

SAFETY DATA SHEET

Sunoco Cyclone 17



Section 1. Identification

- GHS product identifier** : Sunoco Cyclone 17
- Other means of identification** : Leaded racing gasoline
- Product code** : 230600
- Product use** : Liquid: automotive refuelling
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
SKIN IRRITATION - Category 2
TOXIC TO REPRODUCTION - Category 1A
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.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Section 2. Hazards identification

- 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.
Use only outdoors or in a well-ventilated area.
Do not breathe dust or mist.
Wash hands thoroughly after handling.
- Response** : IF exposed or concerned: Get medical advice or attention.
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. 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 cool.
- 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.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Leaded racing gasoline
- Product code** : 230600

Ingredient name	%	CAS number
isooctane	≥50 - ≤75	26635-64-3
Naphtha (petroleum), light alkylate	≥10 - ≤25	64741-66-8
cyclopentane	≥10 - ≤25	287-92-3
isopentane	≥10 - ≤25	78-78-4
tetraethyllead	<1	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 as hazardous to health or the environment and hence require reporting in this section.

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

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.

Section 4. First aid measures

- 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. 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : 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
- 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

Section 4. First aid measures

- 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** : Use dry chemical, CO₂, water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : HIGHLY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

- 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 (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 non-emergency 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).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

- 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. Empty containers retain product residue and can be hazardous. Do not reuse container.

Bonding and grounding alone may be inadequate to eliminate fire and explosion hazards associated with electrostatic charges. In addition to bonding and grounding, efforts to mitigate the hazards of an electrostatic discharge may include, but are not limited to, ventilation, inerting and/or reduction of transfer velocities. Always keep the nozzle in contact with the container throughout the loading process. Do not fill any portable containers in or on a vehicle. Special precautions, such as reduced loading rates and increased monitoring, must be observed during "switch loading" operations (i. e. loading this material in tanks or shipping compartments that previously contained middle distillates or similar products). Non- equilibrium conditions may increase the risks associated with static electricity such as tank and container filling, tank cleaning, sampling, gauging, loading, filtering, mixing, agitation, etc. Dissipation of electrostatic charges may be improved with the use of conductivity additives when used with other mitigating efforts, including bonding and grounding.

- 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.

- Conditions for safe storage, including any incompatibilities** : 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. NFPA Class 1B Storage.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
isooctane	ACGIH TLV (United States, 3/2020). TWA: 300 ppm 8 hours.
Naphtha (petroleum), light alkylate	None.
cyclopentane	ACGIH TLV (United States, 3/2020). TWA: 600 ppm 8 hours. TWA: 1720 mg/m ³ 8 hours. NIOSH REL (United States, 10/2016). TWA: 600 ppm 10 hours. TWA: 1720 mg/m ³ 10 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 600 ppm 8 hours. TWA: 1720 mg/m ³ 8 hours.
isopentane	ACGIH TLV (United States, 3/2020). TWA: 1000 ppm 8 hours.
tetraethyllead	ACGIH TLV (United States, 3/2020). Absorbed through skin. TWA: 0.1 mg/m ³ , (as Pb) 8 hours. NIOSH REL (United States, 10/2016). Absorbed through skin. TWA: 0.075 mg/m ³ , (as Pb) 10 hours. OSHA PEL (United States, 5/2018). Absorbed through skin. TWA: 0.075 mg/m ³ , (as Pb) 8 hours. OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 0.08 mg/m ³ , (as Pb) 8 hours.

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. face shield.

Skin protection

Section 8. Exposure controls/personal 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.
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 anti-static 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. Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Red. Light.
- Odor** : Gasoline.
- Odor threshold** : <1 ppm [Reference value]
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : 38 to 127°C (100.4 to 260.6°F) [ASTM D 86]
- Flash point** : -40°C (-40°F) [Reference value]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not applicable.
- Lower and upper explosive (flammable) limits** : Lower: 1.5%
Upper: 7.6% [Reference value]
- Vapor pressure** : 6.5 PSI [100°F]
- Vapor density** : Not available.
- Relative density** : Not available.
- Density** : 0.71 g/cm³
- Solubility** : Not available.
- Solubility in water** : NIL - 15% [Reference value]
- Partition coefficient: n-octanol/water** : 2 to 7 [Reference value]
- Auto-ignition temperature** : 280°C (536°F) [Reference value]
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Explosive properties** : Vapors may form explosive mixtures with air.

