SAFETY DATA SHEET

Revision: 3.0 Date: 14 April 2021

ACCORDING TO OSHA HCS (29 CFR 1910.1200)

Transmix

SECTION 1: IDENTIFICATION

Product identifier

Product name	Transmix

Other means of identification None

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Refinery feedstock.
Uses advised against	Anything other than the above.

Details of the supplier of the safety data sheet

Supplier	Vitol Inc. 2925 Richmond Ave, 11th Floor Houston, TX 77098
Telephone	(713) 230-1000
Fax	713-230-1185
E-mail (competent person)	SDSHOU@vitol.com

Emergency telephone number

Emergency Phone No.	Chemtrec: US/Canada: 1-800-424-9300 (24h) Mexico: 800 681 9531 (24h)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with paragraph (d) of 29 CFR 1910.1200

Physical hazards	Flammable Liquid, Category 1
Health hazards	Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Eye Irritation, Category 2. Acute toxicity, Category 3 (Inhalation) Specific target organ toxicity — single exposure, Category 3 (Respiratory Irritation) Specific target organ toxicity — single exposure, Category 3 (Narcotic effects) Germ cell mutagenicity, Category 1B Carcinogen, Category 1 Reproductive toxicity, Category 2 Specific target organ toxicity — repeated exposure, Category 2
Environmental hazards	Hazardous to the aquatic environment, Acute, Category 1 Hazardous to the aquatic environment, Chronic, Category 1

Label elements

Hazard Pictogram(s)

Signal Word(s) DANGER

Hazard Statement(s)	Extremely flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Toxic if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects
Precautionary Statement(s)	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Obtain special instructions before use. Do not breathe vapour. Wear protective gloves/eye protection/face protection. IF SWALLOWED: Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Avoid release to environment. Dispose of contents in accordance with local, state or national legislation.
Other hazards	The vapour is heavier than air; beware of pits and confined spaces. May cause irritation to eyes and air passages. Product may release Hydrogen Sulphide: A specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances.
Percent of the mixture consists of ingredient(s) of unknown acute toxicity:	0% of the mixture consists of ingredients of unknown acute inhalated toxicity. 0% of the mixture consists of ingredients of unknown acute oral toxicity. 0% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures Substances in preparations / mixtures

Classification: OSHA HCS (29 CFR 1910.1200)

Chemical identity of the substance	%W/W	CAS No.	EC No.	Hazard classification
Gasoline	0 - 100	86290-81-5	289-220-8	Flammable Liquid, Category 1 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 (Narcotic effects) Germ cell mutagenicity, Category 1B Carcinogen, Category 1B Reproductive toxicity, Category 2 Hazardous to the aquatic environment, Chronic, Category 2
Fuels, diesel, no. 2	0 - 100	68476-34-6	270-676-1	Flammable Liquid, Category 3 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Acute toxicity, Category 4 (Inhalation) Carcinogen, Category 2

				Specific target organ toxicity — repeated exposure, Category 2 (Bone marrow, Liver, Thymus) Hazardous to the aquatic environment, Chronic, Category 2
Toluene	0 - 30	108-88-3	203-625-9	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 (Narcotic effects) Reproductive toxicity, Category 2 Specific target organ toxicity — repeated exposure, Category 2 Hazardous to the aquatic environment, Chronic, Category 3
Hexane (Other Isomers)	5 - 25	96-14-0	202-481-4	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 (Narcotic effects) Hazardous to the aquatic environment, Chronic, Category 2
Xylene (o, m, p isomers)	0 - 25	1330-20-7	215-535-7	Flammable Liquid, Category 3 Aspiration hazard, Category 1 Acute toxicity, Category 4 (Dermal) Skin Corrosion/Irritation, Category 2 Eye Irritation, Category 2B Acute toxicity, Category 4 (Inhalation) Specific target organ toxicity — single exposure, Category 3 (Respiratory Irritation) Specific target organ toxicity — repeated exposure, Category 2 Hazardous to the aquatic environment, Acute, Category 2 Hazardous to the aquatic environment, Chronic, Category 3
Octane (All isomers)	0 - 18.5	111-65-9	203-892-1	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 (Narcotic effects) Hazardous to the aquatic environment, Acute, Category 1 Hazardous to the aquatic environment, Chronic, Category 1
Ethanol	0 - 10	64-17-5	200-578-6	Flammable Liquid, Category 2 Eye Irritation, Category 2B
1,2,4-trimethylbenzene	0 – 6	95-63-6	202-436-9	Flammable Liquid, Category 3 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Eye Irritation, Category 2B Acute toxicity, Category 4 (Inhalation) Specific target organ toxicity — single exposure, Category 3 (Respiratory irritation) Hazardous to the aquatic environment, Chronic, Category 2
n-Heptane	1 – 5	142-82-5	205-563-8	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 (Narcotic effects) Hazardous to the aquatic environment, Acute, Category 1 Hazardous to the aquatic environment, Chronic, Category 1
Pentane	1 – 5	109-66-0	203-692-4	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Specific target organ toxicity — single exposure, Category 3 (Narcotic effects) Hazardous to the aquatic environment, Chronic, Category 2
Cumene	0 – 5	98-82-8	202-704-5	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Specific target organ toxicity — single exposure, Category 3 (Narcotic effects)

