# SAFETY DATA SHEET

SUNOCO EVO 10



### Section 1. Identification

**GHS** product identifier

: SUNOCO EVO 10

Other means of identification

: Oxygenated unleaded racing gasoline

Product code

: 229700

**Product use** 

: Unleaded racing gasoline.

California Air Resources Board (CARB): This product cannot be sold, offered for sale, supplied or offered for supply for motor vehicles in California except in competition

racing. Not Legal For Use in Any Other Motor Vehicle.

Supplier's details

: Sunoco LP

3801 West Chester Pike

Newtown Square, Pennsylvania 19073

Sunoco Race Fuels email: performanceproducts@sunoco.com

http://www.sunocoracefuels.com

e-mail address of person responsible for this SDS

: sunocomsds@sunoco.com

Emergency telephone

number (with hours of

operation)

: Sunoco LP: (800) 964-8861

Chemtrec: 1-800-424-9300 (Available 24 hours/7 days per week)

Product Safety Information: 1-888-567-3066

## Section 2. Hazards identification

**OSHA/HCS** status

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

: FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2

**TOXIC TO REPRODUCTION - Category 2** 

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -

Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

ASPIRATION HAZARD - Category 1

**GHS label elements** 

Hazard pictograms







Signal word

: Danger

**Hazard statements** 

: Highly flammable liquid and vapor.

Harmful if swallowed.

May be fatal if swallowed and enters airways.

Causes skin irritation.

May cause drowsiness or dizziness.

Suspected of damaging fertility or the unborn child.

Causes damage to organs. (central nervous system (CNS), optic nerve)

May cause damage to organs through prolonged or repeated exposure. (cardiovascular

system, central nervous system (CNS), kidneys, liver, respiratory system)

**Precautionary statements** 

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### Section 2. Hazards identification

#### Preventior

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

#### Response

: IF exposed: Call a POISON CENTER or doctor. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention.

**Storage** 

: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified

: Static-accumulating flammable liquid. Vapors may form explosive mixtures with air.

Product contains methanol. Poison, May be fatal or cause blindness if swallowed.

Cannot be made non-poisonous.

## Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Other means of identification

: Oxygenated unleaded racing gasoline

Product code : 229700

Ingredient name	%	CAS number
isooctane	30 - 50	26635-64-3
toluene	30 - 40	108-88-3
isopentane	10 - 20	78-78-4
ethanol	11 - 15	64-17-5
methanol	10 - 15	67-56-1
xylene	0.01 - 0.013	1330-20-7
benzene	0.002 - 0.01	71-43-2
n-hexane	0.001 - 0.01	110-54-3
ethylbenzene	0.001 - 0.01	100-41-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

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Inhalation

### Section 4. First aid measures

#### **Description of necessary first aid measures**

**Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower

eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10

minutes. Get medical attention. If necessary, call a poison center or physician.

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Get medical attention. If necessary, call a poison center or physician. If unconscious,

place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. If necessary,

call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly

before reuse.

**Ingestion**: Get medical attention immediately. Call a poison center or physician. Wash out mouth

with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an

unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar,

tie, belt or waistband.

#### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

**Eye contact**: No known significant effects or critical hazards.

**Inhalation** : Causes damage to organs following a single exposure if inhaled. Can cause central

nervous system (CNS) depression. May cause drowsiness or dizziness.

**Skin contact**: Causes damage to organs following a single exposure in contact with skin. Causes skin

irritation.

**Ingestion**: Harmful if swallowed. Causes damage to organs following a single exposure if

swallowed. Can cause central nervous system (CNS) depression. May be fatal if

swallowed and enters airways.

#### Over-exposure signs/symptoms

**Eye contact**: Adverse symptoms may include the following:

pain or irritation watering redness

**Inhalation** : Adverse symptoms may include the following:

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations

**Skin contact**: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

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## Section 4. First aid measures

Ingestion

: Adverse symptoms may include the following:

nausea or vomiting reduced fetal weight increase in fetal deaths skeletal malformations

#### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

: Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments

: No specific treatment.

**Protection of first-aiders** 

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

#### Extinguishing media

Suitable extinguishing

media

Unsuitable extinguishing media

: Use dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray (fog). Use an

extinguishing agent suitable for the surrounding fire.

: Do not use water jet.

Specific hazards arising from the chemical

: Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon dioxide

carbon monoxide asphyxiants

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark

: Highly flammable liquid and vapor.

