



4-Cycle Fuel: Ethanol-Free Small Engine Fuel

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 2/17/2026 Version: 1.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : 4-Cycle Fuel: Ethanol-Free Small Engine Fuel

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Fuel
Restrictions on use : No additional information available

1.4. Supplier's details

Supplier

VP Racing Fuels, Inc.
7124 Richter Road
Elmendorf, TX 78112
USA
T +1 210-635-7744

1.5. Emergency phone number

Emergency number : CHEMTREC
USA Toll Free: +1-800-424-9300; International: +1-703-527-3887
Canada Local: +1 703-741-5970

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR § 1910.1200)

Flammable liquid, Category 2	H225	Highly flammable liquid and vapor.
Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 2A	H319	Causes serious eye irritation.
Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity — Single exposure, Category 2	H371	May cause damage to organs.
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness.
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation.
Specific target organ toxicity — Repeated exposure, Category 1	H372	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard, Category 1	H304	May be fatal if swallowed and enters airways.
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411	Toxic to aquatic life with long lasting effects.
Full text of H statements : see section 16		

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

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Hazard statements (GHS US)	: H225 - Highly flammable liquid and vapor H304 - May be fatal if swallowed and enters airways H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation H336 - May cause drowsiness or dizziness H361 - Suspected of damaging fertility or the unborn child H371 - May cause damage to organs. H372 - Causes damage to organs through prolonged or repeated exposure H411 - Toxic to aquatic life with long lasting effects
Precautionary statements (GHS US)	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground/Bond container and receiving equipment. P241 - Use explosion-proof electrical, ventilating, lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P260 - Do not breathe vapors. P264 - Wash hands thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P301+P310 - If swallowed: Immediately call a POISON CENTER, a doctor. P302+P352 - If on skin: Wash with plenty of soap and water. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P311 - If exposed or concerned: Call a POISON CENTER, a doctor. P308+P313 - If exposed or concerned: Get medical advice/attention. P321 - Specific treatment (see supplemental first aid instruction on this label). P331 - Do NOT induce vomiting. P332+P313 - If skin irritation occurs: Get medical advice or attention. P337+P313 - If eye irritation persists: Get medical advice or attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), extinguishing powder to extinguish. P391 - Collect spillage. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P403+P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up. P501 - Dispose of contents and container to a hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

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SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of § 1910.1200

Name	Product identifier	%	GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR § 1910.1200)
Naphtha (petroleum), full-range alkylate, butane-contg.*	CAS-No.: 68527-27-5	45 - 70	Flam. Liq. 1, H224 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 2, H371 STOT SE 3, H336 STOT SE 3, H335 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Toluene	CAS-No.: 108-88-3	10 - 30	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Repr. 2, H361 STOT SE 3, H336 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
Isopentane	CAS-No.: 78-78-4	7 - 13	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
n-hexane	CAS-No.: 110-54-3	0.1 - 1	Flam. Liq. 2, H225 Asp. Tox. 1, H304 STOT RE 2, H373 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 2, H411 Repr. 2, H361
1,2,4-trimethylbenzene	CAS-No.: 95-63-6	< 0.1	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Chronic 2, H411

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Name	Product identifier	%	GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR § 1910.1200)
1,3,5-trimethylbenzene	CAS-No.: 108-67-8	< 0.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Xylene	CAS-No.: 1330-20-7	< 0.1	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
2,2',2"-nitrilotriethanol	CAS-No.: 102-71-6	< 0.1	Not classified
2,4,6-tri-tert-butylphenol	CAS-No.: 732-26-3	< 0.1	Acute Tox. 4 (Oral), H302 Skin Sens. 1B, H317 Repr. 1B, H360 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Comments : * used interchangeably with CAS 64741-64-6. The substitution of the substance does not affect its classification.
Substances considered to be Marine Pollutant according to transport regulations:
Naphtha (petroleum), full-range alkylate, butane-contg.