				Hazardous to the aquatic environment, Chronic, Category 2
Ethylbenzene	0 - 5	100-41-4	202-849-4	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Acute toxicity, Category 4 (Inhalation) Specific target organ toxicity — repeated exposure, Category 2 (hearing organs)
Benzene	0 - 4.9	71-43-2	200-753-7	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Eye Irritation, Category 2 Germ cell mutagenicity, Category 1B Carcinogen, Category 1A Specific target organ toxicity — repeated exposure, Category 2 Hazardous to the aquatic environment, Chronic, Category 3
Naphthalene	1 - 3	91-20-3	202-049-5	Flammable solid, Category 2 Acute toxicity, Category 4 (Oral) Carcinogen, Category 2 Hazardous to the aquatic environment, Acute, Category 1 Hazardous to the aquatic environment, Chronic, Category 1
Nonane	1 - 3	111-84-2	203-913-4	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 (Narcotic effects) Hazardous to the aquatic environment, Acute, Category 1 Hazardous to the aquatic environment, Chronic, Category 1
n-hexane	0 - 3	110-54-3	203-777-6	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 (Narcotic effects) Reproductive toxicity, Category 2 Specific target organ toxicity — repeated exposure, Category 2 Hazardous to the aquatic environment, Chronic, Category 2
Cyclohexane	0 - 3	110-82-7	203-806-2	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Skin Corrosion/Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 (Narcotic effects) Specific target organ toxicity — repeated exposure, Category 2 Hazardous to the aquatic environment, Acute, Category 1 Hazardous to the aquatic environment, Chronic, Category 1

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Self-protection of the first aider

Avoid all contact. Do not breathe vapour. Eliminate sources of ignition. If it is suspected that fumes are still present, the responder should wear an appropriate mask or self-contained breathing apparatus. Drench contaminated clothing with water before removing to avoid risk of sparks from static electricity. Do not use mouth-to-mouth resuscitation. No action should be taken involving personal risk. Wear appropriate personal protective equipment, avoid direct contact. Avoid exposure during pregnancy. Do not ingest. If swallowed then seek immediate medical assistance.

Inhalation

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight

	clothing such as a collar, tie, belt or waistband. Apply artificial respiration only if patient is not breathing but do not use mouth to mouth resuscitation. Get medical advice/attention if you feel unwell.
Skin contact	IF ON SKIN (or hair): Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water. If irritation persists, get medical attention.
Eye contact	IF IN EYES: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention. If irritation persists, get medical attention.
Ingestion	IF SWALLOWED: rinse mouth. Do NOT induce vomiting. If unconscious, place in recovery position and get medical attention immediately. Wash out mouth with water and give small quantities of water to drink. Do not give anything by mouth to an unconscious person. Get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Do not wait for symptoms to appear.
Most important symptoms and effects, both acute and delayed	May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Toxic if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child.
Indication of any immediate medical attention and special treatment needed	Treat symptomatically.
Notes to a physician:	IF IN EYES: Treatment by an ophthalmologist due to possible caustic burn of the eyes may be required. IF INHALED: If unconscious, place in recovery position and get medical attention immediately. Administer oxygen if available and artificial respiration if necessary. IF SWALLOWED: Do not induce vomiting because of risk of aspiration into the lungs. If aspiration is suspected obtain immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media	
Suitable extinguishing media	Extinguish with sand or dry chemical. Foam, Carbon dioxide, Water fog or dry powder
Unsuitable extinguishing media	Do not use water jet. Direct water jet may spread the fire.
Special hazards arising from the substance or mixture	Extremely flammable liquid and vapour. Will float and can be reignited on surface water. A mixture of solid and liquid particulates and gases including unidentified organic and inorganic compounds. May form explosive mixture with air. Prevent liquid entering sewers, basements and any watercourses. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. If sulphur compounds are present in appreciable amounts, combustion products may include also H2S and SOx (sulfur oxides) or sulfuric acid.
Advice for firefighters	Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire. Avoid release to the environment. Dike fire control water for later disposal.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Caution - spillages may be slippery. Ensure operatives are trained to minimise exposures. Ensure suitable personal protection during removal of spillages. Eliminate sources of ignition. Shut off leaks if without risk. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid all contact. Do not breathe vapour. Ensure adequate ventilation. Do not ingest. If swallowed then seek immediate medical assistance. Do not use sparking tools. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Avoid exposure during pregnancy.
Methods and material for containment and cleaning up	Provided it is safe to do so, isolate the source of the leak. Use non-sparking equipment when picking up flammable spill. The vapour is heavier than air; beware of pits and confined spaces. Ensure that the equipment is adequately grounded. Allow small spillages to evaporate provided there is adequate

ventilation. Wear flame-resistant antistatic protective clothing. Wear chemical protection suit and breathing apparatus.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling	Obtain special instructions before use. Keep away from sources of ignition - No smoking. Use only outdoors or in a well-ventilated area. Prevent vapour build up by providing adequate ventilation during and after use. May form explosive mixtures with air. Take action to prevent static discharges. Use non-sparking tools. All parts of the plant and equipment should be electrically bonded together and connected to earth. Electrical continuity should be checked at regular intervals. Antistatic clothing and footwear should be used. The vapour is heavier than air; beware of pits and confined spaces. Avoid all contact with substance. Do not ingest. If swallowed then seek immediate medical assistance. Do not breathe vapour. See Section: 8. Keep good industrial hygiene. Wash hands thoroughly after handling. Contaminated clothing should be thoroughly cleaned.
Conditions for safe storage, including any incompatibilities	Light hydrocarbon vapours can build up in the headspace of containers. These can cause flammability / explosion hazards. Bund storage facilities to prevent soil and water pollution in the event of spillage. Keep only in original packaging. Keep containers properly sealed when not in use. Protect from sunlight. Containers of this material may be hazardous when empty since they retain product residue. Empty container may contain product residue which may result in flammable or explosive vapours inside the container.
Storage temperature	Stable at ambient temperatures.
Incompatible materials	Keep away from oxidising agents. Strong Acids and Alkalis.