Remark (Explosibility)

: Vapors may form explosive mixtures with air.

### Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

**Environmental precautions** 

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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## Section 6. Accidental release measures

#### Methods and materials for containment and cleaning up

#### Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

#### Large spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

#### Precautions for safe handling

#### **Protective measures**

: Put on appropriate personal protective equipment (see Section 8). Avoid exposure obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

# including any incompatibilities

Conditions for safe storage, : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

#### **Control parameters**

Occupational exposure limits

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Ingredient name	Exposure limits
isooctane	ACGIH TLV (United States, 1/2022).
	[Octane]
	TWA: 300 ppm 8 hours.
toluene	OSHA PEL Z2 (United States, 2/2013).
	TWA: 200 ppm 8 hours.
	CEIL: 300 ppm
	AMP: 500 ppm 10 minutes.
	NIOSH REL (United States, 10/2020).
	TWA: 100 ppm 10 hours.
	TWA: 375 mg/m³ 10 hours.
	STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes.
	ACGIH TLV (United States, 1/2022).
	Ototoxicant.
	TWA: 20 ppm 8 hours.
	OSHA PEL 1989 (United States, 3/1989).
	TWA: 100 ppm 8 hours.
	TWA: 375 mg/m <sup>3</sup> 8 hours.
	STEL: 150 ppm 15 minutes.
	STEL: 560 mg/m³ 15 minutes.
inamantana	ACOULTLY (United 2011) - 4/0000
isopentane	ACGIH TLV (United States, 1/2022).
	[Pentane] TWA: 1000 ppm 8 hours.
	TWA. 1000 ppin o nodis.
methanol	ACGIH TLV (United States, 1/2022).
	Absorbed through skin.
	TWA: 200 ppm 8 hours.
	TWA: 262 mg/m <sup>3</sup> 8 hours.
	STEL: 250 ppm 15 minutes. STEL: 328 mg/m³ 15 minutes.
	NIOSH REL (United States, 10/2020).
	Absorbed through skin.
	TWA: 200 ppm 10 hours.
	TWA: 260 mg/m <sup>3</sup> 10 hours.
	STEL: 250 ppm 15 minutes.
	STEL: 325 mg/m³ 15 minutes.
	OSHA PEL (United States, 5/2018).
	TWA: 200 ppm 8 hours.
	TWA: 260 mg/m <sup>3</sup> 8 hours.
	OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.
	TWA: 200 ppm 8 hours.
	TWA: 200 ppin 6 hodrs. TWA: 260 mg/m <sup>3</sup> 8 hours.
	STEL: 250 ppm 15 minutes.
	STEL: 325 mg/m³ 15 minutes.
xylene	ACGIH TLV (United States, 1/2022). [xylene]
	TWA: 20 ppm 8 hours.
	TWA: 434 mg/m <sup>3</sup> 8 hours.
	STEL: 651 mg/m³ 15 minutes.
	OSHA PEL (United States, 5/2018). [Xylenes]
	TWA: 100 ppm 8 hours.
	TWA: 100 ppm 6 nours.  TWA: 435 mg/m <sup>3</sup> 8 hours.
	OSHA PEL 1989 (United States, 3/1989).
	[Xylenes (o-, m-, p-isomers)]
	TWA: 100 ppm 8 hours.
	TWA: 435 mg/m <sup>3</sup> 8 hours.
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STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes.

ACGIH TLV (United States, 1/2022).

Absorbed through skin.

TWA: 0.5 ppm 8 hours. TWA: 1.6 mg/m³ 8 hours. STEL: 2.5 ppm 15 minutes. STEL: 8 mg/m³ 15 minutes.

OSHA PEL Z2 (United States, 2/2013).

TWA: 10 ppm 8 hours.

CEIL: 25 ppm

AMP: 50 ppm 10 minutes.

NIOSH REL (United States, 10/2020).

TWA: 0.1 ppm 10 hours. STEL: 1 ppm 15 minutes.

OSHA PEL (United States, 5/2018).

TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.

OSHA PEL 1989 (United States, 3/1989).

TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.

ACGIH TLV (United States, 1/2022).

Ototoxicant.

TWA: 20 ppm 8 hours.

NIOSH REL (United States, 10/2020).

TWA: 100 ppm 10 hours.
TWA: 435 mg/m³ 10 hours.
STEL: 125 ppm 15 minutes.
STEL: 545 mg/m³ 15 minutes.

