TrusTec™ Diesel Reference Fuel U-36

Version 2.9 Revision Date 2025-10-03

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

Product information

Product Name	:	TrusTec™ Diesel Reference Fuel U-36
Material	:	1108915, 1024281, 1024280, 1032195, 1024277, 1024279, 1024278
Use	:	Reference Fuel
Uses advised against	:	This material should not be used for purposes other than the identified uses in section 1 without expert advice.
Company	:	Chevron Phillips Chemical Company LP Specialty Chemicals 9500 Lakeside Blvd. The Woodlands, TX 77381
Local	:	See Company Address

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) China: 0532 8388 9090
Mexico CHEMTREC 01-800-681-9531 (24 hours)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
Argentina: +(54)-1159839431
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week)
Belgium: 070 245 245 (24 hours/day, 7 days/week)
Bulgaria: +359 2 9154 233
Croatia: +3851 2348 342 (24 hours/day, 7 days/week)
Cyprus: 1401
Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402
Denmark: Danish Poison Center (Giftlinjen): +45 8212 1212
Estonia: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Finland: 0800 147 111 09 471 977 (24 hours/day)
France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week)
Germany: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Greece: (0030) 2107793777 (24 hours/day, 7 days/week)
Hungary: +36-80-201-199 (24 hours/day, 7 days/week)

Iceland: 543 2222 (24 hours/day, 7 days/week)
Ireland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Italy: POISON CENTER MILAN – Azienda Ospedaliera Niguarda Ca` Grande Tel. +39 02 66101029; POISON CENTER ROME – Policlinico “Agostino Gemelli”, Servizio di tossicologia clinica Tel. +39 06 3054343; POISON CENTER ROME – Ospedale Pediatrico Bambino Gesù Tel. +39 06 68593726;POISON CENTER ROME – Policlinico “Umberto I” Tel. +39 06 4997 8000; POISON CENTER FOGGIA – Azienda Ospedaliera Universitaria Riuniti Tel. +39 0881 732326; POISON CENTER NAPLES – Azienda Ospedaliera “Antonio Cardarelli” Tel. +39 081 7472870; POISON CENTER FLORENCE – Azienda Ospedaliera universitaria Careggi Tel. +39 055 7947819; POISON CENTER PAVIA – IRCCS Fondazione Salvatore Maugeri Tel. +39 0382 24444; POISON CENTER BERGAMO – Azienda Ospedaliera “Papa Giovanni XXIII” Tel. 800 883 300; POISON CENTER VERONA – Azienda Ospedaliera Universitaria integrata Tel. 800 011 858;
Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371 67042473. (24 hours.)
Liechtenstein: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Lithuania: +370 (85) 2362052
Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week)
Malta: +356 2395 2000
The Netherlands: NVIC: +31 (0)88 755 8000
Norway: 22 59 13 00 (24 hours/day, 7 days/week)
Poland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Portugal: CIAV phone number: +351 800 250 250
Romania: +40213183606
Slovakia: +421 2 5477 4166
Slovenia: Phone number: 112
Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24 hours/day, 7 days/week)
Sweden: 112 – ask for Poisons Information

Organization that prepared the SDS	:	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
GHS Classification and labelling according to JIS Z 7252-2019 and JIS Z 7253-2019 (GHS 2015)

Classification

: Flammable liquids, Category 3
Skin corrosion/irritation, Category 2
Carcinogenicity, Category 1B
Specific target organ toxicity - repeated exposure, Category 2, Blood, Liver, thymus gland
Aspiration hazard, Category 1
Short-term (acute) aquatic hazard, Category 1
Long-term (chronic) aquatic 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.
H350: May cause cancer.
H373: May cause damage to organs (Blood, Liver, thymus gland) through prolonged or repeated exposure.
H410: Very toxic to aquatic life with long lasting effects.

