### SAFETY DATA SHEET

### SUNOCO EXO2



### **Section 1. Identification**

**GHS** product identifier

: SUNOCO EXO2

Other means of identification

: Oxygenated leaded racing gasoline

Product code

: 136700

Product use

: Leaded racing gasoline with Ethanol

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
CARCINOGENICITY - Category 1B

TOXIC TO REPRODUCTION - Category 1A

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.

May cause cancer.

May damage fertility or the unborn child.

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

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### Section 2. Hazards identification

May cause damage to organs through prolonged or repeated exposure. (cardiovascular system, central nervous system (CNS), kidneys, liver, respiratory system) (inhalation)

#### **Precautionary statements**

Prevention

: 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 leaded racing gasoline

Product code : 136700

Ingredient name	%	CAS number
isooctane	25 - 50	26635-64-3
Naphtha (petroleum), light alkylate	15 - 30	64741-66-8
ethanol	10 - 25	64-17-5
toluene	10 - 20	108-88-3
methanol	7 - 15	67-56-1
isopentane	3 - 10	78-78-4
tetraethyllead	0.1 - 0.2	78-00-2

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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### 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.

Inhalation: 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. Wash contaminated clothing thoroughly with water before removing it, or wear

gloves. 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

### Section 5. Fire-fighting measures

### **Extinguishing media**

Suitable extinguishing

media

extinguishing agent suitable for the surrounding fire. : Do not use water jet.

Unsuitable extinguishing media

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.

: Use dry chemical, CO2, alcohol-resistant foam or water spray (fog). Use an

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".

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### Section 6. Accidental release measures

### **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).

#### 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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# Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
isooctane	ACGIH TLV (United States, 1/2021).
	TWA: 300 ppm 8 hours.
ethanol	ACGIH TLV (United States, 1/2021).
	STEL: 1000 ppm 15 minutes.
	NIOSH REL (United States, 10/2020).
	TWA: 1000 ppm 10 hours.
	TWA: 1000 ppm 10 flours.
	OSHA PEL (United States, 5/2018).
	TWA: 1000 ppm 8 hours.
	TWA: 1900 mg/m <sup>3</sup> 8 hours.
	OSHA PEL 1989 (United States, 3/1989).
	TWA: 1000 ppm 8 hours.
	TWA: 1900 mg/m³ 8 hours.
toluene	OSHA PEL Z2 (United States, 2/2013).
<del></del>	TWA: 200 ppm 8 hours.
	CEIL: 300 ppm
	AMP: 500 ppm 10 minutes.
	NIOSH REL (United States, 10/2020).
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	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, 1/2021).
	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.
mathanal	ACCILITIN/(United States 4/2022)
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/m³ 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 ppm 6 nours.
	STEL: 250 ppm 15 minutes.
	STEL: 250 ppm 15 minutes.  STEL: 325 mg/m³ 15 minutes.
isopentane	ACGIH TLV (United States, 1/2021).
	TWA: 1000 ppm 8 hours.
tetraethyllead	ACGIH TLV (United States, 1/2022).
totraotriyiidad	Absorbed through skin.

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### Section 8. Exposure controls/personal protection

TWA: 0.1 mg/m³, (as Pb) 8 hours.

NIOSH REL (United States, 10/2020).

Absorbed through skin.

TWA: 0.075 mg/m³, (as Pb) 10 hours.

OSHA PEL (United States, 5/2018).

Absorbed through skin.

TWA: 0.075 mg/m³, (as Pb) 8 hours.

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

Absorbed through skin.

TWA: 0.08 mg/m<sup>3</sup>, (as Pb) 8 hours.

#### **Biological exposure indices**

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.

# 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**

**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.

**Body protection** 

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

: 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.

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### Section 8. Exposure controls/personal protection

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.

: Based on the hazard and potential for exposure, select a respirator that meets the Respiratory protection

appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important

**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 : Ørange. [Light]

Odor : Gasoline **Odor threshold** : <1 ppm

рΗ : Not applicable.

Melting point/freezing point **Boiling point, initial boiling** 

: Not available.

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%

: 7.3 PSI [@ 100°F [37.8°C]] Vapor pressure

Relative vapor density : Not available.

: 0.75 [ASTM D 287] Relative density

Solubility in water : NIL - 15%

Partition coefficient: n-

octanol/water

**Viscosity** 

: 2 to 7

**Auto-ignition temperature Decomposition temperature**: Not available.

: 280°C (536°F) : Not available.

**Explosive properties** 

: Vapors may form explosive mixtures with air.

**Oxidizing properties** : Not available.

**Particle characteristics** 

Median particle size : Not applicable.

