , , , , , , , , , , , , , , , , , ,	• .	1000 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	PEL , , .	435 mg/m3
(0)10 1000-20-17		100 ppm
US. OSHA Table Z-2 (29 CFR 1910.1000)	• • • • • •	
Components	Туре	Value
Benzene (CAS 71-43-2)	Ceiling	25 ppm
		•

TWA 200 ppm Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

TWA

Ceiling

Components Type Value 123 mg/m3 TWA 1,2,4, Trimethylbenzene (CAS 95-63-6) 25 ppm 8 mg/m3 Benzene (CAS 71-43-2) STEL 2.5 ppm TWA 1,6 mg/m3 0.5 ppm 246 mg/m3 Cumene (CAS 98-82-8) TWA 50 ppm 344 mg/m3 TWA Cyclohexane (CAS 110-82-7) 100 ppm 1880 mg/m3 .. TWA Ethanol (CAS 64-17-5) 1000 ppm 543 mg/m3 Ethylbenzene (CAS STEL 100-41-4) 125 ppm 434 mg/m3 TWA 100 ppm STEL 500 ppm Gasoline (CAS 86290-81-5) 300 ppm τwa STEL 3500 mg/m3 Hexane (Other Isomers) (CAS 96-14-0) 1000 ppm 1760 mg/m3 TWA 500 ppm 2050 mg/m3 n-Heptane (CAS 142-82-5) STEL 500 ppm 1640 mg/m3 τwa 400 ppm 176 mg/m3 n-Hexane (CAS 110-54-3) TWA 50 ppm

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10 ppm

300 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Туре	Value		
Octane (All isomers) (CAS 111-65-9)	TWA	1400 mg/m3		
		300 ppm		
Pentane (CAS 109-66-0)	TWA	1770 mg/m3		
		600 ppm	•	
Toluene (CA\$ 108-88-3)	TWA	188 mg/m3		
· · ·		50 ppm		
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	651 mg/m3		
		 150 ppm 		
•	TWA	434 mg/m3		
·		100 ppm		

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Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Туре	Value	
1,2,4, Trimethylbenzene	TWA	25 ppm	
(CA3 33-03-0)	STEL	2.5 ppm	
Benzene (CAS 71-43-2)	TWA	0.5 ppm	•
Cumene (CAS 98-82-8)	STEL	75 ppm	
Cumene (CAS 30-02-0)	TWA	25 ppm	
Out-house (CAC	•		
Cyclohexane (CAS 110-82-7)	TWA	100 ppm	
Ethanol (CAS 64-17-5)	STEL	1000 ppm	
Ethylbenzene (CAS	TWA	20 ppm	
100-41-4)		20 660	
Gasoline (CAS 86290-81-5)	STEL	500 ppm	•
· · · · · · · · · · · · · · · · · · ·	TWA	300 ppm	
Hexane (Other Isomers)	TWA	200 ppm	
(CAS 96-14-0)			
n-Heptane (CAS 142-82-5)	STEL	500 ppm	
	TWA	400 ppm	
n-Hexane (CAS 110-54-3)	TWA	20 ppm	
Octane (All isomers) (CAS	TWA	300 ppm	
111-65-9)	•		
Pentane (CAS 109-66-0)	TWA	600 ppm	
Toluene (CA\$ 108-88-3)	TWA	20 ppm	•
Xylene (o, m, p isomers) (CA\$ 1330-20-7)	STEL	150 ppm	,
·	TWA	100 ppm	
		•	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Туре	Value	
1,2,4, Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm	,
Benzene (CAS 71-43-2)	STEL	2.5 ppm	
	TWA .	0.5 ppm	
Cumene (CAS 98-82-8)	TWA	50 ppm	
Cyclohexane (CAS 110-82-7)	TWA	100 ppm	
Ethanol (CAS 64-17-5)	STEL	1000 ppm	
Ethylbenzene (CAS 100-41-4)	STEL	125 ppm	
*	TWA	100 ppm	
Gasoline (CAS 86290-81-5)	STEL	500 ppm	
	TWA	300 ppm	
Hexane (Other Isomers) (CAS 96-14-0)	STEL	1000 ppm	
	TWA	500 ppm	

UNLEADED GASOLINE

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Canada, Ontario OELs, (Control of Exposure to Biological or Chemical Agents)

Components	Туре	Value	
n-Heptane (CAS 142-82-5)	STEL	500 ppm	
	TWA	400 ppm	
n-Hexane (CAS 110-54-3)	тууА	50 ppm	
Octane (All isomers) (CAS 111-65-9)	TWA	300 ppm	
Pentane (CAS 109-66-0) .	STEL	2210 mg/m3	
,		750 ppm	
	TWA	1770 mg/m3	
		600 ppm	
Toluene (CAS 108-88-3)	TWA	20 ppm	
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	150 ppm	
	TWA	100 ppm	

Canada, Quebec OELs, (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

components	Туре	
,2,4, Trimethylbenzene CAS 95-63-6)	TWA	123 mg/m3
		25 ppm
Benzene (CAS.71-43-2)	STEL	15.5 mg/m3
		5 ppm
	TWA	3 mg/m3
		1 ppm
Cumene (CAS 98-82-8)	TWA	246 mg/m3
		50 ppm
Cyclohexane (CAS	TWA	1030 mg/m3
110-82-7)		loop mgmie
		300 ppm
Ethanol (CAS 64-17-5)	TWA	1880 mg/m3
		1000 ppm
Ethylbenzene (CAS	STEL	543 mg/m3
100-41-4)		
	· ·	125 ppm
	TWA	434 mg/m3
		100 ppm
Hexane (Other Isomers) CAS 96-14-0)	STEL	3500 mg/m3
	· · · ·	1000 ppm
• .	TWA	1760 mg/m3
		500 ppm
n-Heptane (CAS 142-82-5)	STEL	2050 mg/m3
	· · · · ·	500 ppm
	TWA	1640 mg/m3
,		400 ppm
n-Hexane (CAS 110-54-3)	TWA	176 mg/m3
	3700	50 ppm
Octane (All isomers) (CAS	STEL	1750 mg/m3
111-65-9)		375 ppm
	TWA	1400 mg/m3
		300 ppm
	50/0	350 mg/m3
Pentane (CAS 109-66-0)	TWA	
	TD & / A	120 ppm
Toluene (CAS 108-88-3)	TWA	188 mg/m3
		50 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	651 mg/m3
		150 ppm
	TWA	434 mg/m3