OSHA PEL (United States, 5/2018).

TWA: 100 ppm 8 hours. TWA: 435 mg/m<sup>3</sup> 8 hours.

OSHA PEL 1989 (United States, 3/1989).

TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes.

ACGIH TLV (United States, 1/2022).

**Absorbed through skin.** TWA: 50 ppm 8 hours.

NIOSH REL (United States, 10/2020).

TWA: 50 ppm 10 hours. TWA: 180 mg/m³ 10 hours. OSHA PEL (United States, 5/2018).

TWA: 500 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.

OSHA PEL 1989 (United States, 3/1989).

TWA: 50 ppm 8 hours. TWA: 180 mg/m<sup>3</sup> 8 hours.

benzene

ethylbenzene

n-hexane

**Biological exposure indices** 

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Ingredient name	Exposure indices
toluene	ACGIH BEI (United States, 1/2022)  BEI: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift.  BEI: 0.3 mg/g creatinine, o-cresol [in urine].  Sampling time: end of shift.  BEI: 0.02 mg/l, toluene [in blood]. Sampling time: prior to last shift of workweek.
methanol	ACGIH BEI (United States, 1/2022) BEI: 15 mg/l, methanol [in urine]. Sampling time: end of shift.
xylene	ACGIH BEI (United States, 1/2022) [XYLENES] BEI: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift.
benzene	ACGIH BEI (United States, 1/2022) BEI: 25 μg/g creatinine, S-phenylmercapturic acid [in urine]. Sampling time: end of shift. BEI: 500 μg/g creatinine, t,t-muconic acid [in urine]. Sampling time: end of shift.
ethylbenzene	ACGIH BEI (United States, 1/2022) BEI: 0.15 g/g creatinine, sum of mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: end of shift.
n-hexane	ACGIH BEI (United States, 1/2022) BEI: 0.5 mg/l, 2,5-hexanedion [in urine]. Sampling time: end of shift.

# Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

# **Environmental exposure** controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### **Individual protection measures**

#### Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

#### Skin protection

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**Hand protection** 

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Recommended:** > 8 hours (breakthrough time): nitrile rubber, Viton®, Teflon.

**Body protection** 

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Recommended:** Ensure an MSHA/NIOSH-approved respirator or equivalent is used.

# **SECTION 9: Physical and chemical properties and safety characteristics**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance** 

Physical state : Liquid.
Color : Green.
Odor : Gasoline
Odor threshold : <1 ppm

pH : Not applicable.Melting point/freezing point : Not available.

Boiling point, initial boiling

point, and boiling range

: 38 to 127°C (100.4 to 260.6°F) [ASTM D 86]

Flash point : Closed cup: -40°C (-40°F)

**Flammability** : Highly flammable liquid and vapor.

Lower and upper explosion limit/flammability limit

: Lower: 1.5% Upper: 7.6%

**Vapor pressure** : **7**.1 PSI [@ 100°F [37.8°C]]

Relative vapor density : Not available.

Relative density : 0.76 [ASTM D 287]

**Solubility in water** : 0 - 15% **Partition coefficient: n-** : 2 to 7

octanol/water

**Auto-ignition temperature** : 280°C (536°F) [Estimated.]

Decomposition temperature : Not available. Viscosity : Not available.

**Explosive properties** : Vapors may form explosive mixtures with air.

Oxidizing properties : Not available.

Particle characteristics

Median particle size : Not applicable.

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## Section 10. Stability and reactivity

**Reactivity**: No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld,

braze, solder, drill, grind or expose containers to heat or sources of ignition. Vapors may

form explosive mixtures with air.

**Incompatible materials**: Reactive or incompatible with the following materials:

oxidizing materials strong acids

strong alkalis halogenated compounds

hydrogen peroxide chlorine

Hazardous decomposition

products not be

: Under normal conditions of storage and use, hazardous decomposition products should

not be produced.