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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242: Use non-sparking tools.
P243: Take action to prevent static discharges.
P260: Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264: Wash skin thoroughly after handling.
P273: Avoid release to the environment.
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.
P308 + P313: IF exposed or concerned: Get medical advice/ attention.
P331: Do NOT induce vomiting.
P332 + P313: If skin irritation occurs: Get medical advice/ attention.
P362 + P364: Take off contaminated clothing and wash it before reuse.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391: Collect spillage.
Storage:
P403 + P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
Disposal:
P501: Dispose of contents/ container to an approved waste disposal plant.

SECTION 3: Composition/information on ingredients

Synonyms : Diesel Reference Fuel U

Molecular formula : Mixture

Chemical name	CAS-No.	Concentration	ENCS/ISHL number
Light Cycle Oil	64741-59-9	60 % - 70%	(9)-1700
C12-C14 Isoalkanes	68551-19-9	30 % - 40%	(2)-10 2-10

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

If swallowed : Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

Notes to physician

Symptoms : No information available.

Risks : No information available.

Treatment : No information available.

SECTION 5: Firefighting measures

Flash point : 40°C (104°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 : Do not allow run-off from fire fighting to enter drains or water

fighting		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 a naked flame or any 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.

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 a naked flame or any 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.

Uses advised against : This material should not be used for purposes other than the identified uses in section 1 without expert advice.

Use : Reference Fuel

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

Chevron Phillips Chemical Company LP

Components	Basis	Value	Control parameters	Note
C12-C14 Isoalkanes	Manufacturer	TWA	1,200 mg/m3	RCP,

RCP Reciprocal Calculation Procedure

JP

Components	Basis	Value	Control parameters	Note
Naphthalene	JP OEL ISHL	ACL	10 ppm,	
Xylenes	JP OEL JSOH	OEL-M	50 ppm, 217 mg/m3	
	JP OEL ISHL	ACL	50 ppm,	
	JP OEL JSOH	OEL-M	50 ppm, 217 mg/m3	2,
p-xylene	JP OEL JSOH	OEL-M	50 ppm, 217 mg/m3	3,
	JP OEL ISHL	ACL	50 ppm,	
m-xylene	JP OEL JSOH	OEL-M	50 ppm, 217 mg/m3	3,
	JP OEL ISHL	ACL	50 ppm,	
Toluene	JP OEL ISHL	ACL	20 ppm,	
	JP OEL JSOH	OEL-M	50 ppm, 188 mg/m3	1, S,
o-xylene	JP OEL JSOH	OEL-M	50 ppm, 217 mg/m3	3,
	JP OEL ISHL	ACL	50 ppm,	
Ethylbenzene	JP OEL JSOH	OEL-M	20 ppm, 87 mg/m3	2, S, 2B,
	JP OEL ISHL	ACL	20 ppm,	
Benzene	JP OEL ISHL	ACL	1 ppm,	
	JP OEL JSOH	REF-Carc	1 ppm,	S, 1,
	JP OEL JSOH	REF-Carc	0.1 ppm,	S, 1,

1 Group 1: carcinogenic to humans
2 Group 2: Substances presumed to cause reproductive toxicity in humans
2B Group 2B: possibly carcinogenic to humans
3 Group 3: Substances suspected to cause reproductive toxicity in humans
S Skin absorption

Biological exposure indices

JP

Substance name	CAS-No.	Control parameters	Sampling time	Update
Xylenes	1330-20-7	total (o-, m-, p-)methylhippuric acid: 800 mg/l In setting OEL-B, consideration is given to the relationship between biological monitoring values and OEL-Ms. (Urine)	End of shift at end of workweek	2023-09-25
p-xylene	106-42-3	total (o-, m-, p-)methylhippuric acid: 800 mg/l In setting OEL-B, consideration is given to the relationship between biological monitoring values and OEL-Ms. (Urine)	End of shift at end of workweek	2023-09-25