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Components	Туре	Value
		100 ppm
Mexico. Occupational Exposure Lin	nit Values	
Components	Туре	Value
1,2,4, Trimethylbenzene	STEL	170 mg/m3
(CAS 95-63-6)		35 ppm
	TWA	125 mg/m3
	I VVA	
D	OTCI	25 ppm
Benzene (CAS 71-43-2)	STEL	16 mg/m3
		5 ppm
· · · ·	TWA	3.2 mg/m3
		1 ppm
Cumene (CAS 98-82-8)	STEL	365 mg/m3
		75 ppm
· · · · ·	TWA	.245 mg/m3 .
		50 ppm
Cyclohexane (CAS	STEL	1300 mg/m3
110-82-7)	··· ·	
•	•	375 ppm
•	TWA	1050 mg/m3
•		300 ppm
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
Ethylbenzene (CAS	STEL	545 mg/m3
100-41-4)	· · ·	- ,
	·*	125 ppm
· ·	TWA	435 mg/m3
		100 ppm
Hexane (Other Isomers)	STEL	3500 mg/m3
(CA\$ 96-14-0)		- -
	· · ·	1000 ppm
	AWT	1760 mg/m3
•	- ·	500 ppm
n-Heptane (CAS 142-82-5)	STEL	2000 mg/m3
a contraction for the contraction		500 ppm
	TWA	1600 mg/m3
	1 8 76 1	400 ppm
n-Hexane (CAS 110-54-3)	TWA	176 mg/m3
	I ¥¥⊅	50 ppm
	STEL	1800 mg/m3
Octane (All isomers) (CAS 111-65-9)	, aicr	i ooo mymo
		375 ppm
•	TWA	1450 mg/m3
	1 ¥ ¥ .	300 ppm
Bostono (CAS 100 66 0)	сты.	2250 mg/m3
Pentane (CAS 109-66-0)	STEL	760 ppm
	TWA	1800 mg/m3
		600 ppm
Toluene (CAS 108-88-3)	TWA	188 mg/m3
		50 ppm
Xylene (o, m, p isomers)	STEL	655 mg/m3
(ČAS 1330-20-7)		
		150 ppm
•	TWA	435 mg/m3
		100 ppm

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No. 9954 Nov. 19. 2013 12:13PM Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust Engineering controls. ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment. Personal protective equipment Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles. Eye / face protection Wear chemical-resistant, impervious gloves. Full body suit and boots are recommended when Skin protection handling large volumes or in emergency situations. Flame retardant protective clothing is recommended. Use a property fitted, air-purifying or air-fed respirator complying with an approved standard if a Respiratory protection risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use. Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with General hygiene skin. Keep away from food and drink. Wash hands before breaks and immediately after handling considerations the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice. 9, Physical & Chemical Properties Light straw to red clear liquid with characteristic strong odor of gasoline. Appearance **Physical state** Liquid. Liquid. Form Color Light straw to red clear. Characteristic Gasoline Odor (Strong). Odor Not available. Odor threshold pН Not available. 60.8 - 101.3 kPa (20°C) Vapor pressure 3 - 4 (Air=1) Vapor density 80.1 - 440.1 °F (26.7 - 226.7 °C) Boiling point 44 °F (6.67 °C) May start to solidify at this temperature. This is based on data for the following Melting point/Freezing point ingredient: Cyclohexane. Weighted average: -91.9 deg C (-133.4 deg F) Very slightly soluble. Solubility (water) 0.66 - 0.75 (Water=1) (60°F) Specific gravity -40 °F (-40 °C) (closed cup) Flash point Flammability limits in air, 71% upper, % by volume Flammability limits in air. 1.3 % lower, % by volume > 500 °F (> 260 °C) Auto-Ignition temperature VOG 100 % 10 - 11 BuAc Evaporation rate Other data Flammable IA Flash point class 10. Chemical Stability & Reactivity Information Stable under normal temperature conditions and recommended use. **Chemical stability** Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, Conditions to avoid

	cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.	
Incompatible materials	Strong oxidizing agents.	
Hazardous decompositio products	Carbon oxides. Sulfur oxides. Nitrogen oxides (NOx). Hydrocarbons.	
Possibility of hazardous reactions	Hazardous polymerization does not occur.	
UNLEADED GASOLINE 3536	ersion #: 03 Revison date: 11-13-2012 Print date: 11-13-2012 9	9/17

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11. Toxicological Information

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Toxicological data		
Components	Species	Test Results
1,2,4, Trimethylbenzene (CAS 95-63	-6)	
Acute		
Dermal		
LD50	Rabbit	> 3160 mg/kg
Inhalation		
LC50	Rat	> 2000 mg/l, 48 Hours
Oral	· · · · · · · · · · · · · · · · · · ·	
LD50	Rat	ê -1
		6 g/kg
Benzene (CAS 71-43-2)	· · ·	· ·
Acute		
Oral		
LD50	Rat	3306 mg/kg
Cumene (CAS 98-82-8)	·	
Acute	N	
Inhalation .	· . · · ·	
		····
LC50	Mouse	2000 mg/l, 7 Hours
· .	Rat	8000 mg/l, 4 Hours
Oral	· · ·	
LD50	Rat	1400 mg/kg
	· · · · · · · · · · · · · · · · · · ·	•
		2.91 g/kg
Cyclohexane (CAS 110-82-7)		
Acute		
Oral	· ·	
LD50	Rat	12705 mg/kg
Ethanol (CAS 64-17-5)		,
Acute	and the second	
Inhalation		
LC50	Rat	20000 H. J. 10
•		30000 mg/m3
Oral		
LD50 .	Rat	11.5 g/kg
Ethylbenzene (CAS 100-41-4)		
Acute		·
Dermal		
· LD50	Rabbit	> 5000 mg/kg
r		- ooov myrky
Oral	P-1	·
LD50	Rat	5.46 g/kg
-Heptane (CAS 142-82-5)		
Acute	, · · · · ·	
Inhalation		
LC50	Rat	103 mg/l, 4 Hours
Octane (All isomers) (CAS 111-65-9)		
		• • •
Acute		
Inhalation	· · · · · · · · · · · · · · · · · · ·	•
LC50	Rat	118 mg/l, 4 Hours
entane (CAS 109-66-0)		
Acute		•
Inhalation	· · ·	
· LC50	Pat	
	Rat	364 mg/l, 4 Hours

