

**Diesel Reference Fuel U-30**

Version 6.1

Revision Date 2017-05-12

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

Product Name : Diesel Reference Fuel U-30
Material : 1108915, 1024281, 1024280, 1032195, 1024277, 1024279,
1024278

Use : Reference Fuel

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

Emergency telephone:**Health:**

866.442.9628 (North America)
1.832.813.4984 (International)

Transport:

CHEMTREC 800.424.9300 or 703.527.3887(int'l)
Asia: CHEMWATCH (+612 9186 1132)
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Mexico CHEMTREC 01-800-681-9531 (24 hours)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

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

SECTION 2: Hazards identification**Classification of the substance or mixture**

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

Classification

: Flammable liquids, Category 3
Skin irritation, Category 2
Eye irritation, Category 2A
Carcinogenicity, Category 2
Specific target organ systemic toxicity - single exposure,
Category 3, Respiratory system
Specific target organ systemic toxicity - repeated exposure,
Category 2, Blood, Liver, thymus gland, Auditory organs,

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Kidney
 Specific target organ systemic toxicity - repeated exposure,
 Category 2, Inhalation, Auditory organs
 Aspiration hazard, Category 1

Labeling

Symbol(s)



Signal Word

: Danger

Hazard Statements

: H226: Flammable liquid and vapor.
 H304: May be fatal if swallowed and enters airways.
 H315: Causes skin irritation.
 H319: Causes serious eye irritation.
 H335: May cause respiratory irritation.
 H351: Suspected of causing cancer.
 H373: May cause damage to organs (Blood, Liver, thymus gland, Auditory organs, Kidney) through prolonged or repeated exposure.
 H373: May cause damage to organs (Auditory organs) through prolonged or repeated exposure if inhaled.

Precautionary Statements

: **Prevention:**
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P233 Keep container tightly closed.
 P240 Ground/bond container and receiving equipment.
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P260 Do not breathe dust/fume/gas/mist/vapor/spray.
 P264 Wash skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 P331 Do NOT induce vomiting.
 P332 + P313 If skin irritation occurs: Get medical advice/

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attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:**IARC**

Group 2B: Possibly carcinogenic to humans

Light Aromatic Solvent 64742-95-6

Naphtha

Ethylbenzene 100-41-4

Light Cycle Oil 64741-59-9

Naphthalene 91-20-3

Cumene 98-82-8

NTP

Known to be human carcinogen

Light Cycle Oil 64741-59-9

Reasonably anticipated to be a human carcinogen

Naphthalene 91-20-3

Cumene 98-82-8

SECTION 3: Composition/information on ingredients

Synonyms : Diesel Reference Fuel U

Molecular formula : Mixture

Component	CAS-No.	Weight %
Distillates (petroleum), Hydrotreated light	64742-47-8	100
Aromatic hydrocarbons, C9-11	70693-06-0	30 - 50
Light Aromatic Solvent Naphtha	64742-95-6	20 - 30
Solvent Naphtha (Petroleum), Heavy Aromatic	64742-94-5	20 - 30
1,2,4-Trimethylbenzene	95-63-6	10 - 20
Ethylbenzene	100-41-4	10 - 20
Light Cycle Oil	64741-59-9	10 - 20
Benzene, dimethyl-	1330-20-7	1 - 10
1,3,5-Trimethylbenzene	108-67-8	1 - 5
1,2,3-trimethylbenzene	526-73-8	1 - 10
Cumene	98-82-8	1 - 10
Naphthalene	91-20-3	0.1 - 0.5

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SECTION 4: First aid measures

- General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.
- If inhaled : If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

- Flash point : 44.9 °C (112.8 °F)
Method: Tag closed cup
- Autoignition temperature : No data available
- Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemical.
- Unsuitable extinguishing media : High volume water jet.
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
- Fire and explosion protection : Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.
- Hazardous decomposition products : Carbon oxides.

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SECTION 6: Accidental release measures

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

SECTION 7: Handling and storage**Handling**

- Advice on safe handling : Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against fire and explosion : Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.