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Toluene	108-88-3	100	375	150	560	NIOSH
		-	-	300	-	OSHA
		20	-	-	-	ACGIH, A4
Hexane (Other Isomers)	96-14-0	100	350	510^	1800	NIOSH
		500	-	1000	-	ACGIH
Xylene	1330-20-7	100	435	150*	655	NIOSH
		100	435	-	-	OSHA
		100	-	150	-	ACGIH, A4
Octane	111-65-9	75	350	385*	1800*	NIOSH
		500	2350	-	-	OSHA
		300	-	-	-	ACGIH
Ethanol	64-17-5	1000	1900	-	-	NIOSH
		1000	1900	-	-	OSHA
		-	-	1000	-	ACGIH
n-Heptane	142-82-5	85	350	440*	1800*	NIOSH
		5000	2000	-	-	OSHA
		400		500		ACGIH
Pentane	109-66-0	1000	-	-	-	ACGIH
Cumene	98-82-8	50	245	-	-	NIOSH
		50	245	-	-	OSHA
		50	--	-	-	ACGIH
Ethylbenzene	100-41-4	100	435	125*	545*	NIOSH
		100	435	-	-	OSHA
		20	-	-	-	ACGIH
Benzene	71-43-2	0.1	0.32	1^	3.2	NIOSH
		1	-	5	-	OSHA
		0.5	-	2.5	-	ACGIH, A1
N-hexane	110-54-3	50	180	-	-	NIOSH
		50	1800	-	-	OSHA
		50	-	-	-	ACGIH, Sk
Cyclohexane	110-82-7	300	1050	-	-	NIOSH
		300	1050	-	-	OSHA
		100	-	-	-	ACGIH
Naphthalene	91-20-3	10	50	15^	75^	NIOSH
		10	50			OSHA
		10	-	-	-	ACGIH, SK, A3
Nonane	111-84-2	200	1050	-	-	NIOSH
		200	-	-	-	ACGIH

Note: OSHA PELs 1910.1000 TABLE Z-1/2/3 / NIOSH RELs / ACGIH TLVs
^Ceiling limit value (15 min)
*NIOSH 15 minute average values
(1) Ceiling limit value (10 min)
Sk - Can be absorbed through skin.
A1: Confirmed Human Carcinogen: The agent is carcinogenic to humans based on the weight of evidence from epidemiological studies
A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histological type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiological studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.
A4: Not Classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of the lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.
The other components listed in Section 3 do not have occupational exposure limits.

Biological exposure indicies

SUBSTANCE	CAS No.	Determinant	Biological Exposure Indices	Sampling Time	Note

Toluene	108-88-3	Toluene in blood Toluene in urine o-Cresol in urine with hydrolosis	0.02 mg/l 0.03 mg/l 0.3 mg/g creatinine	Prior to last shift of workweek End of shift End of shift	- - B
Xylene, o-,m-,p- or mixed isomers	1330-20-7	Methylhippuric acids in urine.	1.5 g/g Creatinine	End of shift	-
Ethylbenzene	100-41-4	Sum of mandelic acid and phenylglyoxylic acid in urine	0.15 g/g Creatinine	End of shift	Ns
Naphthalene	91-20-3	1-Naphthol* + 2-Naphthol*	-	End of shift	Nq, Ns

Source: ACGIH: American Conference of Governmental Industrial Hygienists - Biological Exposure Index (BEI) 2019

Note:
B: Background
Nq: Nonquantitative
Ns: The determinant is nonspecific, since it is also observed after exposure to other chemicals.

Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction if dusts, fumes or vapours are likely to be evolved. Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources. Guarantee that the eye flushing systems and safety showers are located close to the working place.

Individual protection measures, such as personal protective equipment

Fuels are typically used, transferred and transported in closed systems. If exposure is likely (i.e. during sampling) the following advice may be appropriate. Keep good industrial hygiene. Always wash hands before smoking, eating and drinking. Do not eat, drink or smoke at the work place. Avoid all contact. Do not breathe vapour. Avoid exposure during pregnancy.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/ face protection

Use eye protection according to EN 166, designed to protect against liquid splashes.

Skin protection

Hand protection: Wear impervious gloves (recommended: EN374). Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Protective index 6, corresponding > 480 minutes of permeation time according to EN 374. Efficiency of at least 80%).

Body protection: Wear anti-static clothing and shoes.
Small scale: Wear suitable coveralls to prevent exposure to the skin.
Large scale: Chemical protection suit.

Respiratory protection

When the product is heated / In case of inadequate ventilation wear respiratory protection. The use of a high efficiency filter (recommended: EN143) is recommended. Filter type A1.

Closed system(s): Not normally required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Light straw to red clear liquid.
Odour	Strong Hydrocarbon
Odour threshold	Not available
pH	Not available
Melting point/freezing point	Not available
Initial boiling point and boiling range	80.06 - 440.06 °F (26.7 - 226.7 °C)
Flash point	-40.0 °F (-40.0 °C) (closed cup)

Evaporation rate	Not available
Flammability (solid, gas)	Not applicable - Liquid
Upper/lower flammability or explosive limits	Upper limit: 7.1 % Lower limit: 1.3 %
Vapour pressure	60.8 - 101.3 kPa (20°C)
Vapour density	3 - 4 (Air=1)
Relative density	Not available
Solubility(ies)	Very slightly soluble.
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions. Reacts with - Strong oxidising agents
Chemical stability	Stable under normal conditions. Hazardous polymerisation will not occur. Product may release Hydrogen Sulphide.
Possibility of hazardous reactions	Extremely flammable liquid and vapour. May form explosive mixture with air. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback.
Conditions to avoid	Elevated temperature. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from direct sunlight.
Incompatible materials	Keep away from oxidising agents. Strong Acids and Alkalis.
Hazardous decomposition products	A mixture of solid and liquid particulates and gases including unidentified organic and inorganic compounds. Decomposes in a fire giving off toxic fumes: COx, H2S, SOx,