m-xylene	108-38-3	total (o-, m-, p-)methylhippuric acid: 800 mg/l In setting OEL-B, consideration is given to the relationship between biological monitoring values and OEL-Ms. (Urine)	End of shift at end of workweek	2023-09-25
Toluene	108-88-3	Toluene: 0.6 mg/l In setting OEL-B, consideration is given to the relationship between biological monitoring values and OEL-Ms. (Blood)	Within 2 h prior to end of shift at end of work week	2023-09-25
		Toluene: 0.06 mg/l In setting OEL-B, consideration is given to the relationship between biological monitoring values and OEL-Ms. (Urine)	Within 2 h prior to end of shift at end of work week	2023-09-25
o-xylene	95-47-6	total (o-, m-, p-)methylhippuric acid: 800 mg/l In setting OEL-B, consideration is given to the relationship between biological monitoring values and OEL-Ms. (Urine)	End of shift at end of workweek	2023-09-25
Ethylbenzene	100-41-4	Mandelic acid + Phenylglyoxylic acid: 200 mg/g creatinine In setting OEL-B, consideration is given to the relationship between biological monitoring values and OEL-Ms. (Urine)	End of shift at end of workweek	2023-09-25
		Mandelic acid: 150 mg/g creatinine In setting OEL-B, consideration is given to the relationship between biological monitoring values and OEL-Ms. (Urine)	End of shift	2023-09-25
		Ethylbenzene: 15 µg/l In setting OEL-B, consideration is given to the relationship between biological monitoring values and OEL-Ms. (Urine)	End of shift	2023-09-25

Engineering measures

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

Personal protective equipment

Respiratory protection : If ventilation or other engineering controls are not adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate. If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that provides protection may be appropriate, such as:. Air-Purifying Respirator for Organic Vapors. Full-Face Air-Purifying Respirator for Organic Vapors, Dusts and Mists. A positive pressure, air-supplying respirator may be appropriate if there is potential for uncontrolled release, aerosolization, 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.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state	:	liquid
Color	:	Yellow
Odor	:	Mild

Safety data

Flash point	:	40°C (104°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	:	164-314°C (327-597°F)
Vapor pressure	:	No data available
Relative density	:	0.8613 at 15.6 °C (60.1 °F)

Density	:	0.8613 g/cm3
Bulk density	:	7.19 L/G
Water solubility	:	negligible
Partition coefficient: n-octanol/water	:	No data available
Viscosity, kinematic	:	1.775 cSt at 40°C (104°F)
Relative vapor density	:	3 (Air = 1.0)
Evaporation rate	:	< 1
Percent volatile	:	> 99 %
Conductivity	:	No data available

SECTION 10: Stability and reactivity

Reactivity : Stable under recommended storage conditions.

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

Possibility of hazardous reactions

Hazardous reactions : Hazardous reactions: Hazardous polymerization does not occur.

Hazardous reactions: Vapors may form explosive mixture with air.

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

TrusTec™ Diesel Reference Fuel U-36

Acute oral toxicity : Acute toxicity estimate: 3,572 mg/kg
Method: Calculation method

TrusTec™ Diesel Reference Fuel U-36
Acute inhalation toxicity : Acute toxicity estimate: 6.64 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

TrusTec™ Diesel Reference Fuel U-36
Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

TrusTec™ Diesel Reference Fuel U-36
Skin irritation : Skin irritation
largely based on animal evidence.

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Eye irritation : Vapors may cause irritation to the eyes, respiratory system and the skin.

TrusTec™ Diesel Reference Fuel U-36
Sensitization : Does not cause skin sensitization.
Estimated based on individual component values.

Repeated dose toxicity

Light Cycle Oil : Species: Rat, males
Sex: males
Application Route: Dermal
Dose: 0, 8, 25, 125, 500, 1250 mg/kg
Exposure time: 90 day
Number of exposures: 5 days/wk
NOEL: 25 mg/kg
Target Organs: Blood, Liver, Thymus

Species: Rat, females
Sex: females
Application Route: Dermal
Dose: 0, 8, 25, 125, 500, 1250 mg/kg
Exposure time: 90 day
Number of exposures: 5 days/wk
NOEL: 125 mg/kg
Target Organs: Blood, Liver, Thymus

C12-C14 Isoalkanes Species: Rat, male and female
Sex: male and female
Application Route: oral gavage
Dose: 100, 500, 1000 mg/kg/d
Exposure time: 13 wk
Number of exposures: daily
NOEL: > 1000 mg/kg/d
Method: OECD Test Guideline 408
No adverse effects expected
Information given is based on data obtained from similar substances.