Storage

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

SECTION 8: Exposure controls/personal protection**Ingredients with workplace control parameters****US**

Ingredients	Basis	Value	Control parameters	Note
Distillates (petroleum), Hydrotreated light	OSHA Z-1	TWA	500 ppm, 2,000 mg/m ³	(b),
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m ³	
	ACGIH	TWA	200 mg/m ³	CNS impair, URT irr, skin irr, P, A3, Skin, varies,
	OSHA Z-1	TWA	5 mg/m ³	Mist

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	OSHA Z-1-A	TWA	5 mg/m3	Mist
Light Aromatic Solvent Naphtha	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	(b),
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
	ACGIH	TWA	200 mg/m3	CNS impair, URT irr, skin irr, P, A3, Skin, varies,
Solvent Naphtha (Petroleum), Heavy Aromatic	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	(b),
	ACGIH	TWA	200 mg/m3	CNS impair, URT irr, skin irr, P, A3, Skin, varies,
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
1,2,4-Trimethylbenzene	ACGIH	TWA	25 ppm,	CNS impair, hematologic eff, asthma,
	OSHA Z-1-A	TWA	25 ppm, 125 mg/m3	
Ethylbenzene	OSHA Z-1	TWA	100 ppm, 435 mg/m3	(b),
	OSHA Z-1-A	TWA	100 ppm, 435 mg/m3	
	OSHA Z-1-A	STEL	125 ppm, 545 mg/m3	
	ACGIH	TWA	20 ppm,	
Benzene, dimethyl-	OSHA Z-1	TWA	100 ppm, 435 mg/m3	(b),
	OSHA Z-1-A	STEL	150 ppm, 655 mg/m3	
	OSHA Z-1-A	TWA	100 ppm, 435 mg/m3	
	CAL PEL	STEL	150 ppm, 655 mg/m3	
	ACGIH	TWA	100 ppm,	CNS impair, URT irr, eye irr, BEI, A4,
	ACGIH	STEL	150 ppm,	CNS impair, URT irr, eye irr, BEI, A4,
1,2,3-trimethylbenzene	ACGIH	TWA	25 ppm,	CNS impair, hematologic eff, asthma,
	OSHA Z-1-A	TWA	25 ppm, 125 mg/m3	
1,3,5-Trimethylbenzene	ACGIH	TWA	25 ppm,	CNS impair, hematologic eff, asthma,
	OSHA Z-1-A	TWA	25 ppm, 125 mg/m3	
Cumene	ACGIH	TWA	50 ppm,	CNS impair, URT irr, eye irr, skin irr,
	OSHA Z-1	TWA	50 ppm, 245 mg/m3	X, (b),
	OSHA Z-1-A	TWA	50 ppm, 245 mg/m3	X,
Naphthalene	ACGIH	TWA	10 ppm,	hemolytic anemia, URT irr, cataract, A3, Skin,
	ACGIH	STEL	15 ppm,	hematologic eff, URT irr, eye irr, eye dam, (), A4, Skin,
	OSHA Z-1	TWA	10 ppm, 50 mg/m3	(b),
	OSHA Z-1-A	TWA	10 ppm, 50 mg/m3	
	OSHA Z-1-A	STEL	15 ppm, 75 mg/m3	

- (i) Adopted values or notations enclosed are those for which changes are proposed in the NIC
- (b) The value in mg/m3 is approximate.
- A3 Confirmed animal carcinogen with unknown relevance to humans
- A4 Not classifiable as a human carcinogen
- asthma Asthma
- BEI Substances for which there is a Biological Exposure Index or Indices (see BEI® section)
- cataract Cataract
- CNS impair Central Nervous System impairment
- eye dam Eye damage
- eye irr Eye irritation
- hematologic eff Hematologic effects
- hemolytic anemia Hemolytic anemia
- P Application restricted to conditions in which there are negligible aerosol exposures
- Skin Danger of cutaneous absorption
- skin irr Skin irritation
- URT irr Upper Respiratory Tract irritation
- varies varies
- X Skin notation

Hazardous components without workplace control parameters

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
Distillates (petroleum), Hydrotreated light	64742-47-8	Immediately Dangerous to Life or Health Concentration Value 2500 mg/m ³	1995-03-01

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Ethylbenzene	100-41-4	Immediately Dangerous to Life or Health Concentration Value 800 ppm	1995-03-01
Benzene, dimethyl-	1330-20-7	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
Naphthalene	91-20-3	Immediately Dangerous to Life or Health Concentration Value 250 ppm	1995-03-01
Cumene	98-82-8	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
Distillates (petroleum), Hydrotreated light	64742-47-8	Immediately Dangerous to Life or Health Concentration Value 2500 mg/m ³	1995-03-01
Ethylbenzene	100-41-4	Immediately Dangerous to Life or Health Concentration Value 800 ppm	1995-03-01
Benzene, dimethyl-	1330-20-7	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
Cumene	98-82-8	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
Naphthalene	91-20-3	Immediately Dangerous to Life or Health Concentration Value 250 ppm	1995-03-01
Distillates (petroleum), Hydrotreated light	64742-47-8	Immediately Dangerous to Life or Health Concentration Value 2500 mg/m ³	1995-03-01
Ethylbenzene	100-41-4	Immediately Dangerous to Life or Health Concentration Value 800 ppm	1995-03-01
o-xylene	95-47-6	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
Benzene, dimethyl-	1330-20-7	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
p-xylene	106-42-3	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
m-xylene	108-38-3	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
Cumene	98-82-8	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
Naphthalene	91-20-3	Immediately Dangerous to Life or Health Concentration Value 250 ppm	1995-03-01