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity - Ingestion		Mixture: Based upon the available data, the classification criteria are not met. Calculated acute toxicity estimate (ATE) >2,000 mg/kg.
Acute toxicity - Inhalation		Mixture: Acute toxicity, Category 3 (Inhalation): Toxic if inhaled. Acute Toxicity Estimate Mixture Calculation: LC50 < 2,0 ≤ 10,0 (Vapour)
	Fuels, diesel, no. 2	Acute toxicity, Category 4 (Inhalation): Harmful if inhaled. LC50 (inhalation,rat) mg/l/4h: 4.1 (OECD 403)
	Xylene (o, m, p isomers)	Acute toxicity, Category 4 (Inhalation): Harmful if inhaled. EU Harmonised Classification
	1,2,4-trimethylbenzene	Acute toxicity, Category 4 (Inhalation): Harmful if inhaled. EU Harmonised Classification
	Ethylbenzene	Acute toxicity, Category 4 (Inhalation): Harmful if inhaled. EU Harmonised Classification
Acute toxicity - Skin contact		Mixture: Based upon the available data, the classification criteria are not met. Calculated acute toxicity estimate (ATE) >2,000 mg/kg.
Skin corrosion/irritation		Mixture: Skin Corrosion/Irritation, Category 2: Causes skin irritation.
	Gasoline	Skin Corrosion/Irritation, Category 2: Causes skin irritation. Irritating to skin. (rabbit) (OECD 404)
	Fuels, diesel, no. 2	Skin Corrosion/Irritation, Category 2: Causes skin irritation. Irritating to skin. (rabbit) (OECD 404)
	Toluene	Skin Corrosion/Irritation, Category 2: Causes skin irritation. Irritating to skin. (rabbit) (EU Method B.4)
	Hexane (Other Isomers)	Skin Corrosion/Irritation, Category 2: Causes skin irritation. Irritating to skin. (Human) (Unnamed publication, 1999)
	Xylene (o, m, p isomers)	Skin Corrosion/Irritation, Category 2: Causes skin irritation. EU Harmonised Classification Read across (chevron paraxylene). Slightly irritating to skin. (rat) (EU Method B.4) (Chatterjee, 2005)
	Octane (All isomers)	Skin Corrosion/Irritation, Category 2: Causes skin irritation. Irritating to skin. (rabbit) (OECD 404)
	1,2,4-trimethylbenzene	Skin Corrosion/Irritation, Category 2: Causes skin irritation.

		Irritating to skin. (rabbit) (EU Method B.4)
	n-Heptane	Skin Corrosion/Irritation, Category 2: Causes skin irritation. EU Harmonised Classification Irritating to skin. (rabbit) (OECD 404)
	Benzene	Skin Corrosion/Irritation, Category 2: Causes skin irritation. Irritating to skin. (rabbit) (OECD 404)
	N-hexane	Skin Corrosion/Irritation, Category 2: Causes skin irritation. EU Harmonised Classification Irritating to skin. (rabbit) (OECD 404)
	Cyclohexane	Skin Corrosion/Irritation, Category 2: Causes skin irritation. EU Harmonised Classification Irritating to skin. (rabbit) (EU Method B.4)
	Nonane	Skin Corrosion/Irritation, Category 2: Causes skin irritation. EU ECHA registration dossier
Serious eye damage/irritation		Mixture: Eye Irritation, Category 2: Causes serious eye irritation.
	Xylene (o, m, p isomers)	Irritation, Category 2: Causes serious eye irritation. Eye Damage/Irritation - Category 2
	Ethanol	Irritation, Category 2A: Causes serious eye irritation. EU Harmonised Classification. Irritating to eyes. (rabbit) (OECD 405)
	1,2,4-trimethylbenzene	Irritation, Category 2: Causes serious eye irritation. EU Harmonised Classification
	Benzene	Irritation, Category 2: Causes serious eye irritation. EU Harmonised Classification.
Respiratory or skin sensitisation		Mixture: Based upon the available data, the classification criteria are not met.
Germ cell mutagenicity		Mixture: Germ cell mutagenicity, Category 1B: May cause genetic defects.
	Gasoline	Germ cell mutagenicity, Category 1B: May cause genetic defects. EU Harmonised Classification. ECHA Registration Endpoint summary: According to EU CLP Classification (EC no. 1272/2008), there is a regulatory requirement to classify gasoline and naphtha streams as hazardous for this endpoint when they contain >0.1% benzene.
	Benzene	Germ cell mutagenicity, Category 1B: May cause genetic defects. In vitro: negative (Zeiger E and Haworth S., 1985) In vivo: positive (OECD 474)
Carcinogenicity		Mixture: Carcinogen, Category 1: May cause cancer.
	Gasoline	Carcinogen, Category 1B: May cause cancer. EU Harmonised Classification. ECHA Registration Endpoint summary: According to EU CLP Classification (EC no. 1272/2008), there is a regulatory requirement to classify gasoline and naphtha streams as hazardous for this endpoint when they contain >0.1% benzene.
	Fuels, diesel, no. 2	Carcinogen, Category 2: Suspected of causing cancer. EU Harmonised Classification.
	Benzene	Carcinogen, Category 1A: May cause cancer. LOAEL: 25 mg/kg/dw/day (rat) (EPA OPP 83-5)
	Naphthalene	Carcinogen, Category 2: Suspected of causing cancer. EU Harmonised Classification LOAEC: 50 mg/m^3 (rat) (Unnamed publication, 2000)
Reproductive toxicity		Mixture: Reproductive toxicity, Category 2: Suspected of damaging fertility or the unborn child.
	Gasoline	Reproductive toxicity, Category 2: Suspected of damaging fertility or the unborn child. EU Harmonised Classification. ECHA Registration Endpoint summary: According to EU CLP Classification (EC no. 1272/2008), there is a regulatory requirement to classify gasoline and naphtha streams as hazardous for this endpoint when they contain >0.1% benzene.
	Toluene	Reproductive toxicity, Category 2: Suspected of damaging fertility or the unborn child. Reproductive toxicity: NOAEC (rat) (inhalation exposure) mg/m^3: 2261. (Ono, 1996)