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	Species	Test Results
Toluene (CAS 108-88-3)		
Acute		
Demai		
LD50	Rabbit	14,1 ml/kg
		14, t ming
Inhalation		
LC50	Rat	49000 mg/m ^a , 4 Hours
Ora/		
LD50	Rat	636 mg/kg
		ood nignig
Xylene (o, m, p isomers) (CAS 13	330-20-7)	•
Acute		,
Oral		
LD50	Rat	4300 mg/kg
· · ·		
Sensitization	This substance may have a among sensitive individuals.	potential for sensitization which may provoke an allergic reaction
Acute effects	swallowed. Initating to eyes,	through skin, or swallowed. Harmful: may cause lung damage if respiratory system and skin. In high concentrations, vapors and may cause headache, fatigue, dizziness and nausea.
I and offent-	alles alle second de la second de la second	
Local effects		
US. ACGIH Threshold Limi	,	•
Benzene (CAS 71-43-2) n-Hexane (CAS 110-54-		Can be absorbed through the skin. Can be absorbed through the skin.
Chronic effects		atory animals to high concentrations of gasoline vapors has cause
	kidney damage and cancer i	n rats and cancer in mice. Gasoline was evaluated for genetic acti
		ils, cultured mammalian cells and rat bone marrow cells. The resu
	were all negative so gasoline	e was considered nonmutagenic under these conditions.
the second second	Overexposure to this produce	t or its components has been suggested as a cause of liver
	abnormalities in laboratory a	nimals and humans. Lifetime studies by the American Petroleum
•	Institute have shown that kin	ney damage and kidney cancer can occur in male rats after
		ساهمتهم هريم ملائم المحالية بعنا المفرية فأرباب المستحد المتعادين المستحد المتعالية والمستحد
· · · · · · · · · · · · · · · · · · ·	formale rate word uppflotted	res at elevated concentrations of total gasoline. Kidneys of mice a
	 female rats were unaffected. 	. The U.S. EPA Risk Assessment Forum has concluded that the m
	 female rats were unaffected. rat kidney tumor results are 	. The U.S. EPA Risk Assessment Forum has concluded that the π not relevant for humans. Total gasoline exposure also produced in
	female rats were unaffected rat kidney tumor results are tumors in female mice only.	. The U.S. EPA Risk Assessment Forum has concluded that the π not relevant for humans. Total gasoline exposure also produced in The implication of these data for humans has not been determined
Subchronic effects	female rats were unaffected rat kidney tumor results are tumors in female mice only Subchronic inhalation of ber	. The U.S. EPA Risk Assessment Forum has concluded that the π not relevant for humans. Total gasoline exposure also produced in The implication of these data for humans has not been determined by rats produced decreased white blood cell counts, decrea
Subchronic effects	female rats were unaffected rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, inc	. The U.S. EPA Risk Assessment Forum has concluded that the m not relevant for humans. Total gasoline exposure also produced in The implication of these data for humans has not been determined beene by rats produced decreased white blood cell counts, decrea creased red blood cell activity and cataracts. Blood disorders may
Subchronic effects	female rats were unaffected rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala	. The U.S. EPA Risk Assessment Forum has concluded that the π not relevant for humans. Total gasoline exposure also produced li The implication of these data for humans has not been determine been by rats produced decreased white blood cell counts, decrea creased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney
	female rats were unaffected rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala	The U.S. EPA Risk Assessment Forum has concluded that the π not relevant for humans. Total gasoline exposure also produced in The implication of these data for humans has not been determined been by rats produced decreased white blood cell counts, decrea creased red blood cell activity and cataracts. Blood disorders may
Carcinogenicity	female rats were unaffected rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala	. The U.S. EPA Risk Assessment Forum has concluded that the m not relevant for humans. Total gasoline exposure also produced in The implication of these data for humans has not been determined been by rats produced decreased white blood cell counts, decrea creased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney
	female rats were unaffected rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala	. The U.S. EPA Risk Assessment Forum has concluded that the m not relevant for humans. Total gasoline exposure also produced in The implication of these data for humans has not been determined been by rats produced decreased white blood cell counts, decrea creased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney
Carcinogenicity	female rats were unaffected rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro	The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced in The implication of these data for humans has not been determined arene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney longed and repeated exposure.
Carcinogenicity ACGIH Carcinogens	female rats were unaffected rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro	The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced in The implication of these data for humans has not been determined arene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney longed and repeated exposure.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2)	female rats were unaffected rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced in The implication of these data for humans has not been determined arene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney longed and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2)	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced light for humans has not been determined activity and cataracts. Blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact end/or ingestion. Liver and kidney longed and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal cateringen with unknown relevance to
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5)	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced limits implication of these data for humans has not been determined azene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney longed and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5)	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced limits implication of these data for humans has not been determined azene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney longed and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced limits implication of these data for humans has not been determined azene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney longed and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced limits implication of these data for humans has not been determined azene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney longed and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3 Xylene (o, m, p isomers	female rats were unaffected. rat kidney tumor results are i tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro))-41-4) (1-5)	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced limits implication of these data for humans has not been determined azene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney longed and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen. A4 Not classifiable as a human carcinogen.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3 Xylene (o, m, p isomers JARC Monographs. Overall	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro))-41-4)))-41-5))) (CAS 1330-20-7) I Evaluation of Carcinogenicit	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced lift The implication of these data for humans has not been determined acene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney longed and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen. A4 Not classifiable as a human carcinogen.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3 Xylene (o, m, p isomers JARC Monographs. Overall Benzene (CAS 71-43-2)	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro admage may occur after pro))-41-4)))-41-4))) (CAS 1330-20-7) I Evaluation of Carcinogenicit)	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced lift The implication of these data for humans has not been determined been by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact end/or ingestion. Liver and kidney blonged and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen. A4 Not classifiable as a human carcinogen. Y 1 Carcinogenic to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3 Xylene (o, m, p isomers JARC Monographs. Overall	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro admage may occur after pro))-41-4)))-41-4))) (CAS 1330-20-7) I Evaluation of Carcinogenicit)	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced light implication of these data for humans has not been determined acene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney blonged and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen. A4 Not classifiable as a human carcinogen.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3 Xylene (o, m, p isomers JARC Monographs. Overall Benzene (CAS 71-43-2)	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro damage may occur after pro))-41-4)))-41-4))) (CAS 1330-20-7) I Evaluation of Carcinogenicit	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced lift The implication of these data for humans has not been determined been by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact end/or ingestion. Liver and kidney blonged and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen. A4 Not classifiable as a human carcinogen. Y 1 Carcinogenic to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3 Xylene (o, m, p isomers IARC Monographs. Overall Benzene (CAS 71-43-2) Cumene (CAS 98-82-8)	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro admage may occur after pro (ACS 1330-20-7) (CAS 1330-20-7) I Evaluation of Carcinogenicit) (-41-4)	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced lift in implication of these data for humans has not been determined activity and cataracts. Blood disorders may tion, prolonged skin contact end/or ingestion. Liver and kidney alonged and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen. A4 Not classifiable as a human carcinogen. A5 Confirmed to humans. A6 Confirmed to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3 Xylene (o, m, p isomers IARC Monographs. Overall Benzene (CAS 71-43-2) Cumene (CAS 98-82-8) Ethylbenzene (CAS 100	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro admage may occur after pro (AMS 1330-20-7) (CAS 1330-20-7) I Evaluation of Carcinogenicit) (-41-4) (-5)	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced lift The implication of these data for humans has not been determined been by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact end/or ingestion. Liver and kidney blonged and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen. A4 Not classifiable as a human carcinogen. A5 Confirmed to humans. A6 Confirmed to humans. A7 Carcinogenic to humans. A8 Possibly carcinogenic to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3 Xylene (o, m, p isomers JARC Monographs. Overall Benzene (CAS 71-43-2) Cumene (CAS 98-82-8) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8	female rats were unaffected. rat kidney tumor results are i tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro admage may occur after pro))-41-4) (CAS 1330-20-7) I Evaluation of Carcinogenicit))-41-4) (1-5)	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced lift The implication of these data for humans has not been determined been by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact end/or ingestion. Liver and kidney blonged and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen. A4 Not classifiable as a human carcinogen. Y 1 Carcinogenic to humans. 28 Possibly carcinogenic to humans. 28 Possibly carcinogenic to humans. 28 Possibly carcinogenic to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3 Xylene (o, m, p isomers JARC Monographs. Overall Benzene (CAS 71-43-2) Cumene (CAS 98-82-8) Ethylbenzene (CAS 108-88-3 Toluene (CAS 108-88-3	female rats were unaffected. rat kidney tumor results are i tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro admage may occur after pro (AAS 1330-20-7) I Evaluation of Carcinogenicit ())-41-4) (CAS 1330-20-7) I Evaluation of Carcinogenicit ())-41-4) ()-41-4) ()-41-4)	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced limits implication of these data for humans has not been determined acene by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney blonged and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen. A4 Not classifiable as a human carcinogen. Y 1 Carcinogenic to humans. 2B Possibly carcinogenic to humans. 2 B Possibly carcinogenic to humans. 3 Not classifiable as to carcinogenicity to humans.
Carcinogenicity ACGIH Carcinogens Benzene (CAS 71-43-2) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100 Gasoline (CAS 86290-8 Toluene (CAS 108-88-3 Xylene (o, m, p isomers IARC Monographs. Overall Benzene (CAS 71-43-2) Cumene (CAS 98-82-8) Ethylbenzene (CAS 108-88-3 Toluene (CAS 108-88-3 Xylene (o, m, p isomers	female rats were unaffected. rat kidney tumor results are tumors in female mice only. Subchronic inhalation of ber bone marrow cell activity, ind occur after prolonged inhala damage may occur after pro (AAS 1330-20-7) (CAS 1330-20-7) I Evaluation of Carcinogenicit) (CAS 1330-20-7) J-41-4) 31-5) 3) (CAS 1330-20-7) ogens: Known carcinogen	 The U.S. EPA Risk Assessment Forum has concluded that the mot relevant for humans. Total gasoline exposure also produced lift implication of these data for humans has not been determined been by rats produced decreased white blood cell counts, decreased red blood cell activity and cataracts. Blood disorders may tion, prolonged skin contact and/or ingestion. Liver and kidney blonged and repeated exposure. A1 Confirmed human carcinogen. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen. A4 Not classifiable as a human carcinogen. Y 1 Carcinogenic to humans. 2B Possibly carcinogenic to humans. 2 B Possibly carcinogenic to humans. 3 Not classifiable as to carcinogenicity to humans.