US

Substance name	CAS-No.	Control parameters	Sampling time	Update
Ethylbenzene	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid: 0.15 g/g creatinine (Urine)	End of shift (As soon as possible after exposure ceases)	2014-03-01
Benzene, dimethyl-	1330-20-7	Methylhippuric acids: 1.5 g/g creatinine (Urine)	End of shift (As soon as possible after exposure ceases)	2013-03-01
Ethylbenzene	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid: 0.15 g/g creatinine (Urine)	End of shift (As soon as possible after exposure ceases)	2014-03-01
o-xylene	95-47-6	Methylhippuric acids: 1.5 g/g creatinine (Urine)	End of shift (As soon as possible after exposure ceases)	2013-03-01

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Benzene, dimethyl-	1330-20-7	Methylhippuric acids: creatinine (Urine)	1.5 g/g	End of shift (As soon as possible after exposure ceases)	2013-03-01
p-xylene	106-42-3	Methylhippuric acids: creatinine (Urine)	1.5 g/g	End of shift (As soon as possible after exposure ceases)	2013-03-01
m-xylene	108-38-3	Methylhippuric acids: creatinine (Urine)	1.5 g/g	End of shift (As soon as possible after exposure ceases)	2013-03-01

Engineering measures

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

Personal protective equipment

- Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.
- Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.
- Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
- Protective measures : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties**

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Appearance

Physical state : Liquid
Color : Yellow
Odor : Stench

Safety data

Flash point : 44.9 °C (112.8 °F)
Method: Tag closed cup

Lower explosion limit : No data available

Upper explosion limit : No data available

Oxidizing properties : No

Autoignition temperature : No data available

Thermal decomposition : No data available

Molecular formula : Mixture

Molecular weight : Not applicable

pH : Not applicable

Pour point : No data available

Boiling point/boiling range : 146 - 316 °C (295 - 601 °F)

Vapor pressure : No data available

Relative density : 0.817
at 15.6 °C (60.1 °F)

Density : 817.1 g/l

Water solubility : Negligible

Partition coefficient: n-octanol/water : No data available

Viscosity, kinematic : 1.8 cSt
at 40 °C (104 °F)

Relative vapor density : 3
(Air = 1.0)

Evaporation rate : < 1

Percent volatile : > 99 %

SECTION 10: Stability and reactivity

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

Possibility of hazardous reactions

Conditions to avoid : Heat, flames and sparks.

Materials to avoid : May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Thermal decomposition : No data available

Hazardous decomposition products : Carbon oxides

Other data : No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

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Acute oral toxicity : LD50: > 5,000 mg/kg
 Species: Rat
 Method: Acute toxicity estimate

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Acute inhalation toxicity : LC50: > 20 mg/l
 Exposure time: 4 h
 Species: Rat
 Test atmosphere: dust/mist
 Method: Acute toxicity estimate

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Acute dermal toxicity : LD50: > 5,000 mg/kg
 Species: Rabbit
 Method: Acute toxicity estimate

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Skin irritation : Skin irritation

 May cause skin irritation in susceptible persons.

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Eye irritation : Eye irritation.
 May cause irreversible eye damage.

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Sensitization : Does not cause sensitization.

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Repeated dose toxicity : Method: Based on product or component testing, long term repeated exposure may cause damage to the following organs:

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Target Organs: Auditory organs, Eyes, Blood, Thymus, Liver
Estimated based on individual component values.

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Carcinogenicity**

: Method: Expected to be carcinogenic based on individual component data.