		Developmental toxicity: NOAEC (rat) (inhalation exposure) mg/m³: 4522. (Thiel, 1997)
	N-hexane	Reproductive toxicity, Category 2: Suspected of damaging fertility. Reproductive toxicity: No adverse effect observed (rat) (OECD 416) Developmental toxicity: Maternal toxicity – NOAEC: 900 ppm (OECD 414)
STOT - single exposure		Mixture: Specific target organ toxicity — single exposure, Category 3 (Respiratory Irritation): May cause respiratory irritation. Specific target organ toxicity — single exposure, Category 3 (Narcotic effects): May cause drowsiness or dizziness.
	Gasoline	Specific target organ toxicity — single exposure, Category 3 (Narcotic effects): May cause drowsiness or dizziness. Weight of evidence approach
	Toluene	Specific target organ toxicity — single exposure, Category 3 (Narcotic effects): May cause drowsiness or dizziness. Causes dizziness. (Human volunteers) (SCOEL, 2001)
	Hexane (Other Isomers)	Specific target organ toxicity — single exposure, Category 3 (Narcotic effects): May cause drowsiness or dizziness. EU Harmonised Classification.
	Xylene (o, m, p isomers)	Specific target organ toxicity — single exposure, Category 3 (Respiratory Irritation): May cause respiratory irritation. ECHA Registration Endpoint summary: Irritating to eyes, respiratory system and skin
STOT - repeated exposure		Mixture: Specific target organ toxicity — repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure.
	Fuels, diesel, no. 2	Specific target organ toxicity — repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure. Inhalation: NOAEC > 1710 mg/m³ (Systemic effects) (rat) (OECD 413)
	Toluene	Specific target organ toxicity — repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure. Oral: Adverse effects observed - NOAEL (rat) mg/kg bw/day 625 (EU Method B.26) Inhalation: NOAEC (rat) mg/m³ 1131 (OECD 453) Dermal: No data
	Xylene (o, m, p isomers)	Specific target organ toxicity — repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure. Oral: Adverse effects observed – NOAEL (rat) 250 mg/kg bw/day Inhalation: Adverse effects observed – NOAEC (rat) 3515 mg/m³ Dermal: Not classified – No data
	Ethylbenzene	Specific target organ toxicity — repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure. EU Harmonised Classification Oral: NOAEL: 75 mg/kg bw/day (OECD 407) (rat) Inhalation: NOAEC: 500 mg/m³ (OECD 453) (rat) Dermal: No data
	Benzene	Specific target organ toxicity — repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure. Oral: Chronic - LOAEL: 25 mg/kg/dw/day (rat) Inhalation: Chronic - NOAEC: 11.2mg/m³ Dermal: No data
	N-hexane	Specific target organ toxicity — repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure. Oral: NOAEL: 568 mg/kg bw/day (rat) Inhalation: LOAEC: 1760 mg/m³ Dermal: LOAEC: 1760 mg/m³ (Mouse)
	Cyclohexane	Specific target organ toxicity — repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure. Oral: No data Inhalation: NOAEC: 2000ppm (Unnamed publication, 2000) Dermal: No data
Aspiration hazard		Mixture: Aspiration hazard, Category 1: May be fatal if swallowed and enters airways.
	Gasoline	Aspiration hazard, Category 1: May be fatal if swallowed and enters airways.

	EU Harmonised Classification. Viscosity: 1 mm²/s @ 20 °C
Fuels, diesel, no. 2	Aspiration hazard, Category 1: May be fatal if swallowed and enters airways. Kinematic viscosity: 2 – 9 mm²/s @ 40 °C
Toluene	Aspiration hazard, Category 1: May be fatal if swallowed and enters airways. EU Harmonised Classification. Dynamic viscosity: 0.56 mPa s (@25°C) Surface tension: 27.93nM (@25°C)
Hexane (Other Isomers)	Aspiration hazard, Category 1: May be fatal if swallowed and enters airways. EU Harmonised Classification.
Xylene (o, m, p isomers)	Aspiration hazard, Category 1: May be fatal if swallowed and enters airways. Hydrocarbon
Octane (All isomers)	Aspiration hazard, Category 1: May be fatal if swallowed and enters airways. EU Harmonised Classification. Dynamic viscosity: 0.801 mm2/s (@25°C) Surface tension: 21.14 mN/m (@25°C)

Information on likely routes of exposure

Inhalation	Possible – accidental exposure
Ingestion	Possible – accidental exposure
Skin contact	Possible – accidental exposure
Eye contact	Unlikely – accidental exposure

Early onset symptoms related to exposure

May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Toxic if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.

Delayed health effects from exposure

May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child.

Exposure levels and health effects

See Section: 8

Interactive effects

None known

Other information

OSHA Designated Carcinogen	Benzene: Listed
NIOSH Occupational Carcinogen List	Benzene: Listed Gasoline: Listed
NTP Report on Carcinogens	Benzene: Listed Naphthalene: Listed Gasoline: Listed Petroleum: Listed
IARC Monographs	Benzene: Listed Naphthalene: Listed Xylene: Listed Ethylbenzene: Listed Toluene: Listed Ethanol: Listed

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

	Mixture: Hazardous to the aquatic environment, Acute, Category 1: Very toxic to aquatic life with long lasting effects. Hazardous to the aquatic environment, Chronic, Category 1: Very toxic to aquatic life with long lasting effects.
Gasoline	Hazardous to the aquatic environment, Chronic, Category 2: Toxic to aquatic life with long lasting effects. The aquatic toxicity was estimated using the PETROTOX computer model. NOEL (Fish) 0.083 mg/l (Estimated)
Fuels, diesel, no. 2	Hazardous to the aquatic environment, Chronic, Category 2: Toxic to aquatic life with long lasting effects.