# **Section 11. Toxicological information**

#### Information on toxicological effects

#### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
isooctane	LC50 Inhalation Vapor	Rat - Male, Female	>33.52 mg/l	4 hours
toluene	LC50 Inhalation Vapor	Rat - Male, Female	>20 mg/l	4 hours
	LD50 Dermal	Rabbit	12000 mg/kg	-
	LD50 Oral	Rat	2600 mg/kg	-
isopentane	LC50 Inhalation Gas.	Rat - Male, Female	>20000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	280000 mg/m³	4 hours
	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
methanol	LC50 Inhalation Vapor	Rat - Male, Female	128.2 mg/l	4 hours
	LC50 Inhalation Vapor	Rat - Male, Female	87.5 mg/l	6 hours
	LD50 Dermal	Rabbit	17100 mg/kg	-
	LD50 Oral	Rat - Male, Female	1187 to 2769 mg/ kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapor	Rat - Male	6700 ppm	4 hours

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	LD50 Dermal	Rabbit - Male	12126 mg/kg	-
	LD50 Dermal	Rabbit	>1700 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
benzene	LC50 Inhalation Vapor	Rabbit	44.66 mg/l	4 hours
	LC50 Inhalation Vapor	Rat - Female	43.7 mg/l	4 hours
	LD50 Dermal	Rabbit	>8200 mg/kg	-
	LD50 Oral	Rat - Male	>2000 mg/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.4 mg/l	4 hours
	LD50 Dermal	Rabbit	15400 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
n-hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LD50 Dermal	Rabbit	3000 mg/kg	-
	LD50 Oral	Rat	25 g/kg	-

Conclusion/Summary

: Harmful if swallowed.

#### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
toluene	Eyes - Non-irritating to the eyes.	Rabbit	-	1 minutes 0.1 ml	7 days
	Skin - Irritant	Rabbit	-	72 hours 0.5 ml	-
methanol	Eyes - Non-irritating to the eyes.	Rabbit	-	-	8 days
	Skin - Non-irritating to the skin.	Rabbit	-	20 hours	8 days
xylene	Eyes - Mild irritant	Rabbit	-	1 hours	7 days
	Skin - Irritant	Rabbit	-	4 hours 0.5 ml	7 days
benzene	Eyes - Irritant	Rabbit	-	1 minutes 2 drops to eye, undiluted	72 hours
	Skin - Irritant	Rabbit	-	4 hours 0.5 ml	72 hours
n-hexane	Eyes - Non-irritating to the eyes.	Rabbit	-	72 hours 0.01 ml	-
	Eyes - Non-irritating to the eyes.	Rabbit	-	72 hours 0.01 ml	-
	Skin - Irritant	Rabbit	_	24 hours	-

Conclusion/Summary

**Skin**: Causes skin irritation.

**Eyes**: Based on available data, the classification criteria are not met.

**Respiratory**: Not available.

**Sensitization** 

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Product/ingredient name	Route of exposure	Species	Result
methanol	skin	Guinea pig	Not sensitizing
xylene	skin	Mouse	Not sensitizing

#### Conclusion/Summary

**Skin**: Based on available data, the classification criteria are not met.

#### **Mutagenicity**

Product/ingredient name	Test	Experiment	Result
methanol	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Negative
	-	Experiment: In vitro Subject: Mammalian-Animal	Negative
benzene	474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Positive

### Conclusion/Summary

: Based on available data, the classification criteria are not met.

#### **Carcinogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
methanol	Negative - Inhalation - TCLo	Mouse	>1.3 g/m³ NOAEL	1.5 years
	Negative - Inhalation - TCLo	Rat	>1.3 g/m³ NOAEL	2 years
benzene	Positive - Oral - LOAEL	Rat - Male, Female	0 0	103 weeks; 5 days per week

# Conclusion/Summary

: Based on available data, the classification criteria are not met.

#### **Classification**

Product/ingredient name	OSHA	IARC	NTP
toluene	-	3	-
xylene	-	3	-
benzene	+	1	Known to be a human carcinogen.
ethylbenzene	+	2B	-

#### **Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
toluene	Negative	Negative	Negative	Rat - Male, Female	Inhalation: 600 ppm	90 days; 6 hours per day
	-	Positive	-	Rat - Male	Inhalation: 2000 ppm	90 days; 6 hours per day
	-	Negative	Positive	Rat - Female	Inhalation: 2000 ppm	90 days; 6 hours per day
n-hexane	Negative	Negative	Negative	Rat - Male, Female	Inhalation: 9000 ppm	5 weeks; 6 hours per