Benzene (CAS 71-43-2)	-	nces (29 CFR 1910.1001-1050) Cancer hazard.	
			that prolonged and/or reported
Epidemiology .	overexposul disorders, in to benzene : not been ful	nzene. Human epidemiology studies indicate re to benzene may cause damage to the bloo including leukemia. Animal tests suggest that p may damage the embryo/fetus. The relevance ly established. Studies have shown a risk of s high concentrations of organic solvents during	d-producing system and serious blood prolonged and/or repeated overexposu e of these animal studies to humans h pontaneous abortions in women
Mutagenicity	sister-chrom lymphocytes not observe the number	cperiments, neither benzene, toluene nor xyle natid exchanges (SCEs) or the number of chro benzene, toluene and xylene caused a sign d with benzene in the same concentrations. I of sister-chromatid exchanges (SCEs) in hum netic damage.	pmosomal aberrations in human hificant cell growth inhibition which was In in-vivo experiments, toluene change
Neurological effects	Chronic exp	osure to high concentrations of various hydro	carbon blends may lead to
	polyneuropa	athy (peripheral nerve damage), characterized	i by progressive weakness and
· · · ·		n the extremities, loss of deep tendon reflexes velocity. Numerous cases of polyneuritis have	
	exposures to	o a petroleum fraction containing various ison	ners of heptane as major ingredients.
	May cause (weakness, f	central nervous system disorder (e.g., narcos atigue) and/or damage.	is involving a loss of coordination,
Reproductive effects	Benzene, xy	viene and toluene have demonstrated animal	effects of reproductive toxicity. Anima
	studies of b	enzene have shown testicular effects, alteration and embryo/fetotoxicity. Ethanol has demons	ons in reproductive cycles, chromosor
	toxicity. May	y damage fertility or the unborn child. Can cau	ise adverse reproductive effects - suc
• •	💠 as birth defe	acts, miscarriages, or infertility. Avoid, exposur ct during pregnancy/while nursing.	e to women during early pregnancy.
Teratogenicity	Abusive inh	alation of toluene ("glue sniffing") has been re	ported to be associated with birth
·	. defects in th showed emi	e offspring of abusers. Rats exposed to benz bryo/fetotoxic effects. Ethanol has demonstra	ene and xylene vapor during pregnan ated human effects of teratogenicity.
Further information		may be delayed.	
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and the second second			· · · · · · · · · · · · · · · · · · ·
12. Ecological Informatio	חי		
Ecotoxicological data	חי		
Ecotoxicological data Components		Species	Test Results
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9			Test Results
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9 Aquatic	5-63-6)	Species	
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9 Aquatic Fish			
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9 Aquatic Fish Benzene (CAS 71-43-2)	5-63-6)	Species	
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9 Aquatic Fish Benzene (CAS 71-43-2) Aquatic	5-63-6) LC50	Species Fathead minnow (Pimephales promelas)	7.19 - 8.28 mg/l, 96 hours
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9 Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea	5-63-6) LC50 EC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnia magna)	7.19 - 8.28 mg/l, 96 hours '8.76 - 15.6 mg/l, 48 hours
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9 Aquatic Fish Benzene (CAS 71-43-2) Aquatic	5-63-6) LC50	Species Fathead minnow (Pimephales promelas)	7.19 - 8.28 mg/l, 96 hours
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9 Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea	5-63-6) LC50 EC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnia magna) Rainbow trout donaldson trout	7.19 - 8.28 mg/l, 96 hours '8.76 - 15.6 mg/l, 48 hours
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9 Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish	5-63-6) LC50 EC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnia magna) Rainbow trout donaldson trout	7.19 - 8.28 mg/l, 96 hours '8.76 - 15.6 mg/l, 48 hours
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9: Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8)	5-63-6) LC50 EC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnia magna) Rainbow trout donaldson trout	7.19 - 8.28 mg/l, 96 hours '8.76 - 15.6 mg/l, 48 hours
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9 Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8) Aquatic	5-63-6) LC50 EC50 LC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnía magna) Rainbow trout donaldson trout (Oncorhynchus mykiss)	7.19 - 8.28 mg/l, 96 hours 8.76 - 15.6 mg/l, 48 hours 5.3 mg/l, 96 hours
Ecotoxicological data <u>Components</u> 1,2,4, Trimethylbenzene (CAS 94 Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8) Aquatic Crustacea	5-63-6) LC50 EC50 LC50 EC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnia magna) Rainbow trout donaldson trout (Oncorhynchus mykiss) Brine shrimp (Artemia sp.) Rainbow trout,donaldson trout	7.19 - 8.28 mg/l, 96 hours 8.76 - 15.6 mg/l, 48 hours 5.3 mg/l, 96 hours 3.55 - 11.29 mg/l, 48 hours
