Oxygenated Test Fuel - Ethanol

Version 5.2 Revision Date 2025-11-26

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

Product information

Product Name	:	Oxygenated Test Fuel - Ethanol
Material	:	1032211, 1021645, 1021643, 1021646, 1021647, 1021644
Use	:	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 9500 Lakeside Blvd. The Woodlands, TX 77381

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
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 1
Skin irritation, Category 2
Eye irritation, Category 2A
Germ cell mutagenicity, Category 1B
Carcinogenicity, Category 1A
Reproductive toxicity, Category 2
Specific target organ toxicity - single exposure, Category 3, Central nervous system
Specific target organ toxicity - repeated exposure, Category 1, Blood
Specific target organ toxicity - repeated exposure, Category 2, Inhalation, Auditory organs, color vision
Aspiration hazard, Category 1

Labeling

Symbol(s) :

Signal Word : Danger

Hazard Statements : H224: Extremely flammable liquid and vapor.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H340: May cause genetic defects.
H350: May cause cancer.
H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.
H372: Causes damage to organs (Blood) through prolonged or repeated exposure.
H373: May cause damage to organs (Auditory organs, color vision) 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, 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 mist or vapors.
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/ hearing protection.
P280 Wear protective gloves, protective clothing, eye protection and 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 + 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.
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.

Potential Health Effects

Symptoms of Overexposure : No data available

Carcinogenicity:

IARC	Group 1: Carcinogenic to humans	
	Benzene	71-43-2
	Group 2B: Possibly carcinogenic to humans	
	Naphtha, Petroleum, Heavy Catalytic Cracked	64741-54-4
	Naphtha (petroleum), light catalytic reformed	64741-63-5
	Hydrocarbons, C3-11, catalytic cracker distillates	68476-46-0
	Naphtha (petroleum), light alkylate	64741-66-8
	Ethylbenzene	100-41-4
	Naphthalene	91-20-3
	Isoprene	78-79-5
	Cumene	98-82-8
NTP	Known to be human carcinogen	
	Benzene	71-43-2
	Reasonably anticipated to be a human carcinogen	
	Naphthalene	91-20-3
	Isoprene	78-79-5
	Cumene	98-82-8

SECTION 3: Composition/information on ingredients

Synonyms : Oxygenated Test Fuel - Ethanol
Oxygenated Test fuel - Ethanol (E25)
Gasolina 24

Molecular formula : Mixture

Component	CAS-No.	Weight %
Naphtha (petroleum), light alkylate	64741-66-8	0 - 90
Naphtha, Petroleum, Heavy Catalytic Cracked	64741-54-4	0 - 80
Toluene	108-88-3	0 - 70

Heptane, branched, cyclic and linear	426260-76-6	0 - 50
Naphtha (petroleum), hydrotreated heavy	64742-48-9	0 - 50
Isopentane	78-78-4	0 - 35
Cyclopentane	287-92-3	0 - 20
Ethanol	64-17-5	1 - 90
n-Heptane	142-82-5	0 - 30
1-Hexene	592-41-6	0 - 30
n-Butane	106-97-8	0 - 30
2-Methylpentane	107-83-5	0 - 30
Naphtha (petroleum), full-range reformed	68919-37-9	0 - 25
3,3-Dimethylpentane	562-49-2	0 - 70
Distillates (petroleum), Hydrotreated light	64742-47-8	0 - 15
Naphthalene	91-20-3	0 - 10
m-xylene	108-38-3	0 - 20
2,2,4-Trimethylpentane (Isooctane)	540-84-1	0 - 30
Benzene	71-43-2	0 - 5
2-Methylhexane	591-76-4	0 - 5
3-Methylhexane	589-34-4	0 - 5
n-Pentane	109-66-0	0 - 5
Ethylbenzene	100-41-4	0 - 5
3-Methylpentane	96-14-0	0 - 5
n-hexane	110-54-3	0 - 5
2,3-Dimethylpentane	565-59-3	0 - 5
2,4-Dimethylpentane	108-08-7	0 - 5
2-Methylheptane	592-27-8	0 - 5
1,2,4-Trimethylbenzene	95-63-6	0 - 5
2,3-Dimethylbutane	79-29-8	0 - 5
n-Octane	111-65-9	0 - 5
2-methyl-2-butene	513-35-9	0 - 5
Methylcyclohexane	108-87-2	0 - 5
2,3,4-Trimethylpentane	565-75-3	0 - 5
2,3,3-Trimethylpentane	560-21-4	0 - 5
p-xylene	106-42-3	0 - 20
o-xylene	95-47-6	0 - 20
Cyclohexane	110-82-7	0 - 5
Methylcyclopentane	96-37-7	0 - 5
4-Methylheptane	589-53-7	0 - 5
2-methyl-1-butene	563-46-2	0 - 5
Xylenes	1330-20-7	0 - 21
trans-2-Pentene	646-04-8	0 - 5
Hydrogen Sulfide	7783-06-4	0.1 - 1