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

- First-aid measures general
- : If medical advice is needed, have product container or label at hand.
- First-aid measures after inhalation
- : Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell. Give oxygen or artificial respiration if necessary.
- First-aid measures after skin contact
- : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact
- : Immediately rinse with water for a prolonged period while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion
- : If swallowed, seek medical advice immediately and show this container or label. 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.

4.2. Most important symptoms/effects, acute and delayed

- Symptoms/effects
- : May cause damage to organs.
- Symptoms/effects after inhalation
- : Inhalation may cause irritation (cough, short breathing, difficulty in breathing). May cause drowsiness or dizziness.
- Symptoms/effects after skin contact
- : Causes skin irritation. Redness. Itching. Swelling.

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Symptoms/effects after eye contact	: Causes serious eye irritation. Redness. Itching. Lacrimation. Blurred vision.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways. Aspiration of the product into the lungs may cause very serious pneumonia. Ingestion may cause nausea, vomiting and diarrhea. Abdominal pain.
Chronic symptoms	: Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

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

Other medical advice or treatment	: Treat symptomatically. Symptoms may be delayed. Keep under medical supervision for at least 48 hours.
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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Dry chemical, CO2, dry sand, or alcohol-resistant foam. Use extinguishing agent suitable for surrounding fire.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: Highly flammable liquid and vapor. Burning produces irritating, toxic and noxious fumes. In case of fire and/or explosion do not breathe fumes. Heating will cause a rise in pressure with a risk of bursting.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Carbon dioxide. Carbon monoxide. Nitrogen oxides.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Evacuate the danger area. Move containers from fire area if it can be done without personal risk. Fight fire from safe distance and protected location. Use water spray or fog for cooling exposed containers. Use extinguishing media appropriate for surrounding fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Evacuate unnecessary personnel. Ventilate spillage area. Avoid breathing vapors. Do not get in eyes, on skin, or on clothing. Avoid contact with skin and eyes. Do not touch or walk on the spilled product. No action shall be taken without appropriate training or involving any personal risk.

For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel.
Environmental precautions	: Avoid release to the environment. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Notify authorities if product enters sewers or public waters.

6.2. Methods and materials for containment and cleaning up

For containment	: Stop leak if safe to do so. Collect spillage. Do not touch or walk on the spilled product.
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Methods for cleaning up	: Caution : this product can cause the floor to be slippery. Move containers from spill area. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Do not absorb with saw-dust or any other combustible absorbent material. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). Clean contaminated surfaces with an excess of water. Prevent entry to sewers and public waters. Never return unused material to original container. Use non-sparking tools.
Other information	: Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques.

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Provide local exhaust or general room ventilation. Avoid breathing vapors. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid contact during pregnancy and while nursing. Avoid release to the environment. Keep only in original container. Empty containers retain product residue and can be hazardous. Do not re-use container for any purpose. Eliminate all ignition sources if safe to do so. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Use approved electrical and mechanical equipment in accordance with respective zone.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.
Additional hazards when processed	: This product is not classified as corrosive to metals under GHS criteria. However, certain chemical formulations may interact with specific metals or alloys over time, potentially causing degradation, rusting, or pitting. Users should verify material compatibility prior to use, especially for equipment and storage tanks containing copper, brass, polymeric materials, sealants, or other reactive metals. It is recommended to use corrosion-resistant materials such as stainless steel, aluminum, or fluoropolymers for storage and handling. Regular inspection and maintenance of equipment exposed to chemical products are advised to ensure integrity and safe operation.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions	: Store in dry, cool, well-ventilated area. Keep away from food, drink and animal feed. Keep container closed when not in use. Containers which are opened should be properly resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Store in accordance with local, regional, national or international regulation. Keep away from ignition sources (including static discharges). Proper grounding procedures to avoid static electricity should be followed.
Storage area	: Store in a well-ventilated place.
Incompatible products	: Oxidizing agent.
Incompatible materials	: Direct sunlight. Heat sources. Ignition sources.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

1,2,4-trimethylbenzene (95-63-6)	
USA - ACGIH® - Threshold Limit Values	
Local name	1,2,4-Trimethyl benzene

