65 Percentile Fuel

Version 5.0 Revision Date 2016-06-16

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

Product information

Product Name : 65 Percentile Fuel
Material : 1020475, 1020478, 1020477, 1020476, 1033666, 1020479

Use : Fuel

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

Emergency telephone:

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

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

SECTION 2: Hazards identification

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

Emergency Overview

Danger

Physical state: Liquid **Color**: Amber **Odor**: strong

OSHA Hazards : Flammable Liquid, Moderate skin irritant, Moderate eye irritant, Carcinogen, Mutagen, Reproductive hazard, Specific target organ systemic toxicity - repeated exposure, Specific target organ systemic toxicity - single exposure, Aspiration hazard

Classification

: Flammable liquids, Category 2
Skin irritation, Category 2
Eye irritation, Category 2A
Germ cell mutagenicity, Category 1B
Carcinogenicity, Category 1A
Reproductive toxicity, Category 2
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system, Central nervous system
Specific target organ systemic toxicity - repeated exposure, Category 1, Eyes, Blood
Specific target organ systemic toxicity - repeated exposure, Category 2, Auditory organs, Nervous system
Specific target organ systemic toxicity - repeated exposure, Category 2, Inhalation, Auditory organs
Aspiration hazard, Category 1

Labeling

Symbol(s) :

Signal Word : Danger

Hazard Statements : H225: Highly 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.
H336: May cause drowsiness or dizziness.
H340: May cause genetic defects.
H350: May cause cancer.
H361: Suspected of damaging fertility or the unborn child.
H372: Causes damage to organs (Eyes, Blood) through prolonged or repeated exposure.
H373: May cause damage to organs (Auditory organs, Nervous system) 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.
P270 Do not eat, drink or smoke when using this product.
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/ 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:

SECTION 3: Composition/information on ingredients

Synonyms : 65% IVD Test Fuel
Intake Valve Deposits (IVD) Certification Test
IVD Test Fuel
65th Percentile Test Fuel
65 Percentile Fuel

Molecular formula : Mixture

Component	CAS-No.	Weight %
Naphtha, Petroleum, Heavy Catalytic Cracked	64741-54-4	60 - 100
Isopentane	78-78-4	0 - 20
Toluene	108-88-3	10 - 20
n-Butane	106-97-8	0 - 20
Naphthalene	91-20-3	10 - 20
2-Methylpentane	107-83-5	10 - 20
3,3-Dimethylpentane	562-49-2	1 - 15
Naphtha (petroleum), light alkylate	64741-66-8	0 - 15

m-xylene	108-38-3	1 - 10
2-Methylhexane	591-76-4	1 - 10
3-Methylhexane	589-34-4	1 - 5
3-Methylpentane	96-14-0	1 - 5
p-xylene	106-42-3	1 - 5
Benzene	71-43-2	1 - 5
2-methyl-2-butene	513-35-9	1 - 5
o-xylene	95-47-6	1 - 5
Ethylbenzene	100-41-4	1 - 5
n-hexane	110-54-3	1 - 5
n-Heptane	142-82-5	1 - 5
n-Pentane	109-66-0	1 - 5
2,2,4-Trimethylpentane (Isooctane)	540-84-1	1 - 5
1,2,4-Trimethylbenzene	95-63-6	1 - 5
2,3-Dimethylbutane	79-29-8	1 - 5
Methylcyclohexane	108-87-2	1 - 5
n-Octane	111-65-9	1 - 5
Methylcyclopentane	96-37-7	1 - 5
Distillates (petroleum), Hydrotreated light	64742-47-8	0 - 5
Commercial n-Heptane	426260-76-6	0 - 5
2-Methylheptane	592-27-8	0 - 3
4-Methylheptane	589-53-7	0 - 3
Hydrogen Sulfide	7783-06-4	0.1 - 1
Dimethyl Disulfide	624-92-0	0 - 0.5

SECTION 4: First aid measures

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

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

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

In case of eye contact : 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. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point : 0 °C (32 °F)

Autoignition temperature : No data available

Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.