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 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 data available.
Risks	:	No data available.
Treatment	:	Treat symptomatically.

SECTION 5: Firefighting measures

Flash point	:	-37°C (-35°F) estimated
Autoignition temperature	:	No data available
Suitable extinguishing media	:	Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.
Unsuitable extinguishing media	:	High volume water jet.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Fire and explosion protection	:	Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Hazardous decomposition products	:	Carbon oxides.

SECTION 6: Accidental release measures

Personal precautions	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low

areas.

Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7: Handling and storage

Handling

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

Advice on protection against fire and explosion : Do not spray on a naked flame or any 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.

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

Use : Fuel

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

US

Components	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	
Naphtha (petroleum), light catalytic reformed	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	
Hydrocarbons, C3-11, catalytic cracker distillates	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
2,2,4-Trimethylpentane (Isooctane)	ACGIH	TWA	300 ppm,	
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	
	OSHA Z-1	TWA	5 mg/m3	Mist
	OSHA Z-1-A	TWA	5 mg/m3	Mist
	NIOSH REL	TWA	5 mg/m3	Mist
	NIOSH REL	ST	10 mg/m3	Mist
	CAL PEL	PEL	5 mg/m3	particulate
Xylenes	OSHA Z-1	TWA	100 ppm, 435 mg/m3	
	OSHA Z-1-A	STEL	150 ppm, 655 mg/m3	
	OSHA Z-1-A	TWA	100 ppm, 435 mg/m3	
	ACGIH	TWA	20 ppm,	OTO, A4,
	ACGIH	STEL	150 ppm,	A4,
3,3-Dimethylpentane	ACGIH	TWA	400 ppm,	
	ACGIH	STEL	500 ppm,	
Toluene	ACGIH	TWA	20 ppm,	OTO, 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	
Ethanol	OSHA Z-1	TWA	1,000 ppm, 1,900 mg/m3	
	OSHA Z-1-A	TWA	1,000 ppm, 1,900 mg/m3	
	ACGIH	STEL	1,000 ppm,	A3,
Isopentane	ACGIH	TWA	1,000 ppm,	
Heptane, branched, cyclic and linear	ACGIH	TWA	400 ppm,	
	ACGIH	STEL	500 ppm,	
n-Heptane	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	
	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,	
	ACGIH	STEL	500 ppm,	
n-Butane	OSHA Z-1-A	TWA	800 ppm, 1,900 mg/m3	
	ACGIH	STEL	1,000 ppm,	
1-Hexene	ACGIH	TWA	50 ppm,	
Cyclopentane	ACGIH	TWA	1,000 ppm,	
	OSHA Z-1-A	TWA	600 ppm, 1,720 mg/m3	
Ethylbenzene	OSHA Z-1	TWA	100 ppm, 435 mg/m3	
	OSHA Z-1-A	TWA	100 ppm, 435 mg/m3	
	OSHA Z-1-A	STEL	125 ppm, 545 mg/m3	
	ACGIH	TWA	20 ppm,	OTO, A3,
n-hexane	ACGIH	TWA	50 ppm,	Skin,
	OSHA Z-1	TWA	500 ppm, 1,800 mg/m3	
	OSHA Z-1-A	TWA	50 ppm, 180 mg/m3	
2-Methylpentane	OSHA Z-1-A	TWA	500 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	1,000 ppm, 3,600 mg/m3	
	ACGIH	TWA	200 ppm,	A3,
Benzene	ACGIH	TWA	0.02 ppm,	A1, Skin,
	OSHA Z-1-A	TWA	1 ppm,	
	OSHA Z-1-A	CEIL	5 ppm,	
	OSHA Z-2	Peak	50 ppm,	
	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,	
Naphthalene	ACGIH	TWA	10 ppm,	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	
	OSHA Z-1-A	TWA	10 ppm, 50 mg/m3	
	OSHA Z-1-A	STEL	15 ppm, 75 mg/m3	
3-Methylpentane	OSHA Z-1-A	TWA	500 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	1,000 ppm, 3,600 mg/m3	
	ACGIH	TWA	200 ppm,	A3,
2-Methylhexane	ACGIH	TWA	400 ppm,	
	ACGIH	STEL	500 ppm,	
2,2-Dimethylbutane	OSHA Z-1-A	TWA	500 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	1,000 ppm, 3,600 mg/m3	
	ACGIH	TWA	200 ppm,	A3,
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	
3-Methylhexane	ACGIH	TWA	400 ppm,	
	ACGIH	STEL	500 ppm,	