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 9 Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8) Aquatic Crustacea Fish	5-63-6) LC50 EC50 LC50 EC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnia magna) Rainbow trout donaldson trout (Oncorhynchus mykiss) Brine shrimp (Artemia sp.) Rainbow trout,donaldson trout	7.19 - 8.28 mg/l, 96 hours 8.76 - 15.6 mg/l, 48 hours 5.3 mg/l, 96 hours 3.55 - 11.29 mg/l, 48 hours
Ecotoxicological data <u>Components</u> 1,2,4, Trimethylbenzene (CAS 9: Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8) Aquatic Crustacea Fish Cyclohexane (CAS 110-82-7)	5-63-6) LC50 EC50 LC50 EC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnia magna) Rainbow trout donaldson trout (Oncorhynchus mykiss) Brine shrimp (Artemia sp.) Rainbow trout,donaldson trout	7.19 - 8.28 mg/l, 96 hours 8.76 - 15.6 mg/l, 48 hours 5.3 mg/l, 96 hours 3.55 - 11.29 mg/l, 48 hours 2.7 mg/l, 96 hours
Ecotoxicological data <u>Components</u> 1,2,4, Trimethylbenzene (CAS 98 Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8) Aquatic Crustacea Fish Cyclohexane (CAS 110-82-7) Aquatic	5-63-6) LC50 EC50 LC50 EC50 LC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnía magna) Rainbow trout, donaldson trout (Oncorhynchus mykiss) Brine shrimp (Artemia sp.) Rainbow trout, donaldson trout (Oncorhynchus mykiss)	7.19 - 8.28 mg/l, 96 hours 8.76 - 15.6 mg/l, 48 hours 5.3 mg/l, 96 hours 3.55 - 11.29 mg/l, 48 hours 2.7 mg/l, 96 hours
Ecotoxicological data <u>Components</u> 1,2,4, Trimethylbenzene (CAS 94 Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8) Aquatic Crustacea Fish Cyclohexane (CAS 110-82-7) Aquatic Fish	5-63-6) LC50 EC50 LC50 EC50 LC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnía magna) Rainbow trout, donaldson trout (Oncorhynchus mykiss) Brine shrimp (Artemia sp.) Rainbow trout, donaldson trout (Oncorhynchus mykiss)	7.19 - 8.28 mg/l, 96 hours 8.76 - 15.6 mg/l, 48 hours 5.3 mg/l, 96 hours 3.55 - 11.29 mg/l, 48 hours 2.7 mg/l, 96 hours
Ecotoxicological data <u>Components</u> 1,2,4, Trimethylbenzene (CAS 98 Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8) Aquatic Crustacea Fish Cyclohexane (CAS 110-82-7) Aquatic Fish Ethanol (CAS 64-17-5)	5-63-6) LC50 EC50 LC50 EC50 LC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnía magna) Rainbow trout, donaldson trout (Oncorhynchus mykiss) Brine shrimp (Artemia sp.) Rainbow trout, donaldson trout (Oncorhynchus mykiss)	7.19 - 8.28 mg/l, 96 hours 8.76 - 15.6 mg/l, 48 hours 5.3 mg/l, 96 hours 3.55 - 11.29 mg/l, 48 hours 2.7 mg/l, 96 hours
Ecotoxicological data <u>Components</u> 1,2,4, Trimethylbenzene (CAS 9: Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8) Aquatic Crustacea Fish Cyclohexane (CAS 110-82-7) Aquatic Fish Ethanol (CAS 64-17-5) Aquatic	5-63-6) LC50 EC50 LC50 LC50 LC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnía magna) Rainbow trout donaldson trout (Oncorhynchus mykiss) Brine shrimp (Artemia sp.) Rainbow trout, donaldson trout (Oncorhynchus mykiss) Fathead minnow (Pimephales promelas) Fathead minnow (Pimephales promelas) Freshwater algae	7.19 - 8.28 mg/l, 96 hours 8.76 - 15.6 mg/l, 48 hours 5.3 mg/l, 96 hours 3.55 - 11.29 mg/l, 48 hours 2.7 mg/l, 96 hours 3.961 - 5.181 mg/l, 96 hours 275 mg/l, 72 Hours
Ecotoxicological data Components 1,2,4, Trimethylbenzene (CAS 98 Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8) Aquatic Crustacea Fish Cyclohexane (CAS 110-82-7) Aquatic Fish Ethanol (CAS 64-17-5) Aquatic Algae	5-63-6) LC50 EC50 LC50 LC50 LC50 LC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnía magna) Rainbow trout donaldson trout (Oncorhynchus mykiss) Brine shrimp (Artemia sp.) Rainbow trout, donaldson trout (Oncorhynchus mykiss) Fathead minnow (Pimephales promelas) Freshwater algae Marine water algae	7.19 - 8.28 mg/l, 96 hours 8.76 - 15.6 mg/l, 48 hours 5.3 mg/l, 96 hours 3.55 - 11.29 mg/l, 48 hours 2.7 mg/l, 96 hours 3.961 - 5.181 mg/l, 96 hours 275 mg/l, 72 Hours 1970 mg/l
Ecotoxicological data <u>Components</u> 1,2,4, Trimethylbenzene (CAS 9) Aquatic Fish Benzene (CAS 71-43-2) Aquatic Crustacea Fish Cumene (CAS 98-82-8) Aquatic Crustacea Fish Cyclohexane (CAS 110-82-7) Aquatic Fish Ethanol (CAS 64-17-5) Aquatic	5-63-6) LC50 EC50 LC50 LC50 LC50	Species Fathead minnow (Pimephales promelas) Water flea (Daphnía magna) Rainbow trout donaldson trout (Oncorhynchus mykiss) Brine shrimp (Artemia sp.) Rainbow trout, donaldson trout (Oncorhynchus mykiss) Fathead minnow (Pimephales promelas) Fathead minnow (Pimephales promelas) Freshwater algae	7.19 - 8.28 mg/l, 96 hours 8.76 - 15.6 mg/l, 48 hours 5.3 mg/l, 96 hours 3.55 - 11.29 mg/l, 48 hours 2.7 mg/l, 96 hours 3.961 - 5.181 mg/l, 96 hours 275 mg/l, 72 Hours 1970 mg/l