	EC50: 4.321 mg/l (EPA, 2012)
Toluene	Hazardous to the aquatic environment, Chronic, Category 3: Harmful to aquatic life with long lasting effects. Chronic Toxicity: NOEC (Fish) mg/l (40 days) 1.4 (Moles, 1981)
Hexane (Other Isomers)	Hazardous to the aquatic environment, Chronic, Category 2: Toxic to aquatic life with long lasting effects. LC50: 3.649 mg/L (EPA 2012)
Xylene (o, m, p isomers)	Hazardous to the aquatic environment, Chronic, Category 3: Harmful to aquatic life with long lasting effects. EU Harmonised Classification Short term: Not classified – LC50 (fish) mg/l 2.6 OECD 203 Long Term: NOEC (Fish) mg/l >1.3 (Walsh et al, 1977)
Octane (All isomers)	Hazardous to the aquatic environment, Acute, Category 1: Very toxic to aquatic life with long lasting effects. EU Harmonised Classification LL50: 2.587 mg/L (CONCAWE, 2010) Hazardous to the aquatic environment, Chronic, Category 1: Very toxic to aquatic life with long lasting effects. EU Harmonised Classification NOELR: 0.579 mg/L (CONCAWE, 2010)
1,2,4-trimethylbenzene	Hazardous to the aquatic environment, Chronic, Category 2: Toxic to aquatic life with long lasting effects. EU Harmonised Classification EC50: 2.356 mg/L (Nabholz V and Mayo-Bean K, 2009)
n-Heptane	Hazardous to the aquatic environment, Acute, Category 1: Very toxic to aquatic life with long lasting effects. EU Harmonised Classification LL50: 2.738 mg/L (CONCAWE, 2010) Hazardous to the aquatic environment, Chronic, Category 1: Very toxic to aquatic life with long lasting effects. EU Harmonised Classification NOELR: 1.284mg/L (CONCAWE, 2010)
Pentane	Hazardous to the aquatic environment, Chronic, Category 2: Toxic to aquatic life with long lasting effects. EU Harmonised Classification NOELR: 6.165 mg/L (Unnamed publication, 2009)
Cumene	Hazardous to the aquatic environment, Chronic, Category 2: Toxic to aquatic life with long lasting effects. EU Harmonised Classification NOEC: 0.38 mg/L (EU RAR, 2001)
Benzene	Hazardous to the aquatic environment, Chronic, Category 3: Harmful to aquatic life with long lasting effects. NOEC: 0.8 mg/L (32 days) (Fish) (ASTM 1984)
N-hexane	Hazardous to the aquatic environment, Chronic, Category 2: Toxic to aquatic life with long lasting effects. EU Harmonised Classification
Cyclohexane	Hazardous to the aquatic environment, Acute, Category 1: Very toxic to aquatic life with long lasting effects. EU Harmonised Classification LC50: 4.53 mg/L (OECD 203) Hazardous to the aquatic environment, Chronic, Category 1: Very toxic to aquatic life with long lasting effects. EU Harmonised Classification EL10: 0.447 mg/L (McGrath et al.. 2015)
Naphthalene	Hazardous to the aquatic environment, Acute, Category 1: Very toxic to aquatic life with long lasting effects. EU Harmonised Classification LC50: 1.6 mg/L (OECD 203) Hazardous to the aquatic environment, Chronic, Category 1: Very toxic to aquatic life with long lasting effects. EU Harmonised Classification

		LC50: 2.1 mg/L (Moles et al. 1981)
	Nonane	Hazardous to the aquatic environment, Acute, Category 1: Very toxic to aquatic life with long lasting effects. Hazardous to the aquatic environment, Chronic, Category 1: Very toxic to aquatic life with long lasting effects.
		No data
Persistence and degradability		No data for the mixture as a whole.
	Gasoline	Readily biodegradable. (OECD 301F) 90.35% Degradation in Water (28 days)
	Fuels, diesel, no. 2	Substance is complex UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance
	Toluene	Readily biodegradable. 69% Degradation in Water (5 days) (Bridie et al. 1979)
	Hexane (Other Isomers)	Readily biodegradable. ~93-94% Degradation in Water (OECD 301 C)
	Xylene (o, m, p isomers)	Readily biodegradable. 98% Degradation in Water (28 Days) (OECD 301 F)
	Ethanol	Readily biodegradable. 82.7% Degradation in Water (5 Days) (Wagner, R, 1976)
	Octane (All isomers)	Readily biodegradable. 70% Degradation in Water (10 days) (Hains et al. 1974)
	1,2,4-trimethylbenzene	Readily biodegradable. Weight of evidence approach >60% Degradation in Water (28 Days) (OECD 301 F)
	n-Heptane	Readily biodegradable. 70% Degradation in Water (10 days) (Hains et al. 1974)
	Pentane	Readily biodegradable. 87% Degradation in Water (28 Days) (OECD 301 F)
	Cumene	Readily biodegradable. 70% Degradation in Water (20 Days) (Price KS et al. 1974)
	Ethylbenzene	Readily biodegradable. 70-80% Degradation in Water (28 Days) (Unnamed publication, 2003)
	Benzene	Readily biodegradable. 81% Degradation in Water (5 days) (OECD 301F)
	N-hexane	Readily biodegradable. 95% Degradation in Water (14 days) (OECD 301F)
	Cyclohexane	Readily biodegradable. 77% Degradation in Water (28 Days) (OECD 301F)
	Naphthalene	Readily biodegradable. >74% Degradation in Water (28 Days) (OECD 301 C)
	Nonane	No data
Bioaccumulative potential		No data for the mixture as a whole.
	Gasoline	The substance has low potential for bioaccumulation. BCF: 7 ((Q)SAR)
	Fuels, diesel, no. 2	Substance is complex UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance
	Toluene	The substance has low potential for bioaccumulation. BCF: 90 (Freitag D et al. 1985)
	Hexane (Other Isomers)	No data
	Xylene (o, m, p isomers)	Not anticipated to bioaccumulate BCF: 25.9 (Walsh et al. 1977)
	Ethanol	Not anticipated to bioaccumulate BCF: <10 (Freitag, D. et al. 1985)
	Octane (All isomers)	Not anticipated to bioaccumulate BCF: 199 L/kg (Donkin, P. et al. 1989)
	1,2,4-trimethylbenzene	Not anticipated to bioaccumulate BCF: 243 (Veith GD and Broderius SJ. 1987)
	n-Heptane	Will bioaccumulate. BCF: 552 L/Kg (Unnamed publication, 2009)
	Pentane	Not anticipated to bioaccumulate BCF: 171 L/kg (Veith GD and Broderius SJ. 1987)
	Cumene	Not anticipated to bioaccumulate