1,2,4-Trimethylbenzene	ACGIH	TWA	25 ppm,	
	OSHA Z-1-A	TWA	25 ppm, 125 mg/m3	
	ACGIH	TWA	10 ppm,	A4,
2-methyl-2-butene	ACGIH	TWA	10 ppm,	
2,3-Dimethylbutane	OSHA Z-1-A	TWA	500 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	1,000 ppm, 3,600 mg/m3	
	ACGIH	TWA	200 ppm,	A3,
2,3-Dimethylpentane	ACGIH	TWA	400 ppm,	
	ACGIH	STEL	500 ppm,	
2,4-Dimethylpentane	ACGIH	TWA	400 ppm,	
	ACGIH	STEL	500 ppm,	
n-Pentane	OSHA Z-1	TWA	1,000 ppm, 2,950 mg/m3	
	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,	
Methylcyclohexane	ACGIH	TWA	100 ppm,	
	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
2,3,4-Trimethylpentane	ACGIH	TWA	300 ppm,	
Isoprene	US WEEL	TWA	2 ppm,	
Hydrogen Sulfide	ACGIH	TWA	1 ppm,	
	ACGIH	STEL	5 ppm,	
	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	
Cumene	ACGIH	TWA	5 ppm,	A3,
	OSHA Z-1	TWA	50 ppm, 245 mg/m3	X,
	OSHA Z-1-A	TWA	50 ppm, 245 mg/m3	X,

() Adopted values or notations enclosed are those for which changes are proposed in the NIC
A1 Confirmed human carcinogen
A3 Confirmed animal carcinogen with unknown relevance to humans
A4 Not classifiable as a human carcinogen
CNS impair Central Nervous System impairment
eye dam Eye damage
eye irr Eye irritation
hematologic eff Hematologic effects
OTO Ototoxicant
Skin Danger of cutaneous absorption
URT irr Upper Respiratory Tract irritation
X Skin notation

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
Naphtha (petroleum), light alkylate	64741-66-8	Immediately Dangerous to Life or Health Concentration Value 2500 mg/m³	2020-07-01
Xylenes	1330-20-7	Immediately Dangerous to Life or Health Concentration Value 900 parts per million	2017-09-01
Toluene	108-88-3	Immediately Dangerous to Life or Health Concentration Value 500 parts per million	1995-03-01
Ethanol	64-17-5	Immediately Dangerous to Life or Health Concentration Value 3300 parts per million	1995-03-01
n-Heptane	142-82-5	Immediately Dangerous to Life or Health Concentration Value 750 parts per million	1995-03-01
n-Butane	106-97-8	Immediately Dangerous to Life or Health Concentration Value 1600 parts per million	2017-02-03
Ethylbenzene	100-41-4	Immediately Dangerous to Life or Health Concentration Value 800 parts per million	1995-03-01
n-hexane	110-54-3	Immediately Dangerous to Life or Health Concentration Value 1100 parts per million	1995-03-01
Benzene	71-43-2	Immediately Dangerous to Life or Health Concentration Value 500 parts per million	1995-03-01