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1,2,4-trimethylbenzene (95-63-6)	
ACGIH® TLV® TWA	10 ppm
Remark (ACGIH®)	TLV® Basis: CNS impair; Hematologic eff
Regulatory reference	ACGIH 2025
1,3,5-trimethylbenzene (108-67-8)	
USA - ACGIH® - Threshold Limit Values	
Local name	1,3,5-Trimethyl benzene
ACGIH® TLV® TWA	10 ppm
Remark (ACGIH®)	TLV® Basis: CNS impair; Hematologic eff
Regulatory reference	ACGIH 2025
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	1,3,5-Trimethylbenzene [Mesitylene]
Cal/OSHA PEL (OEL TWA)	125 mg/m³
	25 ppm
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
Xylene (1330-20-7)	
USA - ACGIH® - Threshold Limit Values	
Local name	Xylene, mixed isomers (Dimethylbenzene)
ACGIH® TLV® TWA	20 ppm
Remark (ACGIH®)	TLV® Basis: Eye & URT irr; CNS impair; Hematologic eff; Ototoxicity (p-xylene). Notations: OTO (Ototoxicant) (p isomer); A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2025
USA - ACGIH® - Biological Exposure Indices	
Local name	Xylene, all isomers (Dimethylbenzene)
BEI (BLV)	0.3 g/g Kreatinin Parameter: Methylhippuric acids - Medium: urine - Sampling time: End of shift
Remark	Commercial or technical grade xylenes consist of mixtures of isomers and significant amounts of ethyl benzene as indicated under "Properties." Because ethyl benzene is known to reduce the metabolism of xylenes to methylhippuric acids, the BEI applies to technical or commercial grades of xylenes only. The determinants refer to the total of all isomers of methylhippuric acids
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Xylenes (o-, m-, p-isomers)
OSHA PEL TWA	435 mg/m³
	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Xylene; xylol; dimethylbenzene
Cal/OSHA PEL (OEL TWA)	435 mg/m³

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Xylene (1330-20-7)	
	100 ppm
Cal/OSHA STEL	655 mg/m ³
	150 ppm
Cal/OSHA C	300 ppm
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - NIOSH - Occupational Exposure Limits	
Local name	Xylenes (o-, m-, p-isomers)
NIOSH REL 10h TWA	100 ppm
NIOSH REL (STEL)	150 ppm
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))
2,2',2''-nitrilotriethanol (102-71-6)	
USA - ACGIH® - Threshold Limit Values	
Local name	Triethanolamine
ACGIH® TLV® TWA	5 mg/m ³
Remark (ACGIH®)	TLV® Basis: Eye & skin irr
Regulatory reference	ACGIH 2025
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Triethanolamine
Cal/OSHA PEL (OEL TWA)	5 mg/m ³
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
n-hexane (110-54-3)	
USA - ACGIH® - Threshold Limit Values	
Local name	n-Hexane
ACGIH® TLV® TWA	176 mg/m ³
	50 ppm
Remark (ACGIH®)	TLV® Basis: CNS impair; Peripheral neuropathy; Eye & URT irr. Notations: Skin; BEI
Regulatory reference	ACGIH 2025
USA - ACGIH® - Biological Exposure Indices	
Local name	n-Hexane
BEI (BLV)	0.5 mg/l Parameter: 2,5-Hexanedione - Medium: urine - Sampling time: End of shift
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	n-Hexane
OSHA PEL TWA	1800 mg/m ³
	500 ppm