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. Under normal conditions of storage and use, hazardous polymerization 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. Take precautionary measures against electrostatic discharges. Vapors may form explosive mixtures with air.
- Incompatible materials** : Reactive or incompatible with the following materials: oxidizing materials, strong acids, strong alkalis, halogenated compounds, halogens, peroxides, chlorine.
- Hazardous decomposition products** : 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
Naphtha (petroleum), light alkylate	LD50 Dermal	Rabbit - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
cyclopentane	LD50 Oral	Rat	11400 mg/kg	-
isopentane	LC50 Inhalation Vapor	Rat	280000 mg/m ³	4 hours
	LD50 Oral	Rat	2000 to 5000 mg/kg	-
tetraethyllead	LC50 Inhalation Vapor	Rat	850 mg/m ³	1 hours
	LD50 Oral	Rat	12.3 mg/kg	-

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

Irritation/Corrosion

Conclusion/Summary

Skin

: Causes skin irritation.

Samples of gasoline and a number of low boiling point naphtha streams have been tested in rabbit skin irritation studies. The majority of the data were derived using a 24 hour occluded exposure protocol. The degree of dermal irritation observed was variable, ranging from slight to moderate/severe, normally persisting for up to 14 days. There was no evidence of skin corrosion. Heavier, aromatic materials caused more irritation than lighter, paraffinic streams (API, 1995).

Eyes

: The effects of gasoline and low boiling point naphtha streams on the eye have been investigated in rabbits using a number of samples. None of the samples tested showed more than minimal redness and swelling, which resolved quickly (ARCO, 1986-A).

Sensitization

Conclusion/Summary

Section 11. Toxicological information

Skin : Tests in guinea pigs with gasoline and a number of low boiling point naphtha streams showed no evidence of skin sensitization (ARCO, 1986-B).

Respiratory : There are no reports available to indicate that gasoline or low boiling point naphthas have the potential to cause respiratory sensitization.

Mutagenicity

Conclusion/Summary : The mutagenic potential of gasoline and low boiling point naphthas has been extensively studied in a range of in vivo and in vitro assays. The majority of the studies showed no evidence of mutagenic activity (API, 1977; API, 2005). The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7).

Carcinogenicity

Conclusion/Summary : The carcinogenic potential of gasoline has been investigated in rats and mice following inhalation exposure for 2 years. In rats, there was an increased incidence of kidney tumors in males and in mice there was an increased incidence of liver tumors in females; further work has shown that these tumors are sex and species specific and are not considered relevant to humans (Short BG et al., 1989). Results of 2 year skin painting studies with gasoline or low boiling point naphthas have shown either no, or weak potential (low incidence and long latent period) for the development of skin tumors. Additional work has shown that where tumors arise they are most likely a result of a non-genotoxic response due to dermal irritation (API, 1983).

Classification

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

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
tetraethyllead	Positive	-	Positive	Rat	Oral: 1 mg/kg	-

Conclusion/Summary : May damage fertility or the unborn child.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
isooctane	Category 3	-	Narcotic effects
isopentane	Category 3	-	Narcotic effects
Summary: Acute exposure studies show no evidence of systemic toxicity, other than a potential to cause narcosis/ CNS depression at higher exposure concentrations (Drinker P et al, 1943; Davis A et al 1960).			

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
tetraethyllead	Category 2	-	-
Summary: The repeat dose toxicity of gasoline and low boiling point naphthas has been studied in rats following dermal and inhalation exposure for periods between 10 days and up to 2 years. The effects of repeated inhalation exposure of primates to gasoline have also been studied. In dermal studies, no systemic toxicity has been seen; the only effect observed was moderate to severe dermal irritation. Repeated inhalation exposure causes light			

Section 11. Toxicological information

hydrocarbon nephropathy in male rats, an effect which is considered to be both sex and species specific. (Halder CA et al, 1985; API, 2005; ARCO, 1986-C).