Naphthalene	91-20-3	Immediately Dangerous to Life or Health Concentration Value 250 parts per million	1995-03-01
n-Pentane	109-66-0	Immediately Dangerous to Life or Health Concentration Value 1500 parts per million	1995-03-01
Methylcyclohexane	108-87-2	Immediately Dangerous to Life or Health Concentration Value 1200 parts per million	1995-03-01
Hydrogen Sulfide	7783-06-4	Immediately Dangerous to Life or Health Concentration Value 100 parts per million	1995-03-01
Cumene	98-82-8	Immediately Dangerous to Life or Health Concentration Value 900 parts per million	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 Background (Urine) With hydrolyses ()	End of shift (As soon as possible after exposure ceases)	2010-03-01
Xylenes	1330-20-7	Methylhippuric acids: 0.3 g/g creatinine 2024 Adoption (Urine) Commercial or technical grade xylenes consist of mixtures of isomers and significant amounts of ethyl benzene as indicated under 'Properties.' Because ethyl benzene is known to reduce the metabolism of xylenes to methylhippuric acids, the BEI applies to technical or commercial grades of xylenes only. () The determinants refer to the total of all isomers of methylhippuric acids. () Adopted values or notations enclosed are those for which changes are proposed in the NIC ()	End of shift (As soon as possible after exposure ceases)	2024-01-01
Ethylbenzene	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid: 150 mg/g creatinine 2024 Adoption (Urine) Nonspecific ()	End of shift (As soon as possible after exposure ceases)	2024-01-01
Benzene	71-43-2	S-Phenylmercapturic acid: 25 µg/g creatinine Background (Urine)	End of shift (As soon as possible after exposure ceases)	2010-03-01
		t,t-Muconic acid: 500 µg/g creatinine Background (Urine)	End of shift (As soon as possible after exposure ceases)	2010-03-01
n-hexane	110-54-3	2,5-Hexanedione: 0.5 mg/l Without hydrolysis (Urine)	End of shift	2020-02-01

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	:	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. 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

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

Safety data

Flash point	:	-37°C (-35°F) estimated
Lower explosion limit	:	1.5 %(V)
Oxidizing properties	:	no
Autoignition temperature	:	No data available

Molecular formula	:	Mixture
Molecular weight	:	Not applicable
pH	:	5.9
Pour point	:	No data available
Boiling point/boiling range	:	27.2-214°C (81.0-417°F)
Vapor pressure	:	7.00 - 10.00 PSI at 38°C (100°F)
Relative density	:	0.75 at 16 °C (61 °F)
Density	:	742.9 g/l
Water solubility	:	slightly soluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, kinematic	:	No data available
Relative vapor density	:	3 (Air = 1.0)
Evaporation rate	:	No data available
Percent volatile	:	> 99 %

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.

Hazardous decomposition products : Carbon oxides

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

SECTION 11: Toxicological information

Oxygenated Test Fuel - Ethanol
Acute oral toxicity : Acute toxicity estimate: 3,412 mg/kg
Method: Calculation method

Oxygenated Test Fuel - Ethanol
Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method

Oxygenated Test Fuel - Ethanol
Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Oxygenated Test Fuel - Ethanol
Skin irritation : Skin irritation
largely based on animal evidence.

Oxygenated Test Fuel - Ethanol
Eye irritation : Eye irritation
largely based on animal evidence.

Oxygenated Test Fuel - Ethanol
Sensitization : Did not cause sensitization on laboratory animals.
Estimated based on individual component values.

Oxygenated Test Fuel - Ethanol
Repeated dose toxicity : Method: Based on product or component testing, long term repeated exposure may cause damage to the following organs:
Target Organs: Ototoxicity, Eyes, Blood, Nervous system
Subchronic toxicity

Genotoxicity in vitro

Naphtha (petroleum), light alkylate : Test Type: Mouse lymphoma assay
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
Remarks: Information given is based on data obtained from similar substances.

	Test Type: Sister chromatid exchange Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: negative Remarks: Information given is based on data obtained from similar substances. Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Remarks: Information given is based on data obtained from similar substances.
Naphtha, Petroleum, Heavy Catalytic Cracked	Test Type: Mouse lymphoma assay Result: positive
Toluene	Test Type: Ames test Result: negative Test Type: Sister Chromatid Exchange Assay Result: negative Test Type: Mouse lymphoma assay Result: negative Test Type: Cytogenetic assay Result: negative
Isopentane	Test Type: Ames test Concentration: 1, 2, 5, 8, 10% Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Ames test Concentration: 1, 2, 5, 8, 10, 25, 50% Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Remarks: Information given is based on data obtained from similar substances. Test Type: Chromosome aberration test in vitro Metabolic activation: with and without metabolic activation Method: Mutagenicity (in vitro mammalian cytogenetic test) Result: negative Remarks: Information given is based on data obtained from similar substances. Test Type: In vitro mammalian cell gene mutation test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Remarks: Information given is based on data obtained from similar substances.
Cyclopentane	Test Type: Modified Ames test Concentration: 1250 microgram/plate Metabolic activation: with and without metabolic activation