		BCF: 94.69 L/kg (Unnamed publication, 2010)
	Ethylbenzene	Not anticipated to bioaccumulate BCF: 110 L/kg (Roubal, 1978)
	Benzene	Not anticipated to bioaccumulate BCF: < 10 (OECD 305)
	N-hexane	Will bioaccumulate. BCF: 501.187 L/Kg ((Q)SAR) (Veith GD and Broderius SJ. 1987)
	Cyclohexane	Not anticipated to bioaccumulate BCF: < 67 L/kg (Veith et al. 1979)
	Naphthalene	Not anticipated to bioaccumulate BCF: 168 (OECD 305)
	Nonane	No data
Mobility in soil		No data for the mixture as a whole.
	Gasoline	The substance is predicted to have low mobility in soil. Immiscible with water.
	Fuels, diesel, no. 2	Substance is complex UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance
	Toluene	The substance is predicted to have high mobility in soil. Koc: 205 (European Chemicals Bureau, 2003)
	Hexane (Other Isomers)	No data
	Xylene (o, m, p isomers)	The substance has moderate mobility in soil. LogKoc: 2.73 (Hodson & Williams, 1988)
	Ethanol	The substance has high mobility in soil. LogKoc: 0.2 (Schüürmann G et al. 2006)
	Octane (All isomers)	The substance has moderate mobility in soil. LogKoc: 2.64 (Unnamed publication, 2010)
	1,2,4-trimethylbenzene	The substance is predicted to have moderate mobility in soil. Log Koc: 3.04 (Sabljic A and Güsten H. 1995)
	n-Heptane	The substance is predicted to have moderate mobility in soil. Log Koc: 3.12 (Unnamed publication, 2010)
	Pentane	The substance is predicted to have moderate mobility in soil. Log Koc: 2.9 (Sabljic A and Güsten H. 1995)
	Cumene	The substance is predicted to have moderate mobility in soil. Log Koc: 2.946 (Jeng, C.Y. et al. 1992)
	Ethylbenzene	The substance is predicted to have moderate mobility in soil. Log Koc: 3.12 (USEPA, 2008)
	Benzene	The substance has high mobility in soil. Koc: 134 L / Kg.
	N-hexane	The substance is predicted to have moderate mobility in soil. Log Koc: 3.34 (Sabljic A and Güsten H. 1995)
	Cyclohexane	The substance is predicted to have moderate mobility in soil. Log Koc: 2.99 (Sabljic A and Güsten H. 1995)
	Naphthalene	The substance has high mobility in soil. (Lindhardt, 1994)
	Nonane	No data
Other adverse effects		None known.
	Toluene	This chemical is known to leach through soil into ground water under certain conditions.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Dispose of this material and its container as hazardous waste. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point. Disposal should be in accordance with local, state or national legislation. Containers of this material may be hazardous when empty since they retain product residue.

SECTION 14: TRANSPORT INFORMATION

	Road/rail (ADR/RID)	Sea transport (IMDG)	Air (ICAO/IATA)
UN number	UN1268	UN1268	UN1268

UN proper shipping name	PETROLEUM DISTILLATES, N.O.S.	PETROLEUM DISTILLATES, N.O.S.	PETROLEUM DISTILLATES, N.O.S.
Transport hazard class(es)	3	3	3
Packing group	I	I	I
Environmental hazards	Environmentally hazardous substance	Classified as a Marine Pollutant.	Environmentally hazardous substance
Special precautions for user	See Section: 2		
Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable		

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

US Federal Regulations

TSCA Chemical Data Reporting (CDR) Rule	TSCA Inventory Status: All chemicals in this product comply with TSCA rules and regulations including TSCA Section 5 (Inventory Rules).
NIOSH Occupational Carcinogen List	Benzene: Listed Gasoline: Listed Hydrogen Sulfide: Listed (De Minimis limit: 1%)
EPCRA Section 313	Benzene: Listed (De Minimis limit: 0.1%) N-hexane: Listed (De Minimis limit: 1%) Cumene: Listed (De Minimis limit: 1%) Naphthalene: Listed (De Minimis limit: 0.1%) Xylene: Listed (De Minimis limit: 1%) Ethylbenzene: Listed (De Minimis limit: 0.1%) Toluene: Listed (De Minimis limit: 1%) 1,2,4-trimethylbenzene: Listed (De Minimis limit: 1%) Cyclohexane: Listed (De Minimis limit: 1%)
CWA 307- Toxic	Hydrogen Sulfide: Listed Benzene: Listed Naphthalene: Listed Ethylbenzene: Listed Toluene: Listed
CERCLA - Hazardous Substances	Hydrogen Sulfide: Listed (RQ = 100 lbs) Benzene: Listed (RQ = 10 lbs) N-hexane: Listed (RQ = 5,000 lbs) Cumene: Listed (RQ = 5,000 lbs) Naphthalene: Listed (RQ = 100 lbs) Xylene: Listed (De Minimis limit: 1%) (RQ = 100 lbs) Ethylbenzene: Listed (RQ = 1000 lbs) Toluene: Listed (RQ = 1000 lbs)
CWA Section 311 List of Hazardous Substances	Hydrogen Sulfide: Listed Benzene: Listed Naphthalene: Listed Xylene: Listed Ethylbenzene: Listed Toluene: Listed Cyclohexane: Listed