Unsuitable extinguishing media	:	High volume water jet.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Fire and explosion protection	:	Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

SECTION 6: Accidental release measures

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

SECTION 7: Handling and storage

Handling

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

only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Storage

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

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

US

Ingredients	Basis	Value	Control parameters	Note
Naphtha, Petroleum, Heavy Catalytic Cracked	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	(b),
Isopentane	ACGIH	TWA	1,000 ppm,	
Toluene	ACGIH	TWA	20 ppm,	visual impair, female repro, pregnancy loss, BEI, A4,
	OSHA Z-2	TWA	200 ppm,	
	OSHA Z-2	CEIL	300 ppm,	
	OSHA Z-2	Peak	500 ppm,	
	OSHA Z-1-A	TWA	100 ppm, 375 mg/m3	
	OSHA Z-1-A	STEL	150 ppm, 560 mg/m3	
n-Butane	OSHA Z-1-A	TWA	800 ppm, 1,900 mg/m3	
	ACGIH	STEL	1,000 ppm,	CNS impair,
Naphtha (petroleum), light alkylate	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	(b),
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	
2-Methylpentane	ACGIH	TWA	500 ppm,	CNS impair, URT irr, eye irr,
	ACGIH	STEL	1,000 ppm,	CNS impair, URT irr, eye irr,
	OSHA Z-1-A	TWA	500 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	1,000 ppm, 3,600 mg/m3	
3,3-Dimethylpentane	ACGIH	TWA	400 ppm,	CNS impair, URT irr,
	ACGIH	STEL	500 ppm,	CNS impair, URT irr,
m-xylene	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	
	ACGIH	TWA	100 ppm,	CNS impair, URT irr, eye irr, BEI, A4,
	ACGIH	STEL	150 ppm,	CNS impair, URT irr, eye irr, BEI, A4,
2-Methylhexane	ACGIH	TWA	400 ppm,	CNS impair, URT irr,
	ACGIH	STEL	500 ppm,	CNS impair, URT irr,
Distillates (petroleum), Hydrotreated light	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,
	OSHA Z-1	TWA	5 mg/m3	Mist
	OSHA Z-1-A	TWA	5 mg/m3	Mist
Commercial n-Heptane	ACGIH	TWA	400 ppm,	CNS impair, URT irr,
	ACGIH	STEL	500 ppm,	CNS impair, URT irr,
3-Methylhexane	ACGIH	TWA	400 ppm,	CNS impair, URT irr,
	ACGIH	STEL	500 ppm,	CNS impair, URT irr,
3-Methylpentane	ACGIH	TWA	500 ppm,	CNS impair, URT irr, eye irr,
	ACGIH	STEL	1,000 ppm,	CNS impair, URT irr,