	Result: negative Test Type: Mouse lymphoma assay Concentration: 200 microgram/milliliter Metabolic activation: with and without metabolic activation Result: negative
Ethanol	Test Type: Ames test Result: negative Test Type: Forward mutation assay Result: positive Test Type: Sister Chromatid Exchange Assay Result: positive
n-Heptane	Test Type: Ames test Method: Mutagenicity (Escherichia coli - reverse mutation assay) Result: negative Test Type: Mammalian cell gene mutation assay Method: OECD Guideline 476 Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Guideline 473 Result: negative Test Type: Mitotic recombination Result: negative
1-Hexene	Test Type: Ames test Metabolic activation: with and without metabolic activation Method: Mutagenicity (Escherichia coli - reverse mutation assay) Result: negative Test Type: Unscheduled DNA synthesis assay Result: negative Test Type: Mouse lymphoma assay Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Guideline 473 Result: negative
n-Butane	Test Type: Ames test Result: negative
Naphthalene	Test Type: Ames test Result: negative

	Test Type: Sister Chromatid Exchange Assay Result: negative Test Type: Unscheduled DNA synthesis assay Result: negative
m-xylene	Test Type: Ames test Result: negative
2,2,4-Trimethylpentane (Isooctane)	Test Type: Ames test Method: Mutagenicity (Escherichia coli - reverse mutation assay) Result: negative Test Type: Mouse lymphoma assay Method: OECD Guideline 476 Result: negative Test Type: Sister Chromatid Exchange Assay Result: negative Test Type: Unscheduled DNA synthesis assay Result: negative
Benzene	Test Type: Ames test Result: negative Test Type: Cytogenetic assay Result: positive Test Type: Mouse lymphoma assay Result: positive Test Type: Sister Chromatid Exchange Assay Result: negative
n-Pentane	Test Type: Ames test Metabolic activation: with and without metabolic activation Result: negative Test Type: Chromosome aberration test in vitro Metabolic activation: with and without metabolic activation Result: Ambiguous
Ethylbenzene	Test Type: Ames test Result: negative Test Type: Unscheduled DNA synthesis assay Result: negative
n-hexane	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: Mouse lymphoma assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: Positive results were obtained in some in vitro tests.
2,3-Dimethylbutane	Test Type: Ames test Result: negative
2-methyl-2-butene	Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Method: OECD Test Guideline 480 Result: negative
p-xylene	Test Type: Ames test Result: negative Test Type: Chromosome aberration test in vitro Result: negative
o-xylene	Test Type: Ames test Result: negative
Cyclohexane	Test Type: Ames test Metabolic activation: with and without metabolic activation Method: Mutagenicity (Escherichia coli - reverse mutation assay) Result: negative Test Type: Mouse lymphoma assay Metabolic activation: with and without metabolic activation Result: negative Test Type: Mouse lymphoma assay Metabolic activation: with and without metabolic activation Method: OECD Guideline 476 Result: negative
Xylenes	Test Type: Ames test Result: negative Test Type: Mouse lymphoma assay Result: negative

Genotoxicity in vivo

Naphtha (petroleum), light alkylate	:	Test Type: In vivo micronucleus test Species: Rat Cell type: Bone marrow Dose: 2000, 10,000, 20,000 mg/m3 Method: OECD Test Guideline 475 Result: negative