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# Section 11. Toxicological information

day

**Conclusion/Summary**: Suspected of damaging fertility.

**Teratogenicity** 

**Conclusion/Summary**: Suspected of damaging the unborn child.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
isooctane	Category 3	-	Narcotic effects
toluene	Category 3	-	Narcotic effects
isopentane	Category 3	-	Narcotic effects
methanol	Category 1	-	central nervous system (CNS), optic nerve
n-hexane	Category 3	-	Narcotic effects

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
toluene	Category 2	-	cardiovascular system, central nervous system (CNS), kidneys, liver, respiratory system
ethylbenzene	Category 2	-	hearing organs
n-hexane	Category 2	inhalation	nervous system

#### **Aspiration hazard**

Name	Result
SUNOCO EVO 10	ASPIRATION HAZARD - Category 1
isooctane	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1
isopentane	ASPIRATION HAZARD - Category 1
benzene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
n-hexane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

: Not available.

#### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : Causes damage to organs following a single exposure if inhaled. Can cause central

nervous system (CNS) depression. May cause drowsiness or dizziness.

**Skin contact**: Causes damage to organs following a single exposure in contact with skin. Causes

skin irritation.

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# Section 11. Toxicological information

Ingestion

: Harmful if swallowed. Causes damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact**: Adverse symptoms may include the following:

pain or irritation watering redness

**Inhalation**: Adverse symptoms may include the following:

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations

**Skin contact**: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

**Ingestion**: Adverse symptoms may include the following:

nausea or vomiting reduced fetal weight increase in fetal deaths skeletal malformations

#### Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate

effects

: Not available.

Circuts

Potential delayed effects : Not available.

Long term exposure

**Potential immediate** 

: Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available

**Conclusion/Summary**: Not available.

**General**: May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.
 Reproductive toxicity : Suspected of damaging fertility or the unborn child.

#### **Numerical measures of toxicity**

**Acute toxicity estimates** 

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Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/ I)
SUNOCO EVO 10	933.6	2800.9	N/A	28.0	N/A
isopentane	N/A	N/A	N/A	280	N/A
methanol	100	300	N/A	3	N/A
xylene	3500	1100	5000	N/A	N/A
benzene	2500	N/A	N/A	43.7	N/A
ethylbenzene	3500	15400	N/A	17.4	N/A
n-hexane	25000	3000	48000	N/A	N/A

# Section 12. Ecological information

### **Toxicity**

Product/ingredient name	Result	Species	Exposure
toluene	EC50 433 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	EC50 5.6 to 9.83 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	LC50 11 to 15 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
isopentane	EC50 2.3 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
methanol	EC50 22000 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	EC50 >1000 mg/l Fresh water	Micro-organism	3 hours
	Acute EC50 18260 mg/l Fresh water	Daphnia - Daphnia magna	96 hours
	Acute LC50 15400 mg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 7900 mg/l Fresh water	Fish - Oryzias latipes	200 hours
xylene	EC50 0.0084 mg/l	Micro-organism	24 hours
	LC50 0.6 mg/l Fresh water	Daphnia - Water Flea	48 hours
	LC50 2.661 to 4.093 mg/l Fresh water	Fish - Pimephales promelas	96 hours
benzene	EC50 29 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	EC50 8.76 to 15.6 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	LC50 28.6 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
ethylbenzene	EC50 1.7 to 7.6 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	EC50 1.8 to 2.4 mg/l	Daphnia - Daphnia magna	48 hours
	EC50 96 mg/l	Micro-organism	24 hours
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## **Section 12. Ecological information**

U			
	LC50 9.1 to 15.6 mg/l	Fish - Pimephales promelas	96 hours
n-hexane	EC50 1000 mg/l Fresh water	Daphnia - Daphnia Magna	24 hours
	LC50 2.1 to 2.98 mg/l Fresh water	Fish - Pimephales promelas	96 hours

**Conclusion/Summary** 

: Very toxic to aquatic life with long lasting effects.

#### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
methanol	-	97 % - Readily - 20 days	ThOD, BOD = Biochemical Oxygen Demand	-

Conclusion/Summary

: There are no data available on the mixture itself.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
methanol	-	50%; 17.2 day(s)	Readily

#### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
SUNOCO EVO 10	2 to 7	-	high
toluene	2.73	90	low
isopentane	3	171	low
methanol	-0.77	1	low
xylene	3.12	8.1 to 25.9	low
benzene	2.13	11	low
ethylbenzene	3.6	-	low
n-hexane	4	501.187	high

#### **Mobility in soil**

Soil/water partition coefficient (Koc)

: Not available.