Developmental Toxicity

Distillates (petroleum),
Hydrotreated light

: Species: Rat
Application Route: Inhalation
Dose: 0, 106, 364 mg/l
Exposure time: 6h/d
Test period: GD 6 - 20
NOAEL Teratogenicity: \geq 364 mg/l
NOAEL Maternal: \geq 364 mg/l

Species: Rat
Application Route: oral gavage
Dose: 500, 1000, 1500, 2000 mg/kg/d
Exposure time: 10 d
Test period: GD 6 - 15
Method: OECD Guideline 414
NOAEL Teratogenicity: 1,000 mg/kg
NOAEL Maternal: 500 mg/kg

Aromatic hydrocarbons, C9-
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Species: Rat
Application Route: Oral diet
Dose: 0, 75, 150, 450 mg/kg/day
Exposure time: GD 6-15
NOAEL Teratogenicity: $>$ 450 mg/kg/day
NOAEL Maternal: 150 mg/kg/day

Light Cycle Oil

Species: Rat
Application Route: Dermal
Dose: 1, 50, 250 mg/kg/d
Number of exposures: once daily
Test period: GD 0-19
Method: OECD Guideline 414
NOAEL Teratogenicity: 1 mg/kg
NOAEL Maternal: 1 mg/kg

Benzene, dimethyl-

Species: Rat
Application Route: Inhalation
Dose: 0, 805, 1610 ppm
Number of exposures: 6 h/d
Test period: GD 7-16
NOAEL Maternal: 1610 ppm

Species: Mouse
Application Route: oral gavage
Dose: 0, 780, 1960, 2619 mg/kg
Number of exposures: 3 times/d
Test period: GD 6-15
NOAEL Teratogenicity: 780 mg/kg
NOAEL Maternal: 780 mg/kg

Cumene

Species: Rat

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	<p>Application Route: Inhalation Dose: 0, 100, 500, 1200 ppm Number of exposures: 6 h/d Test period: GD 6-15 NOAEL Teratogenicity: > 1200 ppm NOAEL Maternal: 100 ppm</p> <p>Species: Rabbit Application Route: Inhalation Dose: 0, 500, 1200, 2300 ppm Number of exposures: 6 h/d Test period: GD 6-18 NOAEL Teratogenicity: > 2300 ppm</p>
Naphthalene	<p>Species: Rabbit Application Route: oral gavage Dose: 40, 200, 400 mg/kg Test period: 29 d, GD 6-18 NOAEL Teratogenicity: 400 mg/kg</p>
Diesel Reference Fuel U-30 Aspiration toxicity	: Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.
CMR effects	
Ethylbenzene	: Mutagenicity: In vivo tests did not show mutagenic effects Teratogenicity: Did not show teratogenic effects in animal experiments. Reproductive toxicity: No toxicity to reproduction
Light Cycle Oil	Carcinogenicity: Possible human carcinogen
Benzene, dimethyl-	Carcinogenicity: Not classifiable as a human carcinogen. Mutagenicity: Did not show mutagenic effects in animal experiments. Teratogenicity: Damage to fetus not classifiable
Naphthalene	Carcinogenicity: Limited evidence of carcinogenicity in animal studies
Diesel Reference Fuel U-30 Further information	: Solvents may degrease the skin.

SECTION 12: Ecological information**Ecotoxicity effects**

Toxicity to fish	: Very toxic to fish. Estimated based on individual component values.
Toxicity to daphnia and other aquatic invertebrates	: LC50: < 1 mg/l Exposure time: 48 h Method: Estimated based on individual component values.

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Toxicity to algae : EC50: < 1 mg/l
Exposure time: 96 h
Method: Estimated based on individual component values.

Distillates (petroleum), light catalytic cracked : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

Distillates (petroleum), Hydrotreated light : NOEC: 0.48 mg/l
Exposure time: 21 Days
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Ethylbenzene : NOEC: 1 mg/l
Exposure time: 7 d
Species: Daphnia pulex (Water flea)
semi-static test
Analytical monitoring: yes

Elimination information (persistence and degradability)

Bioaccumulation

Aromatic hydrocarbons, C9-11 : Does not significantly accumulate in organisms.
Solvent Naphtha (Petroleum), Heavy Aromatic Benzene, dimethyl- : Does not significantly accumulate in organisms.
: This material is not expected to bioaccumulate.

Biodegradability : No data available

Ecotoxicology Assessment

Acute aquatic toxicity
Distillates (petroleum), Hydrotreated light : Toxic to aquatic life.
Light Aromatic Solvent Naphtha : Toxic to aquatic life.
Solvent Naphtha (Petroleum), Heavy Aromatic 1,2,4-Trimethylbenzene : Toxic to aquatic life.
Ethylbenzene : Toxic to aquatic life.
Light Cycle Oil : Very toxic to aquatic life.
Benzene, dimethyl- : Toxic to aquatic life.
1,3,5-Trimethylbenzene : Toxic to aquatic life.
1,2,3-trimethylbenzene : Toxic to aquatic life.
Cumene : Toxic to aquatic life.
Naphthalene : Very toxic to aquatic life.