	Remarks: Information given is based on data obtained from similar substances.
Toluene	Test Type: Cytogenetic assay Result: negative Test Type: Mouse micronucleus assay Result: negative
Isopentane	Test Type: In vivo micronucleus test Species: Rat Cell type: Bone marrow Route of Application: inhalation (vapor) Exposure time: 13 wk Dose: 5000, 10,000, 20,000 mg/m3 Method: Directive 67/548/EEC, Annex V, B.12. Remarks: Information given is based on data obtained from similar substances.
Cyclopentane	Test Type: Micronucleus test Species: Mouse Route of Application: inhalation (vapor) Dose: 10,000 ppm Result: negative
1-Hexene	Test Type: Mouse micronucleus assay Species: Mouse Method: Mutagenicity (micronucleus test) Result: negative
Naphthalene	Test Type: Mouse micronucleus assay Result: negative
2,2,4-Trimethylpentane (Isooctane)	Test Type: Unscheduled DNA synthesis assay Species: Mouse Dose: 500 mg/kg Result: negative Test Type: Unscheduled DNA synthesis assay Species: Rat Dose: 500 mg/kg Result: negative
Benzene	Test Type: Mouse micronucleus assay Result: positive
n-Pentane	Test Type: Micronucleus test Species: Rat Cell type: Bone marrow Result: negative
Ethylbenzene	Test Type: Mouse micronucleus assay Species: Mouse Result: negative
n-hexane	Test Type: Dominant lethal assay Species: Mouse Dose: 100 and 400 ppm Result: negative

	Test Type: Cytogenetic assay Species: Rat Dose: 900, 3000, 9000 ppm Result: negative
2-methyl-2-butene	Test Type: Mouse micronucleus assay Species: Rat Cell type: Bone marrow Route of Application: Inhalation Exposure time: 6 h/d 2d Method: OECD Test Guideline 474 Result: positive
p-xylene	Test Type: Micronucleus test Species: Mouse Method: Mutagenicity (micronucleus test) Result: negative
o-xylene	Test Type: Mouse micronucleus assay Result: negative
Cyclohexane	Test Type: Cytogenetic assay Species: Rat Cell type: Bone marrow Dose: 96.6, 307.2, 10141.6 ppm Result: negative
Xylenes	Test Type: Mouse micronucleus assay Result: negative

Oxygenated Test Fuel - Ethanol
Carcinogenicity : Method: Expected to be carcinogenic based on individual component data.

Oxygenated Test Fuel - Ethanol
Reproductive toxicity : Method: Estimated based on individual component values.
Suspected of damaging fertility or the unborn child.

Oxygenated Test Fuel - Ethanol
Developmental Toxicity : Method: Estimated based on individual component values.
No adverse effects expected

Oxygenated Test Fuel - Ethanol
Aspiration toxicity : May be fatal if swallowed and enters airways.
Toxicology Assessment

Oxygenated Test Fuel - Ethanol
CMR effects : Carcinogenicity:
Known or presumed human carcinogen(s)
Teratogenicity:
Suspected of damaging fertility. Suspected of damaging the unborn child.
Reproductive toxicity:
Suspected of damaging fertility. Suspected of damaging the

unborn child.

Oxygenated Test Fuel - Ethanol

Further information : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

SECTION 12: Ecological information

Ecotoxicity effects

Toxicity to fish : LC50: < 1 mg/l
Estimated based on individual component values.

Toxicity to daphnia and other aquatic invertebrates : LC50: < 1 mg/l
Estimated based on individual component values.

Toxicity to algae : EC50: < 1 mg/l
Estimated based on individual component values.

M-Factor
methylcyclohexane : M-Factor (Acute Aquat. Tox.) 1

M-Factor (Chron. Aquat. Tox.) 1

M-Factor
cyclohexane M-Factor (Acute Aquat. Tox.) 1

M-Factor (Chron. Aquat. Tox.) 1

M-Factor
hydrogen sulphide M-Factor (Chron. Aquat. Tox.) 1

Toxicity to bacteria

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

Toxicity to fish (Chronic toxicity)

Isopentane	:	EL10: 6.57 mg/l Exposure time: 60 d Species: Oncorhynchus mykiss (rainbow trout) Method: QSAR modeled data The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
n-Heptane		NOELR: 1.284 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Method: QSAR modeled data
n-Pentane		EL10: 2.03 mg/l Exposure time: 60 d Species: Oncorhynchus mykiss (rainbow trout) Method: QSAR modeled data The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

Naphtha (petroleum), light alkylate	:	NOELR: 2.6 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) semi-static test Method: OECD Test Guideline 211
Naphtha, Petroleum, Heavy Catalytic Cracked	:	NOELR: 2.6 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) semi-static test Method: OECD Test Guideline 211
Isopentane	:	EL10: 11.5 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
Distillates (petroleum), Hydrotreated light	:	NOEC: 0.48 mg/l Exposure time: 21 Days Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211
2,2,4-Trimethylpentane (Isooctane)	:	NOEL: 0.17 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Information given is based on data obtained from similar substances.
n-Pentane	:	EL10: 3.54 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR

models), etc.