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n-hexane (110-54-3)	
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	n-Hexane
Cal/OSHA PEL (OEL TWA)	180 mg/m³
	50 ppm
Remark (Cal/OSHA)	S - Skin notation and Protecting Clothing
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - NIOSH - Occupational Exposure Limits	
Local name	n-Hexane
NIOSH REL 10h TWA	50 ppm
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))
Toluene (108-88-3)	
USA - ACGIH® - Threshold Limit Values	
Local name	Toluene
ACGIH® TLV® TWA	20 ppm
Remark (ACGIH®)	TLV® Basis: CNS, Hearing & Visual impair; Female repro system eff; Pregnancy loss. Notations: OTO (Ototoxicant); A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2025
USA - ACGIH® - Biological Exposure Indices	
Local name	Toluene
BEI (BLV)	0.3 mg/g Kreatinin Parameter: o-Cresol - Medium: urine - Sampling time: End of shift - Notations: B 0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: Prior to last shift of workweek 0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: End of shift
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Toluene
OSHA PEL TWA	200 ppm
OSHA PEL (Ceiling)	300 ppm
Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	500 ppm 10 mins.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Toluene; toluol
Cal/OSHA PEL (OEL TWA)	37 mg/m³
	10 ppm
Cal/OSHA STEL	560 mg/m³
	150 ppm

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Toluene (108-88-3)	
Cal/OSHA C	500 ppm
Remark (Cal/OSHA)	S - Skin notation and Protecting Clothing
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - NIOSH - Occupational Exposure Limits	
Local name	Toluene
NIOSH REL 10h TWA	100 ppm
NIOSH REL (STEL)	150 ppm
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-2 (NIOSH Pocket Guide to Chemical Hazards (NPG))
Isopentane (78-78-4)	
USA - ACGIH® - Threshold Limit Values	
Local name	Isopentane
ACGIH® TLV® TWA	2950 mg/m³
	1000 ppm
Remark (ACGIH®)	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Monitoring methods	
Monitoring methods	Refer to all applicable national, international and local regulations or provisions.

8.2. Appropriate engineering controls

Appropriate engineering controls	: Handle in accordance with good industrial hygiene and safety procedures. Provide local exhaust or general room ventilation. Avoid all unnecessary exposure. Ensure exposure is below occupational exposure limits (where available). Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Environmental exposure controls	: Avoid release to the environment. Prevent entry to sewers and public waters. Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment: Wear recommended personal protective equipment. Personal protective equipment should be chosen according to the NIOSH standards and in discussion with the supplier of the protective equipment.	
Hand protection: Chemical resistant gloves (according to NIOSH standard). Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Since the product consists of several substances, the durability of the glove material cannot be estimated and needs to be tested before use	
Eye protection: Chemical goggles or safety glasses	
Skin and body protection: Wear suitable protective clothing. Skin protection appropriate to the conditions of use should be provided	

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Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits. All respirators must conform to specifications for efficiency and performance indicated by OSHA Standard 29 CFR 1910.134 and NIOSH Standards

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless
Odor	: Hydrocarbons, aromatic
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 39 °C (102 °F)
Flash point	: < 22.99 °C (< 73.38 °F, calculated value)
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 0.7295
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: < 20.5 mm ² /s (40 °C, 104 °F)
Explosion limits	: No data available
Particle characteristics	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor. Vapours can form explosive mixtures with air. Heating may cause a fire or explosion.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerization: Will not occur.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Protect from sunlight. Overheating. Heat and ignition sources. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Oxidizing agent.

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10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

1,2,4-trimethylbenzene (95-63-6)

LD50 oral rat	5000 mg/kg
LD50 dermal rabbit	3160 mg/kg
LC50 Inhalation - Rat	18000 mg/m ³ (4 h)
ATE US (oral)	5000 mg/kg body weight
ATE US (dermal)	3160 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	18 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

1,3,5-trimethylbenzene (108-67-8)

LD50 oral rat	> 5000 mg/kg
LC50 Inhalation - Rat	24000 mg/m ³

Xylene (1330-20-7)

LD50 oral rat	3520 mg/kg
LD50 dermal rabbit	12100 mg/kg
LC50 Inhalation - Rat	29 mg/l/4h
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	5000 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

n-hexane (110-54-3)

LD50 oral rat	15840 mg/kg
LC50 Inhalation - Rat (Vapors)	169.2 mg/l/4h

2,4,6-tri-tert-butylphenol (732-26-3)