**Mobility** : Not available.

Other adverse effects

: No known significant effects or critical hazards.

## Section 13. Disposal considerations

#### **Disposal methods**

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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# Section 13. Disposal considerations

#### United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS#	Status	Reference number
Toluene	108-88-3	Listed	U220
Methanol (I)	67-56-1	Listed	U154

## **Section 14. Transport information**

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN3475	UN3475	UN3475	UN3475	UN3475	UN3475
UN proper shipping name	Ethanol and gasoline mixture	ETHANOL AND GASOLINE MIXTURE	MEZCLA DE ETANOL Y GASOLINA	ETHANOL AND GASOLINE MIXTURE	ETHANOL AND GASOLINE MIXTURE	Ethanol and gasoline mixture
Transport hazard class(es)	3	3	3	3	3	3
Label	TAMMAT LOD					
Packing group	II	II	II	II	II	II
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Marine Pollutant: Yes	Yes. The environmentally hazardous substance mark is not required.

#### **Additional information**

**DOT Classification** 

: <u>Reportable quantity</u> 2500 lbs / 1135 kg [394.52 gal / 1493.4 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

**Limited quantity** Yes.

<u>Packaging instruction</u> Exceptions: 150. Non-bulk: 202. Bulk: 242. <u>Quantity limitation</u> Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L.

Special provisions 144, 177, IB2, T4, TP1

**TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous

Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.

Explosive Limit and Limited Quantity Index 30
Passenger Carrying Vessel Index Forbidden
Passenger Carrying Road or Rail Index 5

**Special provisions** 150

Mexico Classification ADR/RID

: Special provisions 333

: The environmentally hazardous substance mark is not required when transported in

sizes of ≤5 L or ≤5 kg.

**Hazard identification number** 33

Limited quantity 1 L

Special provisions 333, 664

Tunnel code (D/E)

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: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Emergency schedules F-E, S-E

Special provisions 333

**IATA** : The environmentally hazardous substance mark may appear if required by other

transportation regulations.

Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger

Aircraft: 1 L. Packaging instructions: Y341.

**Special provisions** A156

Special precautions for user : Transport within user's premises: always transport in closed containers that are

upright and secure. Ensure that persons transporting the product know what to do in the

event of an accident or spillage.

Transport in bulk according: Not applicable.

to IMO instruments

### Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 307: toluene; benzene; ethylbenzene

Clean Water Act (CWA) 311: toluene; xylene; benzene; ethylbenzene Clean Air Act (CAA) 112 regulated flammable substances: isopentane

Clean Air Act Section 112

(b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602

Class I Substances

: Not listed

**Clean Air Act Section 602** 

Class II Substances

: Not listed

**DEA List I Chemicals** 

(Precursor Chemicals)

: Not listed

**DEA List II Chemicals** (Essential Chemicals)

: Listed

#### **SARA 302/304**

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

**SARA 311/312** 

Classification : FLAMMABLE LIQUIDS - Category 2

> ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2

**TOXIC TO REPRODUCTION - Category 2** 

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -

Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

ASPIRATION HAZARD - Category 1

#### Composition/information on ingredients

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# Section 15. Regulatory information

Name	%	Classification
isooctane	≥30 - ≤50	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
toluene	≥30 - ≤40	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1
isopentane	≥10 - ≤20	FLAMMABLE LIQUIDS - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
ethanol	≥11 - ≤15	FLAMMABLE LIQUIDS - Category 2
methanol	≥10 - ≤15	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
xylene	≥0.01 - ≤0.13	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2
benzene	≥0.002 - ≤0.01	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1A ASPIRATION HAZARD - Category 1
n-hexane	≥0.001 - ≤0.01	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1
ethylbenzene	≥0.001 - ≤0.01	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1

**SARA 313** 

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## Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements	1		≥30 - ≤40 ≥10 - ≤15
Supplier notification	1		≥30 - ≤40 ≥10 - ≤15

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

#### State regulations

**Massachusetts** : The following components are listed: TOLUENE; ISOPENTANE; ETHYL ALCOHOL;

**METHANOL** 

**New York** : The following components are listed: Toluene; Methanol

: The following components are listed: TOLUENE; ISOPENTANE; ETHYL ALCOHOL; **New Jersey** 

METHYL ALCOHOL

Pennsylvania : The following components are listed: ISOOCTANE; BENZENE, METHYL-; BUTANE,

2-METHYL-; ETHANOL; METHANOL

#### California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Benzene, which is known to the State of California. to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer, and Toluene, Methanol and n-hexane, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Toluene	-	Yes.
Methanol	-	Yes.
Benzene	Yes.	Yes.
Ethylbenzene	Yes.	-
n-hexane	-	Yes.