Ethylbenzene	:	NOEC: 1 mg/l Exposure time: 7 d Species: Daphnia pulex (Water flea) semi-static test Analytical monitoring: yes
Biodegradability	:	This material is not expected to be readily biodegradable. Expected to be inherently biodegradable.

Elimination information (persistence and degradability)

Bioaccumulation	:	Method: Estimated based on individual component values. This material is not expected to bioaccumulate.

Mobility

Naphtha (petroleum), light alkylate	:	This product may float or sink in water. After release, disperses into the air.
Naphtha, Petroleum, Heavy Catalytic Cracked	:	No data available
Toluene	:	Not expected to adsorb on soil.
Isopentane	:	No data available
Cyclopentane	:	No data available
n-Heptane	:	Medium: Air Method: Calculation, Mackay Level I Fugacity Model Content: 100 % After release, disperses into the air.
1-Hexene	:	No data available
n-Butane	:	The product evaporates readily.
Distillates (petroleum), Hydrotreated light	:	No data available
2,2,4-Trimethylpentane (Isooctane)	:	Medium: Air Method: Calculation, Mackay Level I Fugacity Model After release, disperses into the air.
Benzene	:	No data available
n-Pentane	:	After release, disperses into the air.
Ethylbenzene	:	Method: Calculation, Mackay Level I Fugacity Model Disperses rapidly in air.
n-hexane	:	Method: Calculation, Mackay Level III Fugacity Model The product will be dispersed amongst the various environmental compartments (soil/ water/ air).
Cyclohexane	:	Not expected to adsorb on soil.
Methylcyclopentane	:	No data available

Hydrogen Sulfide	:	No data available
Results of PBT assessment	:	Product does not contain substances which are very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Additional ecological information	:	Very toxic to aquatic life with long lasting effects.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard	:	Very toxic to aquatic life.
Long-term (chronic) aquatic hazard	:	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)

UN3475, ETHANOL AND GASOLINE MIXTURE, 3, II, MARINE POLLUTANT, (N-HEPTANE, 2,2,4-TRIMETHYLPENTANE (ISOOCTANE))

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN3475, ETHANOL AND GASOLINE MIXTURE, 3, II, (-37 °C c.c.), MARINE POLLUTANT, (NAPHTHA (PETROLEUM) LIGHT ALKYLATE, NAPHTHA, PETROLEUM, HEAVY CATALYTIC CRACKED)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
UN3475, ETHANOL AND GASOLINE MIXTURE, 3, II

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
UN3475, ETHANOL AND GASOLINE MIXTURE, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (NAPHTHA (PETROLEUM) LIGHT ALKYLATE, NAPHTHA, PETROLEUM, HEAVY CATALYTIC CRACKED)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
33,UN3475,ETHANOL AND GASOLINE MIXTURE, 3, II, ENVIRONMENTALLY HAZARDOUS, (NAPHTHA (PETROLEUM) LIGHT ALKYLATE, NAPHTHA, PETROLEUM, HEAVY CATALYTIC CRACKED)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
UN3475, ETHANOL AND GASOLINE MIXTURE, 3, II, ENVIRONMENTALLY HAZARDOUS, (NAPHTHA (PETROLEUM) LIGHT ALKYLATE, NAPHTHA, PETROLEUM, HEAVY CATALYTIC CRACKED)

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards	:	Flammable (gases, aerosols, liquids, or solids) Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (single or repeated exposure) Aspiration hazard Skin corrosion or irritation Serious eye damage or eye irritation
CERCLA Reportable Quantity	:	476 lbs Xylenes 200 lbs Benzene
SARA 302 Reportable Quantity	:	Listed substances in the product are at low enough levels to not be expected to exceed the RQ Hydrogen Sulfide
SARA 302 Threshold	:	This material does not contain any components with a section

Planning Quantity 302 EHS TPQ.
SARA 304 Reportable Quantity : Listed substances in the product are at low enough levels to not be expected to exceed the RQ
Hydrogen Sulfide 7783-06-4 100 lbs