				eye irr,
	OSHA Z-1-A	TWA	500 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	1,000 ppm, 3,600 mg/m3	
p-xylene	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	
	ACGIH	TWA	100 ppm,	CNS impair, URT irr, eye irr, BEI, A4,
	ACGIH	STEL	150 ppm,	CNS impair, URT irr, eye irr, BEI, A4,
Benzene	ACGIH	TWA	0.5 ppm,	leukemia, BEI, A1, Skin,
	ACGIH	STEL	2.5 ppm,	leukemia, BEI, A1, Skin,
	OSHA Z-1-A	TWA	1 ppm,	
	OSHA Z-1-A	CEIL	5 ppm,	
	OSHA Z-2	Peak	50 ppm,	(a),
	OSHA 29 CFR 1910.1028(c)	TWA	1 ppm,	
	OSHA 29 CFR 1910.1028(c)	STEL	5 ppm,	
	OSHA CARC	PEL	1 ppm,	
	OSHA CARC	STEL	5 ppm,	
Methylcyclopentane	ACGIH	TWA	500 ppm,	CNS impair, URT irr, eye irr,
	ACGIH	STEL	1,000 ppm,	CNS impair, URT irr, eye irr,
	OSHA Z-1-A	TWA	500 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	1,000 ppm, 3,600 mg/m3	
o-xylene	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	
	ACGIH	TWA	100 ppm,	CNS impair, URT irr, eye irr, BEI, A4,
	ACGIH	STEL	150 ppm,	CNS impair, URT irr, eye irr, BEI, A4,
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,	
n-hexane	ACGIH	TWA	50 ppm,	CNS impair, eye irr, peripheral neuropathy, BEI, Skin,
	OSHA Z-1	TWA	500 ppm, 1,800 mg/m3	(b),
	OSHA Z-1-A	TWA	50 ppm, 180 mg/m3	
n-Heptane	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	(b),
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
	OSHA Z-1-A	STEL	500 ppm, 2,000 mg/m3	
	ACGIH	TWA	400 ppm,	CNS impair, URT irr,
	ACGIH	STEL	500 ppm,	CNS impair, URT irr,
n-Pentane	OSHA Z-1	TWA	1,000 ppm, 2,950 mg/m3	(b),
	OSHA Z-1-A	TWA	600 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	750 ppm, 2,250 mg/m3	
	ACGIH	TWA	1,000 ppm,	
2,2,4-Trimethylpentane (Isooctane)	ACGIH	TWA	300 ppm,	URT irr,
	ACGIH	TWA	300 ppm,	URT irr,
1,2,4-Trimethylbenzene	ACGIH	TWA	25 ppm,	CNS impair, hematologic eff, asthma,
	ACGIH	TWA	25 ppm,	
1,2,4-Trimethylbenzene	OSHA Z-1-A	TWA	25 ppm, 125 mg/m3	
2,3-Dimethylbutane	ACGIH	TWA	500 ppm,	CNS impair, URT irr, eye irr,
	ACGIH	STEL	1,000 ppm,	CNS impair, URT irr, eye irr,
	OSHA Z-1-A	TWA	500 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	1,000 ppm, 3,600 mg/m3	
Methylcyclohexane	ACGIH	TWA	400 ppm,	CNS impair, URT irr, liver dam, kidney dam,
	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	(b),
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
2-Methylheptane	ACGIH	TWA	300 ppm,	URT irr,
n-Octane	OSHA Z-1	TWA	500 ppm, 2,350 mg/m3	(b),
	OSHA Z-1-A	TWA	300 ppm, 1,450 mg/m3	
	OSHA Z-1-A	STEL	375 ppm, 1,800 mg/m3	
	ACGIH	TWA	300 ppm,	URT irr,
4-Methylheptane	ACGIH	TWA	300 ppm,	URT irr,
Hydrogen Sulfide	ACGIH	TWA	1 ppm,	CNS impair, URT irr,
	ACGIH	STEL	5 ppm,	CNS impair, URT irr,
	OSHA Z-2	CEIL	20 ppm,	
	OSHA Z-2	Peak	50 ppm,	
	OSHA Z-1-A	TWA	10 ppm, 14 mg/m3	
	OSHA Z-1-A	STEL	15 ppm, 21 mg/m3	

Dimethyl Disulfide	ACGIH	TWA	0.5 ppm,	URT irr, CNS irr, Skin,

() Adopted values or notations enclosed are those for which changes are proposed in the NIC
(a) This standard applies to the industry segments exempt from the 1 ppm 8-hour TWA and 5 ppm STEL of the benzene standard at 1910.1028.
(b) The value in mg/m3 is approximate.
A1 Confirmed human carcinogen
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
CNS irr Central Nervous System irritation
eye dam Eye damage
eye irr Eye irritation
female repro Female reproductive
hematologic eff Hematologic effects
hemolytic anemia Hemolytic anemia
kidney dam Kidney damage
leukemia Leukemia
liver dam Liver damage
P Application restricted to conditions in which there are neglible aerosol exposures
peripheral neuropathy Peripheral neuropathy
pregnancy loss Pregnancy loss
Skin Danger of cutaneous absorption
skin irr Skin irritation
URT irr Upper Respiratory Tract irritation
varies varies
visual impair Visual impairment