### 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.

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## Section 10. Stability and reactivity

Incompatible materials

: Reactive or incompatible with the following materials:

oxidizing materials strong acids strong alkalis

halogenated compounds hydrogen peroxide

chlorine

concentrated oxygen

Hazardous decomposition products

Product/ingredient name

: Decomposition products may include the following materials:

Species

Dose

Exposure

carbon dioxide carbon monoxide asphyxiants

### **Section 11. Toxicological information**

Result

### Information on toxicological effects

### **Acute toxicity**

Result	Species	Dose	Exposure
LC50 Inhalation Vapor	Rat - Male, Female	>33.52 mg/l	4 hours
LC50 Inhalation Vapor	Rat	>6.31 mg/l	4 hours
LC50 Inhalation Vapor	Rat - Male, Female	5610 mg/m³	4 hours
LD50 Dermal	Rabbit - Male, Female	>2000 mg/kg	-
LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
LC50 Inhalation Gas.	Rat - Male, Female	50000 mg/m³	4 hours
LC50 Inhalation Vapor	Rat	124700 mg/m <sup>3</sup>	4 hours
LD50 Oral	Rat	7060 mg/kg	-
LD50 Oral	Rat - Male, Female	10470 mg/kg	-
LC50 Inhalation Vapor	Rat - Male, Female	>20 mg/l	4 hours
LD50 Dermal	Rabbit	12000 mg/kg	-
LD50 Oral	Rat	2600 mg/kg	-
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	-
LC50 Inhalation Gas.	Rat - Male, Female	>20000 ppm	4 hours
	LC50 Inhalation Vapor  LC50 Inhalation Vapor  LD50 Dermal  LD50 Oral  LC50 Inhalation Vapor  LD50 Oral  LD50 Oral  LC50 Inhalation Vapor  LD50 Oral  LC50 Inhalation Vapor  LD50 Dermal  LD50 Oral  LC50 Inhalation Vapor  LD50 Oral  LC50 Inhalation Vapor  LD50 Oral  LC50 Inhalation Vapor  LC50 Inhalation Vapor	LC50 Inhalation Vapor  Rat - Male, Female  LC50 Inhalation Vapor  Rat - Male, Female  LD50 Dermal  Rabbit - Male, Female  LD50 Oral  Rat - Male, Female  LC50 Inhalation Gas.  Rat - Male, Female  LC50 Inhalation Vapor  Rat  LD50 Oral  Rat  LD50 Oral  Rat - Male, Female  LC50 Inhalation Vapor  Rat  LD50 Oral  Rat - Male, Female  LC50 Inhalation Vapor  Rat - Male, Female  LC50 Inhalation Vapor  Rat - Male, Female  LD50 Oral  Rat  LD50 Oral  Rat  LD50 Oral  Rat  LC50 Inhalation Vapor  Rat - Male, Female  LC50 Inhalation Gas.  Rat - Male, Female	LC50 Inhalation Vapor   Rat - Male, Female   S6.31 mg/l

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	LC50 Inhalation Vapor	Rat	280000 mg/m³	4 hours
	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
tetraethyllead	LC50 Inhalation Vapor	Rat	0.85 mg/l	1 hours
	LC50 Inhalation Vapor	Rat	850 mg/m³	1 hours
	LD50 Oral	Rat	12.3 mg/kg	-
	LD50 Oral	Rat - Male, Female	14.18 mg/kg	-
	LDLo Dermal	Dog	547 mg/kg	-

**Conclusion/Summary** 

: Harmful if swallowed.

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Eyes - Non-irritating to the eyes.	Rabbit	-	1 hours 0.05 ml	24 hours
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

**Conclusion/Summary** 

**Skin** : Causes skin irritation.

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

**Respiratory**: Not available.

### **Sensitization**

Product/ingredient name	Route of exposure	Species	Result
methanol	skin	Guinea pig	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

Conclusion/Summary

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

Carcinogenicity

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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

Conclusion/Summary

: May cause cancer.

### **Classification**

Product/ingredient name	OSHA	IARC	NTP
ethanol	-	1	-
toluene	-	3	-
tetraethyllead	-	3	Reasonably anticipated to be a human carcinogen.

### **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
tetraethyllead	Positive	-	Positive	Rat	Oral: 1 mg/kg	-

Conclusion/Summary

: May damage fertility.

**Teratogenicity** 

**Conclusion/Summary**: May damage the unborn child.

### Specific target organ toxicity (single exposure)

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

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
SUNOCO EXO2	Category 2	inhalation	cardiovascular system, central nervous system (CNS), kidneys, liver, respiratory system
toluene	Category 2	-	cardiovascular

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•			
			system, central nervous system (CNS), kidneys, liver, respiratory system
tetraethyllead	Category 2	-	-

#### **Aspiration hazard**

Name	Result
SUNOCO EXO2	ASPIRATION HAZARD - Category 1
isooctane	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), light alkylate	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1
isopentane	ASPIRATION HAZARD - Category 1

Information on the likely

: Not available.

routes of exposure

#### 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.

#### 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

: Not available.

effects

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 if inhaled.
 Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity**: May damage fertility or the unborn child.