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Chronic aquatic toxicity Distillates (petroleum), Hydrotreated light Light Aromatic Solvent Naphtha	: Toxic to aquatic life with long lasting effects.
Solvent Naphtha (Petroleum), Heavy Aromatic 1,2,4-Trimethylbenzene	: Toxic to aquatic life with long lasting effects.
Ethylbenzene	: Harmful to aquatic life with long lasting effects.
Light Cycle Oil	: Very toxic to aquatic life with long lasting effects.
1,3,5-Trimethylbenzene	: Toxic to aquatic life with long lasting effects.
1,2,3-trimethylbenzene	: Toxic to aquatic life with long lasting effects.
Naphthalene	: Very toxic to aquatic life with long lasting effects.
Toxicity Data on Soil	: No data available
Other organisms relevant to the environment	: No data available
Impact on Sewage Treatment	: No data available
Results of PBT assessment Ethylbenzene	: Non-classified vPvB substance, Non-classified PBT substance
Light Cycle Oil	: Non-classified PBT substance, Non-classified vPvB substance
Additional ecological information	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

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

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

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

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SECTION 14: Transport information

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

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

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

UN1202, DIESEL FUEL, 3, III

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN1202, DIESEL FUEL, 3, III, (44.9 °C), MARINE POLLUTANT, (DISTILLATES (PETROLEUM) HYDROTREATED LIGHT)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN1202, DIESEL FUEL, 3, III

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

UN1202, DIESEL FUEL, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS, (DISTILLATES (PETROLEUM) HYDROTREATED LIGHT)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

UN1202, DIESEL FUEL, 3, III, ENVIRONMENTALLY HAZARDOUS, (DISTILLATES (PETROLEUM) HYDROTREATED LIGHT)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

UN1202, DIESEL FUEL, 3, III, ENVIRONMENTALLY HAZARDOUS, (DISTILLATES (PETROLEUM) HYDROTREATED LIGHT)

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

SECTION 15: Regulatory information**National legislation**

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

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- CERCLA Reportable Quantity : 2000 lbs
Benzene, dimethyl-
- SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.
- SARA 302 Threshold Planning Quantity : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.
- SARA 313 Ingredients : The following components are subject to reporting levels established by SARA Title III, Section 313:
- : 1,2,4-Trimethylbenzene - 95-63-6
 - : Ethylbenzene - 100-41-4
 - : Benzene, dimethyl- - 1330-20-7
 - : Naphthalene - 91-20-3
 - : Cumene - 98-82-8

Clean Air Act

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

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

- : Ethylbenzene - 100-41-4
- : Benzene, dimethyl- - 1330-20-7
- : Cumene - 98-82-8

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

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

- : Ethylbenzene - 100-41-4
- : Benzene, dimethyl- - 1330-20-7
- : Cumene - 98-82-8

US State Regulations

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Pennsylvania Right To Know

: 1,2,4-Trimethylbenzene - 95-63-6
 Ethylbenzene - 100-41-4
 Benzene, dimethyl- - 1330-20-7
 Naphthalene - 91-20-3
 Cumene - 98-82-8

**California Prop. 65
Ingredients**

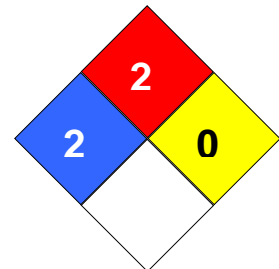
: **WARNING!** This product contains a chemical known in the State of California to cause cancer.

Notification status

Europe REACH : On the inventory, or in compliance with the inventory
 Switzerland CH INV : On the inventory, or in compliance with the inventory
 United States of America (USA) TSCA : On TSCA Inventory
 Canada DSL : All components of this product are on the Canadian DSL
 Australia AICS : On the inventory, or in compliance with the inventory
 New Zealand NZIoC : Not in compliance with the inventory
 Japan ENCS : On the inventory, or in compliance with the inventory
 Korea KECI : On the inventory, or in compliance with the inventory
 Philippines PICCS : On the inventory, or in compliance with the inventory
 China IECSC : On the inventory, or in compliance with the inventory

SECTION 16: Other information**NFPA Classification**

: Health Hazard: 2
 Fire Hazard: 2
 Reactivity Hazard: 0

**Further information**

Legacy SDS Number : 664950

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

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

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

Key or legend to abbreviations and acronyms used in the safety data sheet

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