Hazardous components without workplace control parameters

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
Toluene	108-88-3	Immediately Dangerous to Life or Health Concentration Value 500 ppm	1995-03-01
Naphthalene	91-20-3	Immediately Dangerous to Life or Health Concentration Value 250 ppm	1995-03-01
m-xylene	108-38-3	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/m³	1995-03-01
p-xylene	106-42-3	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
Benzene	71-43-2	Immediately Dangerous to Life or Health Concentration Value 500 ppm	1995-03-01
o-xylene	95-47-6	Immediately Dangerous to Life or Health Concentration Value 900 ppm	1995-03-01
Ethylbenzene	100-41-4	Immediately Dangerous to Life or Health Concentration Value 800 ppm	1995-03-01
n-hexane	110-54-3	Immediately Dangerous to Life or Health Concentration Value 1100 ppm	1995-03-01
n-Heptane	142-82-5	Immediately Dangerous to Life or Health Concentration Value 750 ppm	1995-03-01
n-Pentane	109-66-0	Immediately Dangerous to Life or Health Concentration Value 1500 ppm	1995-03-01
Methylcyclohexane	108-87-2	Immediately Dangerous to Life or Health Concentration Value 1200 ppm	1995-03-01

n-Octane	111-65-9	Immediately Dangerous to Life or Health Concentration Value 1000 ppm	1995-03-01
Hydrogen Sulfide	7783-06-4	Immediately Dangerous to Life or Health Concentration Value 100 ppm	1995-03-01

Biological exposure indices

US

Substance name	CAS-No.	Control parameters	Sampling time	Update
Toluene	108-88-3	Toluene: 0.02 mg/l (In blood)	Prior to last shift of workweek	2010-03-01
		Toluene: 0.03 mg/l (Urine)	End of shift (As soon as possible after exposure ceases)	2010-03-01
		o-Cresol: 0.3 mg/g Creatinine (Urine)	End of shift (As soon as possible after exposure ceases)	2010-03-01
m-xylene	108-38-3	Methylhippuric acids: 1.5 g/g creatinine (Urine)	End of shift (As soon as possible after exposure ceases)	2013-03-01
p-xylene	106-42-3	Methylhippuric acids: 1.5 g/g creatinine (Urine)	End of shift (As soon as possible after exposure ceases)	2013-03-01
Benzene	71-43-2	S-Phenylmercapturic acid: 25 µg/g creatinine (Urine)	End of shift (As soon as possible after exposure ceases)	2010-03-01
		t,t-Muconic acid: 500 µg/g creatinine (Urine)	End of shift (As soon as possible after exposure ceases)	2010-03-01
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
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
n-hexane	110-54-3	2,5-Hexanedione: 0.4 mg/l (Urine)	End of shift at end of workweek	2007-01-01

Engineering measures

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

Personal protective equipment

Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. If control is not feasible, then use only NIOSH approved respiratory protection with an assigned protection factor (APF) of 1000. 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. Wear a positive-pressure supplied-air respirator. 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. Dust safety masks are recommended when the dust concentration is excessive.

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. Wear face-shield and protective suit for abnormal processing problems.
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	:	Amber
Odor	:	strong

Safety data

Flash point	:	0 °C (32 °F)
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Oxidizing properties	:	no
Autoignition temperature	:	No data available
Molecular formula	:	Mixture
Molecular weight	:	Not applicable
pH	:	Not applicable
Freezing point	:	No data available

Pour point		No data available
Boiling point/boiling range	:	51.8 - 231.8 °C (125.2 - 449.2 °F)
Vapor pressure	:	10.57 PSI at 38 °C (100 °F)
Relative density	:	0.741
Density	:	748.9 g/l
Water solubility	:	Negligible
Partition coefficient: n-octanol/water	:	No data available
Viscosity, kinematic	:	No data available
Relative vapor density	:	3 (Air = 1.0)
Evaporation rate	:	> 1
Percent volatile	:	> 99 %