### **Numerical measures of toxicity**

### **Acute toxicity estimates**

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/ l)
SUNOCO EXO2	1001.3	3004	N/A	30.0	N/A
Naphtha (petroleum), light alkylate	N/A	2500	N/A	N/A	N/A
ethanol	7060	N/A	N/A	124.7	N/A
methanol	100	300	N/A	3	N/A
isopentane	N/A	N/A	N/A	280	N/A
tetraethyllead	0.5	5	N/A	0.5	N/A

### **Section 12. Ecological information**

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### **Toxicity**

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Product/ingredient name	Result	Species	Exposure
Naphtha (petroleum), light alkylate	Acute EC50 30000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute LC50 8.2 mg/l	Fish - Pimephales promelas	96 hours
ethanol	LC50 10000 mg/l Fresh water	Fish	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
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
methanol	EC50 22000 mg/l Fresh water	Algae - Pseudokirchneriella	96 hours

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		subcapitata	
	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
isopentane	EC50 2.3 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
tetraethyllead	Acute LC50 85 μg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 0.23 mg/l Marine water	Fish - Pleuronectes platessa	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 EXO2	2 to 7	-	high
Naphtha (petroleum), light alkylate	-	10 to 2500	high
ethanol	-0.35	-	low
toluene	2.73	90	low
methanol	-0.77	1	low
isopentane	3	171	low
tetraethyllead	4.15	460	low

### **Mobility in soil**

Soil/water partition coefficient (Koc)

: Not available.

Mobility

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

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### 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.

### 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 petrol mixture
Transport hazard class(es)	3	3	3	3	3	3
Label	3	<b>1 1 1 2 2 2 2 2 3 3 3 3 4 3 3 3 3 4 3 3 3 3 4 3 3 3 3 3 3 3 3 3 3</b>		<b>₹</b> 2	<b>1 1 1 1 1 1 1 1 1 1</b>	
Packing group	II	II	II	II	II	II
Environmental hazards	Yes.	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** 

: This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.

Reportable quantity 5000 lbs / 2270 kg [799.56 gal / 3026.7 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.

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### Section 14. Transport information

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** : Special provisions 333

ADR/RID : 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)

**IMDG** : 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 4(a) proposed test rules: tetraethyllead

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 307: toluene; tetraethyllead Clean Water Act (CWA) 311: toluene; tetraethyllead

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** 

: Not listed

(Essential Chemicals) SARA 302/304

**Composition/information on ingredients** 

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## Section 15. Regulatory information

			SARA 302 TPQ		SARA 304 RQ	
Name	%	EHS	(lbs)	(gallons)	(lbs)	(gallons)
tetraethyllead	0.1 - 0.2	Yes.	100	7.1	10	0.71

**SARA 304 RQ** : 5000 lbs / 2270 kg [799.6 gal / 3026.7 L]

**SARA 311/312** 

Classification : FLAMMABLE LIQUIDS - Category 2

ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 CARCINOGENICITY - Category 1B

TOXIC TO REPRODUCTION - Category 1A

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**

Name	%	Classification
isooctane	≥25 - ≤50	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
Naphtha (petroleum), light alkylate	≥15 - ≤30	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
ethanol	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 2
toluene	≥10 - ≤20	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
methanol	≥7 - ≤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
isopentane	≥3 - ≤10	FLAMMABLE LIQUIDS - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
tetraethyllead	0.1 - 0.2	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 1 ACUTE TOXICITY (dermal) - Category 1 ACUTE TOXICITY (inhalation) - Category 2 CARCINOGENICITY - Category 1B TOXIC TO REPRODUCTION - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

### Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements			≥10 - ≤20 ≥7 - ≤15
Supplier notification			≥10 - ≤20 ≥7 - ≤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: ETHYL ALCOHOL; TOLUENE; METHANOL;

**ISOPENTANE** 

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

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

ALCOHOL; ISOPENTANE; TETRAETHYL LEAD

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

METHANOL; BUTANE, 2-METHYL-

#### California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Lead and lead compounds, which is known to the State of California to cause cancer, and Toluene and Methanol, 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 Methanol Lead and lead compounds	- - -	Yes. Yes.

#### VOC

Calculation method	Product as-supplied	Product ready-for-use
Without volume exclusion	751.5 g/l 100 % (w/w)	Not applicable
With volume exclusion [water excluded]	751.5 g/l	Not applicable
With volume exclusion [water not excluded]	751.5 g/l	Not applicable

### **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)

Ingredient name	List name	Status
Tetraethyl lead; Plumbane, tetraethyl; TEL	Industrial	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

NDSL.

### Section 15. Regulatory information

**China** : All components are listed or exempted.

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

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.

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	
CARCINOGENICITY - Category 1B	Calculation method	
TOXIC TO REPRODUCTION - Category 1A	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	Expert judgment	
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

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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

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Indicates information that has changed from previously issued version.

#### **Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

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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