#### VOC

100%

#### **International regulations**

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### **Montreal Protocol**

Not listed.

#### **Stockholm Convention on Persistent Organic Pollutants**

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### **UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

#### **Inventory list**

Canada : At least one component is not listed in DSL but all such components are listed in

China : All components are listed or exempted.

**Eurasian Economic Union** : Russian Federation inventory: All components are listed or exempted.

Japan : Japan inventory (CSCL):

All components are listed or exempted.

## Section 15. Regulatory information

New Zealand : All components are listed or exempted.
Philippines : All components are listed or exempted.
Republic of Korea : All components are listed or exempted.
Taiwan : All components are listed or exempted.
Thailand : All components are listed or exempted.
United States : All components are active or exempted.
Viet Nam : All components are listed or exempted.

## Section 16. Other information

#### National Fire Protection Association (U.S.A.)



#### Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
SKIN IRRITATION - Category 2	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -	Calculation method
Category 3	
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Expert judgment

#### **History**

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**Key to abbreviations** : ADR = The European Agreement concerning the International Carriage of Dangerous

Goods by Road

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DOT = Department of Transportation

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available

RID = The Regulations concerning the International Carriage of Dangerous Goods by

Rail

SGG = Segregation Group

TDG = Transportation of Dangerous Goods

UN = United Nations

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## Section 16. Other information

#### References

: API (1977) Mutagenicity evaluation of unleaded gasoline. Study conducted by Litton Bionetics. API Med. Res. Publ. 28-30173. Washington DC: American Petroleum Institute.

API (1983) Carcinogenic potential of key petroleum products. Study conducted by Eppley Institute for Research in Cancer, University of Nebraska Medical School. API Med. Res. Publ. 30-31646. Washington DC: American Petroleum Institute.

API (1995) Primary skin irritation study in rabbits of API 91-01 and PS-6. Unleaded test gasolines. Study conducted by Hill Top Biolabs Inc. API Toxicology Report No. 409. Washington DC: American Petroleum Institute.

API (2005) Baseline gasoline vapor condensate: a 13-week whole-body inhalation toxicity study in rats with neurotoxicity assessments and 4-week in vivo genotoxicity and immunotoxicity assessments. Study conducted by Huntingdon Life Sciences. Study No. 00-6125. Washington DC: American Petroleum Institute.

ARCO (1986-A) Primary eye irritation study in rabbits administered test article F-64-01 unleaded Watson premium gasoline. UBTL Study No. 60583. Los Angeles CA: ARCO.

ARCO (1986-B) Dermal sensitization study in guinea pigs administered test article F-64-01 unleaded premium gasoline. UBTL Study No. 60613. Los Angeles CA: ARCO.

ARCO (1986-C) Twenty-eight (28) day dermal toxicity study in rats on test article F-64-01 unleaded Watson premium gasoline. UBTL Study No. 60761. Los Angeles CA: ARCO.

Davis, A. et al (1960) The effects on human volunteers of exposure to air containing gasoline vapor. Arch Environ Health 1, 548-554.

Drinker, P. et al (1943) The threshold toxicity of gasoline vapor. J Ind Hyg Toxicol 25, 6, 225-232.

Halder, C.A. et al (1985) Hydrocarbon nephropathy in male rats: identification of the nephrotoxic components of unleaded gasoline. Toxicol Ind Health 1, 3, 67-87.

McKee, R.H. et al (2000) Assessment in rats of the reproductive toxicity of gasoline from a gasoline vapor recovery unit. Reprod Toxicol 14, 4, 337-353.

Roberts, L. et al (2001) Developmental toxicity evaluation of unleaded gasoline vapor in the rat. Reprod Toxicol 15, 5, 487-494.

Short, B.G. et al (1989) Promoting effects of unleaded gasoline and 2,2,4-trimethylpentane on the development of atypical cell foci and renal tubular cell tumors in rats exposed to N-ethyl-N-hydroxy-ethylnitrosamine. Cancer Research 49, 22, 6369-6378.

Indicates information that has changed from previously issued version.

#### Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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