SECTION 10: Stability and reactivity

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

Possibility of hazardous reactions

Conditions to avoid	:	Heat, flames and sparks.
Materials to avoid	:	May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Other data	:	No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

65 Percentile Fuel
Acute oral toxicity : LD50: 4,820 mg/kg
Species: Rat
Method: Acute toxicity estimate

65 Percentile Fuel
Acute inhalation toxicity : LC50: > 5.04 mg/l
Exposure time: 4 h

Species: Rat
Test atmosphere: dust/mist
Method: Acute toxicity estimate

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

65 Percentile Fuel
Skin irritation : May cause skin irritation in susceptible persons.

65 Percentile Fuel
Eye irritation : Eye irritation.

65 Percentile Fuel
Sensitization : No adverse effects expected.

65 Percentile Fuel
Repeated dose toxicity : Method: Based on product or component testing, long term repeated exposure may cause damage to the following organs:
Target Organs: Eyes, Nervous system, Blood, Auditory organs
Estimated based on individual component values.

65 Percentile Fuel
Carcinogenicity : Method: Expected to be carcinogenic based on individual component data.

65 Percentile Fuel
Reproductive toxicity : Method: Estimated based on individual component values.
Suspected of damaging fertility or the unborn child.

65 Percentile Fuel
Developmental Toxicity : Method: Estimated based on individual component values.
Suspected of damaging fertility or the unborn child.

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

Toxicology Assessment

65 Percentile Fuel
CMR effects : Carcinogenicity:
May cause cancer.
Mutagenicity:
May cause genetic defects.
Teratogenicity:
Suspected of damaging the unborn child.
Reproductive toxicity:

Not available

65 Percentile Fuel
Further information : Solvents may degrease the skin.

SECTION 12: Ecological information

Ecotoxicity effects

Toxicity to fish : Method: Estimated based on individual component values.
Very toxic to fish.

Toxicity to daphnia and other aquatic invertebrates : Method: Estimated based on individual component values.
Toxic to aquatic organisms.

Toxicity to algae : Method: Estimated based on individual component values.
The product is toxic to algae.

Toxicity to bacteria

Methylcyclohexane : IC50: 29 mg/l
Exposure time: 15 h
Growth inhibition

Toxicity to fish (Chronic toxicity) : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Elimination information (persistence and degradability)

Bioaccumulation : No data available

Biodegradability : No data available

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Results of PBT assessment : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information : 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.

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)
UN1203, GASOLINE, 3, II, MARINE POLLUTANT, (NAPHTHALENE, 2,2,4-TRIMETHYLPENTANE (ISOOCTANE))

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
UN1203, GASOLINE, 3, II, (0 °C), MARINE POLLUTANT, (NAPHTHALENE, 2,2,4-TRIMETHYLPENTANE (ISOOCTANE))

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
UN1203, GASOLINE, 3, II

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
UN1203, MOTOR SPIRIT, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (NAPHTHALENE, 2,2,4-TRIMETHYLPENTANE (ISOOCTANE))

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
UN1203, GASOLINE, 3, II, ENVIRONMENTALLY HAZARDOUS, (NAPHTHALENE, 2,2,4-TRIMETHYLPENTANE (ISOOCTANE))

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
UN1203, GASOLINE, 3, II, ENVIRONMENTALLY HAZARDOUS, (NAPHTHALENE, 2,2,4-TRIMETHYLPENTANE (ISOOCTANE))

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

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO – KNOW

CERCLA Reportable Quantity : 256 lbs

Benzene

SARA 302 Reportable Quantity : Calculated RQ exceeds reasonably attainable upper limit.

Hydrogen Sulfide

SARA 302 Threshold Planning Quantity : The following components are subject to reporting levels established by SARA Title III, Section 302:

Hydrogen Sulfide 7783-06-4 500 lbs

SARA 304 Reportable Quantity : Calculated RQ exceeds reasonably attainable upper limit.