LD50 oral rat	1610 mg/kg
ATE US (oral)	500 mg/kg body weight

Toluene (108-88-3)

LD50 oral rat	2600 mg/kg
LD50 dermal rabbit	14.1 ml/kg

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Toluene (108-88-3)	
LC50 Inhalation - Rat	8000 mg/l/4h
Isopentane (78-78-4)	
LD50 oral rat	> 2000 mg/kg
LC50 Inhalation - Rat (Vapors)	> 25.3 mg/l/4h
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Xylene (1330-20-7)	
IARC group	3 - Not classifiable
2,2',2''-nitrilotriethanol (102-71-6)	
IARC group	3 - Not classifiable
Toluene (108-88-3)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: May cause damage to organs. May cause drowsiness or dizziness. May cause respiratory irritation.
STOT-repeated exposure	: Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.
4-Cycle Fuel: Ethanol-Free Small Engine Fuel	
Viscosity, kinematic	< 20.5 mm²/s (40 °C, 104 °F)
Symptoms/effects	: May cause damage to organs.
Symptoms/effects after inhalation	: Inhalation may cause irritation (cough, short breathing, difficulty in breathing). May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Causes skin irritation. Redness. Itching. Swelling.
Symptoms/effects after eye contact	: Causes serious eye irritation. Redness. Itching. Lacrimation. Blurred vision.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways. Aspiration of the product into the lungs may cause very serious pneumonia. Ingestion may cause nausea, vomiting and diarrhea. Abdominal pain.
Chronic symptoms	: Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.
Other information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.

1,2,4-trimethylbenzene (95-63-6)	
LC50 - Fish [1]	22.4 mg/l (96h, Tilapia zillii)
EC50 - Crustacea [1]	4910 µg/l (48h, Elasmopus pectenicrus)

4-Cycle Fuel: Ethanol-Free Small Engine Fuel

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

1,3,5-trimethylbenzene (108-67-8)	
LC50 - Fish [1]	3.48 mg/l (96 h, Pimephales promelas)
EC50 - Crustacea [1]	6 mg/l (48 h, Daphnia magna)
LC50 - Fish [2]	12.52 mg/l (96 h, Carrasius auratus)
EC50 72h - Algae [1]	53 mg/l (48 h, Desmodesmus subspicatus)
NOEC chronic crustacea	0.4 mg/l (21 d, Daphnia magna)
NOEC chronic algae	16 mg/l (48 h, Desmodesmus subspicatus)

Xylene (1330-20-7)	
LC50 - Fish [1]	3.3 mg/l (96 h)
LC50 - Other aquatic organisms [1]	8 mg/l (96 h, Oncorhynchus mykiss)
EC50 - Crustacea [1]	8.5 mg/l (48 h, Palaemonetes pugio)
LC50 - Fish [2]	13.4 mg/l (96 h, Pimephales promelas)
EC50 - Crustacea [2]	3.82 mg/l (48 h, Daphnia magna)
EC50 72h - Algae [1]	11 mg/l (72 h)

n-hexane (110-54-3)	
LC50 - Fish [1]	2.5 mg/l (96 h, Pimephales promelas)

Toluene (108-88-3)	
LC50 - Fish [1]	6.86 – 9.83 mg/l (96 h, Oncorhynchus gorbuscha)
EC50 - Crustacea [1]	5.46 – 9.83 mg/l (48 h, Daphnia magna)

12.2. Persistence and degradability

4-Cycle Fuel: Ethanol-Free Small Engine Fuel	
Persistence and degradability	Biodegradability in water: no data available.
1,3,5-trimethylbenzene (108-67-8)	
Persistence and degradability	Not rapidly degradable
Biodegradation	42 % (28 d)

12.3. Bioaccumulative potential

4-Cycle Fuel: Ethanol-Free Small Engine Fuel	
Bioaccumulative potential	No data available concerning bioaccumulation.
1,2,4-trimethylbenzene (95-63-6)	
BCF - Fish [1]	243
Partition coefficient n-octanol/water (Log Pow)	3.63
1,3,5-trimethylbenzene (108-67-8)	
BCF - Fish [1]	161
Partition coefficient n-octanol/water (Log Pow)	3.42
Xylene (1330-20-7)	
BCF - Fish [1]	8.1 – 25.9