Prepared by 3E Company

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Components		Species		Test Results
Invertebrate	EC50	Freshwater invertebrate		5012 mg/l, 48 Hours
•		Marine water invertebrate		857 mg/l, 48 Hours
Ethylbenzene (CAS 100-41-4)				
Aquatic				
Crustacea	EC50	Water flea (Daphnia magna)		1 - 4 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout		4 mg/l, 96 hours
		(Oncorhynchus mykiss)		
1-Hexane (CAS 110-54-3)			•	· ·
Aquatic		<i>,</i>		
Fish	LC50	Fathead minnow (Pimephales	promelas)	2,101 - 2,981 mg/l, 96 hours
oluene (CAS 108-88-3)				
Aquatic			•	
Crustacea	EC50	Water flea (Daphnia magna)	· .	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	·. *	5,5 mg/l, 96 hours
(ylene (o, m, p isomers) (CAS 13	330-20-7)		• ,	
Aquatic	• •		•	
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	• •	8 mg/l, 96 Hours
	Ocentralize e o			
cotoxicity		ubstance which causes risk of ha		
invironmental effects	Ine product long-term ad	contains a substance which is tox lverse effects in the aquatic enviro	nment.	tic organisms and which may cause
quatic toxicity	Toxic to aqu	atic organisms. May cause long-te	erm advers	e effects in the aquatic environment.
ersistence and degradability	Not available	e. , ''	•	
lioaccumulation /	Not available)		
coumulation				· .
Partition coefficient				• •
Ethanol Benzene		-0.31 2.13		
Toluene		2.13		,
Ethylbenzene		3.15		
Xylene (o, m, p isomers)		3.2		•
Pentane		3.39 3.44		· ·.
Cyclohexane Hexarte (Other Isomers)		3.6		
Cumene		3.66		
n-Hexane		3.9		
n-Heptane		4.66		
Octane (All isomers)		5.18		
3. Disposal Consideratio	ons		,	
Naste codes		······································		· · · ·
vaste codes	D001; Waste D018: Waste	e Flemmable material with a flash e Benzene ·	point <140	J-F
Disposal instructions	hezardous o an approveç	r special waste collection point. In	icinerate th terial to dra	ispose of this material and its container t ne material under controlled conditions in ain into sewers/water supplies. Do not or used container.
4. Transport Information	n			· .
тот				
Basic shipping requirement	nts:			•
UN number	UN1203	·		
Proper shipping name	Gasoline			
UNLEADED GASOLINE		· · · · · · · · · · · · · · · · · · ·		