Aspiration hazard

Name	Result
Sunoco Cyclone 17	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** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : 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.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

Section 11. Toxicological information

- 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** : 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 Cyclone 17	25087.5	2543.8	N/A	N/A	N/A
Naphtha (petroleum), light alkylate	N/A	2500	N/A	N/A	N/A
cyclopentane	11400	N/A	N/A	N/A	N/A
isopentane	2500	N/A	N/A	280	N/A
tetraethyllead	12.3	5	N/A	0.5	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Naphtha (petroleum), light alkylate	Acute EC50 30000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
cyclopentane	Acute EC50 10.5 mg/l	Daphnia - Daphnia magna	48 hours
isopentane	Acute EC50 2.3 mg/l	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

- Conclusion/Summary** : Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Sunoco Cyclone 17	2 to 7	-	high
Naphtha (petroleum), light alkylate	-	10 to 2500	high
cyclopentane	3	70.8	low
isopentane	3	171	low
tetraethyllead	4.15	460	low

Mobility in soil

Section 12. Ecological information





Soil/water partition coefficient (K_{oc}) : 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.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN1203	Not determined.	Not determined.	UN1203	UN1203	UN1203
UN proper shipping name	Gasoline	-	-	GASOLINE	GASOLINE	Gasoline
Transport hazard class(es)	3	-	-	3	3	3
Label						
Packing group	II	-	-	II	II	II
Environmental hazards	No.	No.	No.	Yes.	Marine Pollutant: Yes	Yes. The environmentally hazardous substance mark is not required.

Additional information

DOT Classification : **Reportable quantity** 2857.1 lbs / 1297.1 kg [482.63 gal / 1827 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.
Packaging instruction Exceptions: 150. Non-bulk: 202. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L.
Special provisions 144, 177, B1, B33, IB2, T4

Section 14. Transport information

Reportable quantity

Toluene RQ: 1000 lbs (454 kg); **Tetraethyl lead RQ:** 10 lbs (4.54 kg)

Mexico Classification : Special provisions 243

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 243, 534, 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 243

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 A100

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 to IMO instruments : Not applicable.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 4(a) proposed test rules:** tetraethyllead

TSCA 8(a) PAIR: cyclopentane

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

Clean Water Act (CWA) 307: tetraethyllead

Clean Water Act (CWA) 311: tetraethyllead

Clean Air Act (CAA) 112 regulated flammable substances: isopentane

Clean Air Act Section 112 : Listed

(b) Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 : Not listed

Class I Substances

Clean Air Act Section 602 : Not listed

Class II Substances

DEA List I Chemicals : Not listed

(Precursor Chemicals)

DEA List II Chemicals : Not listed

(Essential Chemicals)

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
tetraethyllead	<1	Yes.	100	7.1	10	0.71

SARA 304 RQ : 2857.1 lbs / 1297.1 kg [482.6 gal / 1827 L]

SARA 311/312

Section 15. Regulatory information

Classification : FLAMMABLE LIQUIDS - Category 2
 SKIN IRRITATION - Category 2
 TOXIC TO REPRODUCTION - Category 1A
 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	≥50 - ≤75	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	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 2 GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1B ASPIRATION HAZARD - Category 1
cyclopentane	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 2
isopentane	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
tetraethyllead	<1	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 2 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

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	tetraethyllead	78-00-2	<1
Supplier notification	tetraethyllead	78-00-2	<1

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: CYCLOPENTANE; ISOPENTANE
- New York** : The following components are listed: Tetraethyl lead
- New Jersey** : The following components are listed: CYCLOPENTANE; ISOPENTANE; BUTANE, 2-METHYL-; TETRAETHYL LEAD; LEAD, TETRAETHYL-
- Pennsylvania** : The following components are listed: ISOCTANE; CYCLOPENTANE; BUTANE, 2-METHYL-; PLUMBANE, TETRAETHYL-

California Prop. 65

⚠ WARNING: This product can expose you to Lead and lead compounds, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Lead and lead compounds	-	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Section 15. Regulatory information

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

Section 16. Other information

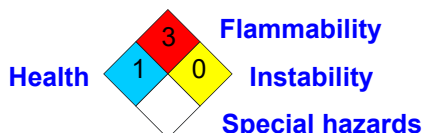
Hazardous Material Information System (U.S.A.), Fourth Edition

Health	*	2
Flammability		3
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

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



Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	Expert judgment
SKIN IRRITATION - Category 2	Calculation method
TOXIC TO REPRODUCTION - Category 1A	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Expert judgment

Section 16. Other information

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

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✔ Indicates information that has changed from previously issued version.

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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.