4-Cycle Fuel: Ethanol-Free Small Engine Fuel

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Xylene (1330-20-7)	
Partition coefficient n-octanol/water (Log Pow)	3.12 – 3.2
n-hexane (110-54-3)	
BCF - Fish [1]	501.187
Partition coefficient n-octanol/water (Log Pow)	4
2,4,6-tri-tert-butylphenol (732-26-3)	
BCF - Fish [1]	13803.84
Partition coefficient n-octanol/water (Log Pow)	6.06
Toluene (108-88-3)	
Partition coefficient n-octanol/water (Log Kow)	2.73 (20 °C)

12.4. Mobility in soil

4-Cycle Fuel: Ethanol-Free Small Engine Fuel	
Ecology - soil	No additional information available.

12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No other effects known.
Fluorinated greenhouse gases	: No

SECTION 13 Disposal considerations

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Empty containers retain product residue and can be hazardous.
Additional information	: Do not re-use empty containers. Flammable vapors may accumulate in the container. Do not puncture or incinerate, even when empty.
Ecological waste information	: Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
UN1203	UN1203	1203	1203
14.2. Proper Shipping Name			
Gasoline	GASOLINE	GASOLINE	Gasoline
14.3. Transport hazard class(es)			
3	3	3	3
			

4-Cycle Fuel: Ethanol-Free Small Engine Fuel

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

DOT	TDG	IMDG	IATA
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT	
UN-No. (DOT)	: UN1203
DOT Special Provisions (49 CFR 172.102)	: 144 - If transported as a residue in an underground storage tank (UST), as defined in 40 CFR 280.12, that has been cleaned and purged or rendered inert according to the American Petroleum Institute (API) Standard 1604 (IBR, see 171.7 of this subchapter), then the tank and this material are not subject to any other requirements of this subchapter. However, sediments remaining in the tank that meet the definition for a hazardous material are subject to the applicable regulations of this subchapter. 177 - Gasoline, or, ethanol and gasoline mixtures, for use in internal combustion engines (e.g, in automobiles, stationary engines and other engines) must be assigned to Packing Group II regardless of variations in volatility. B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. B33 - MC 300, MC 301, MC 302, MC 303, MC 305, MC 306, and DOT 406 cargo tanks equipped with a 1 psig normal vent used to transport gasoline must conform to Table I of this Special Provision. Based on the volatility class determined by using ASTM D 439 and the Reid vapor pressure (RVP) of the particular gasoline, the maximum lading pressure and maximum ambient temperature permitted during the loading of gasoline may not exceed that listed in Table I. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: E - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.
TDG	
UN-No. (TDG)	: UN1203
TDG Special Provisions	: 17 - These dangerous goods may be handled, offered for transport or transported under the UN number and shipping name UN1268, PETROLEUM DISTILLATES, N.O.S, PETROLEUM PRODUCTS N.O.S, DISTILLATS DE PÉTROLE, N.S.A. or PRODUITS PÉTROLIERS, N.S.A.,88

4-Cycle Fuel: Ethanol-Free Small Engine Fuel

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

TDG Special Provisions : - Despite the quantity limits in column 9 of Schedule 1 for these dangerous goods, a road vehicle is not a passenger carrying road vehicle unless the passengers in it are transported for hire or reward, 98 - If these dangerous goods are composed of more than 10% ethanol, they must be transported under UN3475, ETHANOL AND GASOLINE MIXTURE, 150 - An approved ERAP is required for the dangerous goods referred to in paragraph 7.2(1)(f) of Part 7 (Emergency Response Assistance Plan).