Hydrogen Sulfide 7783-06-4 100 lbs

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

: Toluene - 108-88-3
Naphthalene - 91-20-3
m-xylene - 108-38-3
p-xylene - 106-42-3
Benzene - 71-43-2
o-xylene - 95-47-6
Ethylbenzene - 100-41-4
n-hexane - 110-54-3
1,2,4-Trimethylbenzene - 95-63-6

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):

: Toluene - 108-88-3
Naphthalene - 91-20-3
m-xylene - 108-38-3
p-xylene - 106-42-3
Benzene - 71-43-2
o-xylene - 95-47-6
Ethylbenzene - 100-41-4
n-hexane - 110-54-3
2,2,4-Trimethylpentane (Isooctane) - 540-84-1

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

: Isopentane - 78-78-4
n-Butane - 106-97-8
n-Pentane - 109-66-0

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

: Isopentane - 78-78-4
Toluene - 108-88-3
p-xylene - 106-42-3
Benzene - 71-43-2
o-xylene - 95-47-6
Ethylbenzene - 100-41-4
n-Pentane - 109-66-0
Methylcyclohexane - 108-87-2

US State Regulations

Pennsylvania Right To Know

: Isopentane - 78-78-4
Toluene - 108-88-3
n-Butane - 106-97-8
Naphthalene - 91-20-3
2-Methylpentane - 107-83-5
3,3-Dimethylpentane - 562-49-2
m-xylene - 108-38-3
2-Methylhexane - 591-76-4
3-Methylhexane - 589-34-4
3-Methylpentane - 96-14-0
p-xylene - 106-42-3
Benzene - 71-43-2
Methylcyclopentane - 96-37-7
2-methyl-2-butene - 513-35-9
o-xylene - 95-47-6
Ethylbenzene - 100-41-4
n-hexane - 110-54-3
n-Heptane - 142-82-5
n-Pentane - 109-66-0
2,2,4-Trimethylpentane (Isooctane) - 540-84-1

2,3-Dimethylbutane - 79-29-8
Methylcyclohexane - 108-87-2
n-Octane - 111-65-9
Hydrogen Sulfide - 7783-06-4
Dimethyl Disulfide - 624-92-0

New Jersey Right To Know : Isopentane - 78-78-4
Toluene - 108-88-3
n-Butane - 106-97-8
Naphthalene - 91-20-3
2-Methylpentane - 107-83-5
m-xylene - 108-38-3
3-Methylhexane - 589-34-4
p-xylene - 106-42-3
Benzene - 71-43-2
Methylcyclopentane - 96-37-7
2-methyl-2-butene - 513-35-9
o-xylene - 95-47-6
Ethylbenzene - 100-41-4
n-hexane - 110-54-3
n-Heptane - 142-82-5
n-Pentane - 109-66-0
2,2,4-Trimethylpentane (Isooctane) - 540-84-1
1,2,4-Trimethylbenzene - 95-63-6
2,3-Dimethylbutane - 79-29-8
Methylcyclohexane - 108-87-2
n-Octane - 111-65-9

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

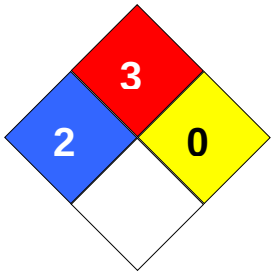
WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Notification status

Europe REACH	:	Not in compliance with the inventory
United States of America TSCA	:	On the inventory, or in compliance with the inventory
Canada DSL	:	This product contains one or several components that are not on the Canadian DSL nor NDSL.
Australia AICS	:	Not in compliance with the inventory
New Zealand NZIoC	:	Not in compliance with the inventory
Japan ENCS	:	Not in compliance with the inventory
Korea KECI	:	Not in compliance with the inventory
Philippines PICCS	:	Not in compliance with the inventory
China IECSC	:	Not in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 2
Fire Hazard: 3
Reactivity Hazard: 0



Further information

Legacy SDS Number : 645350

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

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

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

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

	Substances in China		
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%		