SARA 313 Components : The following components are subject to reporting levels established by SARA Title III, Section 313:
: Xylenes - 1330-20-7
Toluene - 108-88-3
Ethylbenzene - 100-41-4
n-hexane - 110-54-3
Benzene - 71-43-2
Naphthalene - 91-20-3
1,2,4-Trimethylbenzene - 95-63-6
Isoprene - 78-79-5
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 112 (40 CFR 61):
: 2,2,4-Trimethylpentane (Isooctane) - 540-84-1
Xylenes - 1330-20-7
Toluene - 108-88-3
Ethylbenzene - 100-41-4
n-hexane - 110-54-3
Benzene - 71-43-2
Naphthalene - 91-20-3

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
2-methyl-1-butene - 563-46-2
Isoprene - 78-79-5

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):
: Xylenes - 1330-20-7
Ethanol - 64-17-5
Toluene - 108-88-3
Isopentane - 78-78-4
Ethylbenzene - 100-41-4
Benzene - 71-43-2
n-Pentane - 109-66-0
Methylcyclohexane - 108-87-2
Isoprene - 78-79-5

US State Regulations

Pennsylvania Right To Know : Naphtha, Petroleum, Heavy Catalytic Cracked - 64741-54-4
Naphtha (petroleum), light catalytic reformed - 64741-63-5
Hydrocarbons, C3-11, catalytic cracker distillates - 68476-46-0
2,2,4-Trimethylpentane (Isooctane) - 540-84-1
Naphtha (petroleum), light alkylate - 64741-66-8
Xylenes - 1330-20-7
3,3-Dimethylpentane - 562-49-2
Ethanol - 64-17-5
Toluene - 108-88-3
Isopentane - 78-78-4
C9-C11 Isoalkanes - 68551-16-6
Isoalkanes C7-8 - 70024-92-9
Heptane, branched, cyclic and linear - 426260-76-6
n-Heptane - 142-82-5
n-Butane - 106-97-8
1-Hexene - 592-41-6
Cyclopentane - 287-92-3
Ethylbenzene - 100-41-4
n-hexane - 110-54-3
2-Methylpentane - 107-83-5
Benzene - 71-43-2
Naphthalene - 91-20-3
3-Methylpentane - 96-14-0
2-Methylhexane - 591-76-4
2,2-Dimethylbutane - 75-83-2
Methylcyclopentane - 96-37-7
3-Methylhexane - 589-34-4
1,2,4-Trimethylbenzene - 95-63-6
2-methyl-2-butene - 513-35-9
2,3-Dimethylbutane - 79-29-8
2,3-Dimethylpentane - 565-59-3
2,4-Dimethylpentane - 108-08-7
n-Pentane - 109-66-0
Methylcyclohexane - 108-87-2
2-methyl-1-butene - 563-46-2
2-Methyl-2-Pentene - 625-27-4
Isoprene - 78-79-5
Hydrogen Sulfide - 7783-06-4
Cyclohexane - 110-82-7
Cumene - 98-82-8

California Prop. 65 Components : WARNING: This product can expose you to chemicals including [listed below], which is [are] known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov/food.

Ethylbenzene	100-41-4
Benzene	71-43-2
Naphthalene	91-20-3
Isoprene	78-79-5
Cumene	98-82-8

WARNING: This product can expose you to chemicals including [listed below], which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

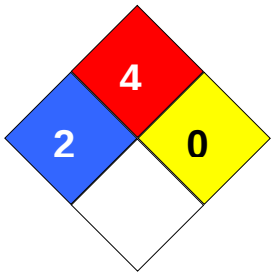
Toluene	108-88-3
Benzene	71-43-2
n-hexane	110-54-3

Notification status

Europe REACH	:	Not in compliance with the inventory
Switzerland CH INV	:	Not in compliance with the inventory
United States of America (USA) TSCA	:	On or in compliance with the active portion of the TSCA inventory
Canada NDSL	:	This product contains one or several components listed in the Canadian NDSL.
Australia AIIC	:	Not in compliance with the inventory
New Zealand NZIoC	:	Not in compliance with the inventory
Japan ENCS	:	Not in compliance with the inventory
Japan ISHL	:	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
Taiwan TCSI	:	Not in compliance with the inventory
Other TECI	:	Not in compliance with the inventory

SECTION 16: Other information

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



Revision Date : 2025-11-26
Date of last issue : 2020-07-15

Further information

Legacy SDS Number : 663570

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