Hazard class	3							
Packing group	Ð							
Additional information:								
Special provisions	1 3 9, B33, B1	101. T8						
Packaging exceptions	150							
Packaging non bulk	202							
Packaging bulk	242							
	272						•	
UN number	UN1203							
	Gasoline							
UN proper shipping name	3							
Transport hazard class(es)	3 1]							
Packing group	3H						· .	
ERG code	э п .					•		
MDG	1413888		•					
UN number	UN1203	•	1.1.1					
UN proper shipping name	Gasoline	•				· .		
Transport hazard class(es)	3			•				
Packing group	<u>11</u>							
EmS	F- <u>E</u> , S-E			,			· ·	
rDG		· · · ·	· · · ·	•				
Proper shipping name	•	, MOTOR SPI	RIT; or PETRO	DL, MARINE	. POLLUTAN	AL L		
Hazard class	3					•	.,	
UN number	UN1203			•				
Packing group	- <mark>1</mark> 1							
Marine pollutant	Yes	•		·			-	
Snanial acaulaiana	17							
Special provisions	19		· · · · ·		•			
· · · · ·					•		• •	•
Special provisions 15. Regulatory Information US federal regulations	n This produc Standard, 2	9 CFR 1910.1	lous Chemical''	•	-	A Hazard Co	mmunication	
5. Regulatory Informations	n This produc Standard, 29 All compone	9 CFR 1910.1 ents are on the	1200. e U.S. EPA TS	•	-	A Hazard Co	mmunication	•
5. Regulatory Information IS federal regulations TSCA Section 12(b) Export	n This produc Standard, 29 All compone	9 CFR 1910.1 ents are on the	1200. e U.S. EPA TS	•	-	A Hazard Co	mmunication	
 15. Regulatory Information JS federal regulations TSCA Section 12(b) Export Not regulated. 	n This produc Standard, 2: All compone Notification (4	9 CFR 1910.1 ents are on the 40 CFR 707, :	1200. e U.S. EPA TS Subpt. D)	CA Inventor	-	A Hazard Co	mmunication	
 15. Regulatory Information JS federal regulations TSCA Section 12(b) Export Not regulated. Clean Alr Act (CAA) Section 	n This produc Standard, 2: All compone Notification (4	9 CFR 1910.1 ents are on the 40 CFR 707, :	1200. e U.S. EPA TS Subpt. D)	CA Inventor	-	A Hazard Co	mmunication	·
 15. Regulatory Information JS federal regulations TSCA Section 12(b) Export Not regulated. Clean Air Act (CAA) Section Benzene (CAS 71-43-2) 	n This produc Standard, 2: All compone Notification (4	9 CFR 1910.1 ents are on the 40 CFR 707, :	1200. e U.S. EPA TS Subpt. D)	CA Inventor	-	A Hazard Co	mmunication	·
 15. Regulatory Information JS federal regulations TSCA Section 12(b) Export Not regulated. Clean Air Act (CAA) Section Benzene (CAS 71-43-2) Cumene (CAS 98-82-8) 	n This produc Standard, 2 All compone Notification (4 n 112 Hazardo	9 CFR 1910.1 ents are on the 40 CFR 707, :	1200. e U.S. EPA TS Subpt. D)	CA Inventor	-	A Hazard Co	mmunication	
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UNLEADED GASOLINE 3536 Prepared by 3E Company

Version #: 03

CERCLA (Superfund) reportable	quantity (lbs) (40 C	CFR 302.4)					
Gasoline: 100 Toluene: 1000 Hexane (Other Isomers): 100 Xylene (o, m, p isomers): 100							
Octane (All isomers): 100 Pentane: 100 Cumene: 5000 Ethylbenzene: 1000							
Benzene: 10 n-Hexane: 5000 Cyclohexane: 1000							
Superfund Amendments and Re	authorization Act o	of 1986 (SARA)) ·				
Hazard categories	Immediate Hazard Delayed Hazard - Fire Hazard - Yes Pressure Hazard - Reactivity Hazard	Yes		:			
Section 302 extremely hazardous substance (40 CFR 355, Appendix A)	No	· · .		· ::		· : ···	
Section 311/312 (40 CFR 370)	No	•	. '	• • •	· · ·		
Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)	Not controlled		. •	•	·	• . • .	
Canadian regulations	This product has b contains all the inf				ard criteria c	of the CPR and th	e MSDS
WHMIS status	Controlled		-	1		· .'	
WHMIS classification	B2 - Flammable Li D1A - Immediate/S D2A - Other Toxic	Serious-VERY Effects-VERY	TOXIC	··		•	
WHMIS labeling	D2B - Other Toxic		• .			· · · · ·	•
	· .	· · · · ·		, 1	· · · ·		
Inventory status			· · ·				
Country(s) or region . * Australia	Inventory name Australian Invento	ry of Chemical	Substances ((AICS)		On inventory	' (yes/no)* Yes
Canada	Domestic Substan				,		Yes
Canada	Non-Domestic Sul				· · · ·		No
China	Inventory of Existi		1 C)		No
Europe	European Invento Substances (EINE	ĒČ\$)·		, ,			Yes
Europe	European List of N	-			1	· · ·	No
Japan	Inventory of Existi	-	remical Subst	tances (ENCS	5)		Yes
Korea	Existing Chemical	•	· · ·				Yes
New Zealand	New Zealand Inve						Yes.
Philippines	Philippine Invento (PICCS)				5		Yes .
United States & Puerto Rico *A "Yes" indicates this product co	Toxic Substances implies with the invento				g country(s)		No
State regulations	WARNING: This p					ifornia to cause c	ancer

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

1,2,4, Trimethylbenzene (CAS 95-63-6) Benzene (CAS 71-43-2)	Listed. Listed.	
UNLEADED GASOLINE		