Species: Rat, male and female
Sex: male and female
Application Route: Inhalation
Dose: 2600, 5200, 10400 mg/m3
Exposure time: 90 d
Number of exposures: 6 h/d; 5d/wk
NOEL: > 10400 mg/m3
Method: OECD Test Guideline 413
No adverse effects expected
Information given is based on data obtained from similar substances.

Genotoxicity in vitro

Light Cycle Oil	:	Test Type: Modified Ames test Result: positive Test Type: Mouse lymphoma assay Result: positive Test Type: Sister Chromatid Exchange Assay Result: negative
C12-C14 Isoalkanes		Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Mouse lymphoma assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Sister Chromatid Exchange Assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: negative

Genotoxicity in vivo

Light Cycle Oil	:	Test Type: Cytogenetic assay Result: negative
C12-C14 Isoalkanes		Test Type: dominant lethal test Species: Rat Route of Application: Intraperitoneal injection Dose: 300, 900 ppm Method: OECD Test Guideline 478 Remarks: Information given is based on data obtained from similar substances.

TrusTec™ Diesel Reference Fuel U-36
Carcinogenicity : Remarks: May cause cancer.

Developmental Toxicity

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
C12-C14 Isoalkanes	Species: Rat Application Route: Inhalation Dose: 0, 400, 1200 ppm Exposure time: 6h Test period: GD 6-15 NOAEL Teratogenicity: 1200 ppm NOAEL Maternal: 1200 ppm Information given is based on data obtained from similar substances.
	Species: Rat Application Route: Inhalation Dose: 300, 900 ppm Exposure time: 6h Test period: GD 6-15 NOAEL Teratogenicity: >= 900 ppm NOAEL Maternal: >= 900 ppm Information given is based on data obtained from similar substances.

TrusTec™ Diesel Reference Fuel U-36
Aspiration toxicity : May be fatal if swallowed and enters airways.

CMR effects

Light Cycle Oil	: Carcinogenicity: Possible human carcinogen
C12-C14 Isoalkanes	Carcinogenicity: Not available Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects., In vivo tests did not show mutagenic effects Teratogenicity: Animal testing did not show any effects on fetal development. Reproductive toxicity: Animal testing did not show any effects on fertility.

TrusTec™ Diesel Reference Fuel U-36
Further information : Solvents may degrease the skin.

SECTION 12: Ecological information

Toxicity to fish

Light Cycle Oil	: LL50: > 0.3 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) semi-static test Method: OECD Test Guideline 203

C12-C14 Isoalkanes	LL50: > 1,000 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) semi-static test Method: OECD Test Guideline 203 Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates

Light Cycle Oil	:	EL50: 0.32 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Immobilization Method: OECD Test Guideline 202
C12-C14 Isoalkanes		EL50: > 1,000 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) static test Method: OECD Test Guideline 202 Information given is based on data obtained from similar substances.

Toxicity to algae

Light Cycle Oil	:	EL50: 0.51 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) Growth inhibition Method: OECD Test Guideline 201
C12-C14 Isoalkanes		EL50: > 1,000 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) Growth inhibition Method: OECD Test Guideline 201 Information given is based on data obtained from similar substances.

M-Factor

Distillates (petroleum), light catalytic cracked	:	M-Factor (Acute Aquat. Tox.)	1
		M-Factor (Chron. Aquat. Tox.)	1

Toxicity to fish (Chronic toxicity)

C12-C14 Isoalkanes	:	No data available:

Biodegradability

Light Cycle Oil	:	aerobic 56.32 % Testing period: 28 d Method: OECD Test Guideline 301F Expected to be inherently biodegradable.
C12-C14 Isoalkanes	:	aerobic Result: Readily biodegradable.

89.8 %
Testing period: 28 d
Method: OECD Test Guideline 301F
Information given is based on data obtained from similar substances.