US State Regulations

Proposition 65 (California)	Benzene: Listed N-hexane: Listed Cumene: Listed Naphthalene: Listed Ethylbenzene: Listed Toluene: Listed Ethanol: Listed
Massachusetts, New Jersey, Pennsylvania, Rhode Island- State Right to Know Lists	Petroleum: Listed Hydrogen Sulfide: Listed Sulfur: Listed

	Benzene: Listed N-hexane: Listed Cumene: Listed Naphthalene: Listed Xylene: Listed Ethylbenzene: Listed Toluene: Listed Gasoline: Listed (Massachusetts only) Hexane (Other Isomers): Listed (Massachusetts only) Octane (All isomers): Listed Ethanol: Listed Pentane: Listed 1,2,4-trimethylbenzene: Listed n-Heptane: Listed
New York -State Right to Know Lists	Petroleum: Listed Hydrogen Sulfide: Listed Sulfur: Listed Benzene: Listed N-hexane: Listed Cumene: Listed Naphthalene: Listed Xylene: Listed Ethylbenzene: Listed Toluene: Listed Ethanol: Listed Pentane: Listed 1,2,4-trimethylbenzene: Listed n-Heptane: Listed
Minnesota - State Right to Know Lists	Petroleum: Listed Hydrogen Sulfide: Listed Benzene: Listed N-hexane: Listed Cumene: Listed Naphthalene: Listed Xylene: Listed Ethylbenzene: Listed Toluene: Listed Ethanol: Listed Pentane: Listed 1,2,4-trimethylbenzene: Listed n-Heptane: Listed
Massachusetts – Toxic Use reduction act	Petroleum: Listed Hydrogen Sulfide: Listed Sulfur: Listed Benzene: Listed N-hexane: Listed Cumene: Listed Naphthalene: Listed Xylene: Listed Ethylbenzene: Listed Toluene: Listed Ethanol: Listed Pentane: Listed 1,2,4-trimethylbenzene: Listed n-Heptane: Listed

Non-Regional

IARC Monographs	Petroleum: Listed Benzene: Listed Naphthalene: Listed Xylene: Listed Ethylbenzene: Listed

Toluene: Listed
Gasoline: Listed
Ethanol: Listed

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Updated substance / mixture classification. Updated version and date. New format has been issued, all sections have been updated to include new information. Review SDS with care.

Version	3.0
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Date of First Issue	Not available. 2ND ISSUE RELEASED JUNE, 15 2015

This Safety Data Sheet was prepared in accordance with US Regulation OSHA HCS (29 CFR 1910.1200)

References:

Existing Safety Data Sheet (SDS),

EU Harmonised Classification and Existing ECHA registration for Gasoline (CAS No. 86290-81-5); Fuels, diesel, no. 2 (CAS No. 68476-34-6); Toluene (CAS No. 108-88-3); Hexane (Other Isomers) (CAS No. 96-14-0); Xylene (o, m, p isomers) (CAS No.1330-20-7); Octane (All isomers) (CAS No. 111-65-9); Ethanol (CAS No. 64-17-5); 1,2,4-trimethylbenzene (CAS No. 95-63-6); n-Heptane (CAS No. 142-82-5); Pentane (CAS No. 109-66-0); Cumene (CAS No. 98-82-8); Ethylbenzene (CAS No. 100-41-4); Benzene (CAS No. 71-43-2); n-hexane (CAS No. 110-54-3); Cyclohexane (CAS No. 110-82-7); Naphthalene (CAS No. 91-20-3) and Nonane (CAS No. 111-84-2).

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Classification of the substance or mixture in accordance with paragraph (d) of 29 CFR 1910.1200	Classification procedure
Flammable Liquid, Category 1	Flash point (°C) / Boiling Point (°C)
Aspiration hazard, Category 1	High percentage inclusion of components with Aspiration hazard
Skin Corrosion/Irritation, Category 2	Threshold Calculation
Eye Irritation, Category 2	Threshold Calculation
Acute toxicity, Category 3 (Inhalation)	ATE Calculation method
Specific target organ toxicity — single exposure, Category 3 (Respiratory Irritation)	Threshold Calculation
Specific target organ toxicity — single exposure, Category 3 (Narcotic effects)	Threshold Calculation
Carcinogen, Category 1A	Threshold Calculation
Germ cell mutagenicity, Category 1B	Threshold Calculation
Reproductive toxicity, Category 2	Threshold Calculation
Specific target organ toxicity — repeated exposure, Category 2	Threshold Calculation
Hazardous to the aquatic environment, Acute, Category 1	Summation Calculation
Hazardous to the aquatic environment, Chronic, Category 1	Summation Calculation

Legend

ADR/RID	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road / RID: Regulations concerning the international railway transport of dangerous goods
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor (BCF)
CAS	CAS: Chemical Abstracts Service
EC	European Community
EN	European Standard
EU	European Union
IATA	International Air Transport Association
ICAO/IATA	ICAO: International Civil Aviation Organization / IATA: International Air Transport Association
IMDG	International Maritime Dangerous Goods
Koc	Soil Adsorption Coefficient
Kow	Partition coefficient: n-octanol/water
LC50	Lethal concentration 50
LD50	Lethal dose 50
LOAEL	Lowest dose adverse effect level
LTEL	Long Term Exposure Limit
NOAEC	No Observed Averse Effect concentration
NOAEL	No Observed Adverse Effect Level
OECD	Organisation for Economic Cooperation and Development
PBT	PBT: Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration
(Q)SAR	Quantitative structure-activity relationship (QSAR)
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
UN	United Nations
vPvB	very Persistent and very Bioaccumulative

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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