19.	2013	12/26 12/26				No. 9954	Ρ.	17/31
		nene (CAS 98-82-8)		Listed.				
		Iohexane (CAS 110-82-7)		Listed.				
	Etha	anol (CAS 64-17-5)		Listed.				
	Ethy	/Ibenzene (CA\$ 100-41-4)		Listed.				•
	Hex	ane (Other Isomers) (CAS 96-14-0)	Listed,				
		eptane (CAS 142-82-5)	· .	Listed.				
	n-He	exane (CAS 110-54-3)		Listed.				
	Ócta	ane (All isomers) (CAS 111-65-9)		Listed.				
	Pen	tane (CAS 109-66-0)		Listed.				
		ene (CAS 108-88-3)		Listed.				
		ne (o, m, p isomers) (CAS 1330-20	J-7)	Listed.				
		ifornia Proposition 65 - Carcinoc		tive Toxicity (CRT): Listed sui	ostance		
	Ben	zene (CAS 71-43-2)	, ·	Listed.		•.		
		nene (CAS 98-82-8)		Listed.		· ·		
		lbenzene (CAS 100-41-4)		Listed,	· · · ·			•
		iene (CAS 108-88-3)		Listed.		. • •		
		ifornia Proposition 65 - CRT: Lis	ted date/Carcino	denic substar	icê ···			
•		zene (CAS 71-43-2)	····,	-	uary 27, 1987 Ca	reinogenie		
		nene (CÁS 98-82-8)	:		6, 2010 Carcinog			1
		(benzene (CAS 100-41-4)						·
		ifornia Proposition 65 - CRT: Lis	ممط والمعمالة المحم		11, 2004 Carcino	igenic,		•
		•	red oare/pevelop					
		zene (CAS 71-43-2)				evelopmental toxi	٦.	
		iene (CAS 108-88-3)			ary 1, 1991 Deve	lopmental toxin.		
	US - Cal	ifornia Proposition 65 - CRT: Lis	ted date/Female (reproductive i	toxin	•		•
•	Tolu	ene (CAS 108-88-3)		Listed: Augu	st 7, 2009 Femal	e reproductive tox	in.	
	US - Cal	ifornia Proposition 65 - CRT: Lis	ted date/Male rep			• • •		
		żene (CA\$ 71-43-2)				ale reproductive to	ivin	
		v Jersey RTK - Substances: List	ad enhetanca		ander 20, 1007 M	ale reproductive i	ixin,	٣
		4. Trimethylbenzene (CAS 95-63-6)	Listed.				
		zene (CAS 71-43-2)		Listed.			· ·	:
		nene (CAS 98-82-8)		Listed.				
		ohexane (CAS 110-82-7)		Listed.	•		•	
		anol (CAS 64-17-5)		Listed.		•		
		(benzene (CAS 100-41-4)		Listed.			•	
		eptane (CAS 142-82-5)	• • • •	. Listed.				
		exane (CAS 110-54-3)		Listed.		•••	•	
		ane (All isomers) (CAS 111-65-9)		Listed.				
		tane (CAS 109-66-0)	•	Listed.		•		
•		ene (CAS 108-88-3)	•	Listed.				
		ne (o, m, p isomers) (CAS 1330-20		Listed.				
	ŲS - Per	insylvania RTK - Hazardous Sub	stances: Special	hazard	·· .			
	Ben	zene (CAS 71-43-2)		Special haza	ard,			
	US, Maş	sachusetts RTK - Substance Lis	t.		· •			•
	12	4, Trimethylbenzene (CAS 95-63-6	n	Listed.		•	•	•
		zene (CAS 71-43-2)		Listed.	•	• •••		•
		nene (CAS 98-82-8)		Listed.	· .•			
		ohexane (CAS 110-82-7)		Listed.				
		anol (CAS 64-17-5)	•	Listed.		•		
		(benzene (CAS 100-41-4)		Listed.		•		
		ane (Other Isomers) (CAS 96-14-0	۰. ۱	Listed.				
		eptane (CAS 142-82-5)	y ., ,	Listed.			•	• *
		exane (CAS 110-54-3)		Listed.		•		
. '		ane (All isomers) (CAS 111-65-9)		Listed.		•		•
			•		•	•		
		tane (CAS 109-66-0)		Listed.		,		•
		ene (CAS 108-88-3)	n 7\	Listed.				
·		ne (o, m, p isomers) (CAS 1330-2)		Listed.				
		Jersey Worker and Community	-					
		4, Trimethylbenzene (CAS 95-63-6	5)	500 LBS				
		zene (CAS 71-43-2)	• •	500 LBS		•		
		tene (CÁS 98-82-8)		500 LBS				
		lohexane (CAS 110-82-7)		500 LBS				
		(benzene (CAS 100-41-4)		500 LBS				
		exane (CAS 110-54-3)		500 LBS				
		, , ,						

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Pentane (CAS 109-66-0) Toluene (CAS 108-88-3) Xylene (o, m, p isomers) (CAS 1330-20-7)	500 LBS 500 LBS 500 LBS	
US. Pennsylvania RTK - Hazardous Substances	300 EBG	·
1,2,4, Trimethylbenzene (CAS 95-63-6) Benzene (CAS 71-43-2) Cumene (CAS 98-82-8) Cyclohexane (CAS 110-82-7) Ethanol (CAS 64-17-5) Ethylbenzene (CAS 100-41-4) Gasoline (CAS 86290-81-5) Hexane (Other Isomers) (CAS 96-14-0)	Listed. Listed. Listed. Listed. Listed. Listed. Listed. Listed.	
n-Heptane (CAS 142-82-5) n-Hexane (CAS 110-54-3) Octane (All isomers) (CAS 111-65-9)	Listed. Listed. Listed.	
	Listed. Listed. Listed.	· · · · · · · · · · · · · · · · · · ·
Ayrene (0, m, prisoners) (CAS TSSU-20-7)	. Listou.	· · · · · · · · · · · · · · · · · · ·

16. Other Information

Further information .

HMIS® is a registered trade and service mark of the NPCA.

Flammability: 3 Physical hazard: 0

Health: 1 Flammability: 3

 Other information
 Note: This Material Safety Data Sheet applies to the listed products and synonym descriptions for Hezard Communication purposes only. Technical Specifications vary greatly depending on the products and are not reflected in this document. Consult specification sheets for technical information.

 HMIS® ratings
 Health: 2*

HMIS® ratings

NFPA ratings

Disclaimer.

Instability: 0 This Material Safety Data Sheet (MSDS) was prepared in accordance with 29 CFR 1910.1200 by Valero Marketing & Supply Co., ("VALERO"). VALERO does not assume any liability arising out of product use by others. The information, recommendations, and suggestions presented in this MSDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use, the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.

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