Bioaccumulation

Light Cycle Oil	:	The product may be accumulated in organisms.
C12-C14 Isoalkanes	:	The product may be accumulated in organisms.

Mobility

Light Cycle Oil	:	No data available
C12-C14 Isoalkanes	:	immobile

Results of PBT assessment

Light Cycle Oil	:	Non-classified PBT substance, Non-classified vPvB substance
C12-C14 Isoalkanes	:	Non-classified PBT substance, Non-classified vPvB substance
Additional ecological information	:	Very toxic to aquatic life with long lasting effects.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

Light Cycle Oil	:	Very toxic to aquatic life.
C12-C14 Isoalkanes	:	This material is not expected to be harmful to aquatic organisms.

Long-term (chronic) aquatic hazard

Light Cycle Oil	:	Very toxic to aquatic life with long lasting effects.
C12-C14 Isoalkanes	:	This material is not expected to be harmful to aquatic organisms.

SECTION 13: Disposal considerations

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

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

Product	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

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

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

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)
UN1202, DIESEL FUEL, 3, III

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
UN1202, DIESEL FUEL, 3, III, (40 °C c.c.), MARINE POLLUTANT, (LIGHT CYCLE OIL)

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, (LIGHT CYCLE OIL)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
30,UN1202,DIESEL FUEL, 3, III, ENVIRONMENTALLY HAZARDOUS, (LIGHT CYCLE OIL)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
UN1202, DIESEL FUEL, 3, III, ENVIRONMENTALLY HAZARDOUS, (LIGHT CYCLE OIL)

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

National legislation

Poisonous and Deleterious Substances Control Law

: Not applicable

Industrial Safety and Health Law

Substances Subject to be Notified Names Law Article 57-2 (Ministerial Order Article 34-2 Appended Table 2)	:	naphthalene(408) xylenes(136)
Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)	:	Inflammable Substance
Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)	:	Inflammable Substance
Harmful Substances Required Permission for Manufacture	:	Not applicable
Hazardous Substances Subject to Labeling Requirements Law Article 57 (Ministerial Order Article 30 Appended Table 2)	:	naphthalene (408)
Ordinance on Prevention of Organic Solvent Poisoning	:	Not applicable
Ordinance on Prevention of Lead Poisoning	:	Not applicable
Harmful Substances Prohibited from Manufacture	:	Not applicable
Ordinance on Prevention of Hazards Due to Specified Chemical Substances Group 2 Substance	:	naphthalene(23.2)
Ordinance on Prevention of Tetraalkyl Lead Poisoning	:	Not applicable
Mutagens, Existing Chemicals	:	naphthalene, naphthalene (Molten), naphthalene (Refined or crude), naphthalene (Refined), naphthalene (Crude)
	:	Not applicable
Substances Prevented From Impairment of Health	:	Not applicable Listed

Chemical Substance Control Law

Priority Assessment Chemical Substance	:	naphthalene(76) toluene(46) ethylbenzene(50) Benzene(45) xylenes(125)

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Class I Designated Chemical Substances	:	naphthalene(302) (302)

Other regulations

Fire Service Law	:	Flammable liquids Type 2 petroleums Hazardous rank III
High Pressure Gas Safety Act	:	Not applicable
Explosive Control Law	:	Not applicable
Vessel Safety Law	:	Flammable liquids (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)
Aviation Law	:	Flammable liquid (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)

Notification status

Europe REACH	:	This product is in full compliance according to REACH regulation 1907/2006/EC.
United States of America (USA) TSCA	:	On or in compliance with the active portion of the TSCA inventory
Switzerland CH INV	:	On the inventory, or in compliance with the inventory
Canada DSL	:	All components of this product are on the Canadian DSL
Australia AIIC	:	Not 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	:	A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations.
Philippines PICCS	:	Not in compliance with the inventory
Taiwan TCSI	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

SECTION 16: Other information

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%
AIIC	Australian Inventory of Industrial Chemicals	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%	ATE	Acute toxicity estimate