Explosive Limit and Limited Quantity Index : 30 L
Excepted quantities (TDG) : E2
Passenger Carrying Vessel Index : 100 L
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 5 L
Emergency Response Guide (ERG) Number : 128

IMDG

Special provision (IMDG) : 243
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1
EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage) : S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER
Stowage category (IMDG) : E
Properties and observations (IMDG) : Immiscible with water.

IATA

Special provision (IATA) : A100
PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
ERG code (IATA) : 3H

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S

2,4,6-tri-tert-butylphenol	CAS-No. 732-26-3	< 0.1%
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Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

1,2,4-trimethylbenzene	CAS-No. 95-63-6	< 0.1%
Xylene	CAS-No. 1330-20-7	< 0.1%
n-hexane	CAS-No. 110-54-3	0.1 - 1%
Toluene	CAS-No. 108-88-3	10 - 30%

4-Cycle Fuel: Ethanol-Free Small Engine Fuel

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Xylene (1330-20-7)

Listed on EPA Hazardous Air Pollutant (HAPS)
Listed on EPA HAPs Chronic Dose Response Assessment List - Carcinogens
Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits

CERCLA RQ	100 lb
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n-hexane (110-54-3)

Listed on EPA Hazardous Air Pollutant (HAPS)
Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits

CERCLA RQ	5000 lb
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Toluene (108-88-3)

Listed on EPA Hazardous Air Pollutant (HAPS)
Listed on EPA HAPs Chronic Dose Response Assessment List - Carcinogens
Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits

CERCLA RQ	1000 lb
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15.2. International regulations

CANADA

1,2,4-trimethylbenzene (95-63-6)

Listed on the Canadian DSL (Domestic Substances List)

1,3,5-trimethylbenzene (108-67-8)

Listed on the Canadian DSL (Domestic Substances List)

Xylene (1330-20-7)

Listed on the Canadian DSL (Domestic Substances List)

2,2',2"-nitilotriethanol (102-71-6)

Listed on the Canadian DSL (Domestic Substances List)

n-hexane (110-54-3)

Listed on the Canadian DSL (Domestic Substances List)

2,4,6-tri-tert-butylphenol (732-26-3)

Listed on the Canadian DSL (Domestic Substances List)

Naphtha (petroleum), full-range alkylate, butane-contg.* (68527-27-5)

Listed on the Canadian DSL (Domestic Substances List)

Toluene (108-88-3)

Listed on the Canadian DSL (Domestic Substances List)

4-Cycle Fuel: Ethanol-Free Small Engine Fuel

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Isopentane (78-78-4)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

1,2,4-trimethylbenzene (95-63-6)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

1,3,5-trimethylbenzene (108-67-8)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Xylene (1330-20-7)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on EPA HAPs Chronic Dose Response Assessment List - Carcinogens

Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits

2,2',2"-nitritotriethanol (102-71-6)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

n-hexane (110-54-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits

Toluene (108-88-3)

Listed on EPA HAPs Chronic Dose Response Assessment List - Carcinogens

Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Isopentane (78-78-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

 **WARNING:** This product can expose you to n-Hexane, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Issue date : 2/17/2026

Data sources : Supplier's safety documents. ECHA (European Chemicals Agency).

Training advice : Training staff on good practice.

Full text of hazard classes and H-statements

H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor

4-Cycle Fuel: Ethanol-Free Small Engine Fuel

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Full text of hazard classes and H-statements	
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H360	May damage fertility or the unborn child
H361	Suspected of damaging fertility or the unborn child
H371	May cause damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Abbreviations and acronyms	
ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American International Health Alliance
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS-No.	Chemical Abstracts Service number
DOT	Department of Transport
DSL	Canada DSL (Domestic Substances List)
EC50	Median effective concentration
EC-No.	European Community number
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
LC50	Median lethal concentration

4-Cycle Fuel: Ethanol-Free Small Engine Fuel

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Abbreviations and acronyms	
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
N.O.S.	Not Otherwise Specified
NDSL	Canada NDSL (Non-Domestic Substances List)
NIOSH	National Institute for Occupational Safety and Health
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PPE	Personal protection equipment
SDS	Safety Data Sheet

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.