

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Gasoline**

Other means of identification : Octane Grades, Blendstock uses (i.e. CBOBs, RBOBs), Unleaded Gasolines, Ethanol and Gasohols

Recommended use of the chemical and restrictions on use

: Automotive and internal combustion engine fuel
Restriction on use: None known

Chemical family : Complex combination of hydrocarbons

Name, address, and telephone number of the supplier:

Name, address, and telephone number of the manufacturer:

Hartland Fuel Products

920 10th Avenue North
Onalaska, WI, USA
54650

Supplier's Telephone #

Refer to supplier

: (800) 283-4427, (608) 779-6580, (Monday - Friday 8 am - 5 pm CST)

24 Hr. Emergency Tel # : (800) 633-8253 (PERS)

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear Colored liquid. Hydrocarbon odor.

Most important hazards: Extremely flammable liquid and vapor. Vapors may cause flash fires. Aspiration hazard. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Occupational exposure to the substance or mixture may cause adverse effects. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Avoid release to the environment. See Section 12 for more environmental information.

Hazard classification

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Flammable liquids -Category 1

Aspiration Toxicity - Category 1

Skin Corrosion/Irritation - Category 2

Eye damage/irritation Category 2A

Specific target organ toxicity, single exposure - Category 3 (respiratory)

Specific target organ toxicity, single exposure - Category 3 (narcotic effects)

Specific Target organ toxicity, repeated exposure- Category 1 (blood and immune, peripheral neuropathy)

Specific Target Organ Toxicity, Repeated Exposure - Category 2 (Central Nervous system)

Germ cell mutagenicity - Category 1B

Reproductive toxicity - Category 2

Carcinogenicity - Category 1

Label elements

Hazard pictogram(s)



Signal Word

Danger

Hazard statement(s)

Extremely flammable liquid and vapor.
May be fatal if swallowed and enters airways. Causes serious eye irritation.
Causes skin irritation.
May cause respiratory irritation. May cause drowsiness or dizziness. May cause genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure. (blood, immune, peripheral neuropathy and central nervous system)

Precautionary statement(s)

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use explosion-proof electrical and ventilating equipment. Use only non-sparking tools.
Take precautionary measures against static discharge. Do not breathe mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
Wear protective gloves/clothing and eye/face protection.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation occurs: get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical attention/advice. In case of fire: Use appropriate media to extinguish.

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

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Other hazards which do not result in classification:

Exposure to component solvent Vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effect, such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Intentional inhalation may cause unconsciousness, asphyxiation and death. Contains benzene, which can cause blood disease, including anemia and leukemia.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Gasoline	Petrol	8006-61-9	99.9 - 100.0
Toluene	Methylbenzene	108-88-3	8.0 - 11.0
Ethyl alcohol	Ethyl alcohol Ethyl hydrate	64-17-5	9.0 - 11.0
Pentane	Amyl hydride	109-66-0	8.0 - 10.0
n-Hexane	Hexanes	110-54-3	7.0 - 9.0
Xylene	Dimethylbenzene; Methyltoluene; Xylol	1330-20-7	7.0 - 8.0
Heptane	Dipropylmethane Heptyl hydride	142-82-5	5.0 - 8.0
Butane	Butyl hydride	106-97-8	4.0 - 6.0
1,2,4-Trimethyl benzene	Pseudocumene	95-63-6	0.0 - 3.0
Benzene	Phenyl hydride Coal naphtha	71-43-2	0.0 - 3.0
Ethylbenzene	Ethylbenzol Phenylethane	100-41-4	0.0 - 2.0
Cyclohexane	Benzenhexahydride	110-82-7	0.0 - 1.0

The % concentrations for the above listed chemicals will vary from batch to batch. Concentrations listed represent the actual concentration range for each chemical.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately. Seek immediate medical attention/advice. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.
- Inhalation* : Move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Seek immediate medical attention/advice. Provide supportive treatment, keeping victim warm and quiet.
- Skin contact* : IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Take off contaminated clothing and shoes immediately. Launder clothing before reuse.
- Eye contact* : Flush eyes thoroughly with running water for at least 20 minutes, holding eyelids open to ensure complete flushing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice.

Most important symptoms and effects, both acute and delayed

- : Causes eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
- : Causes skin irritation. Symptoms may include redness, edema, drying defatting and cracking of the skin.

May cause drowsiness or dizziness. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. May cause respiratory irritation. Symptoms may include coughing, choking and wheezing.
Aspiration hazard - material may cause lung inflammation or damage if it enters lungs through vomiting or swallowing.
May cause genetic defects.
May damage fertility or the unborn child.
May cause cancer by inhalation.
Causes damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

: Treat symptomatically. Aspiration hazard. This product is a CNS depressant.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Dry chemical, alcohol foam, carbon dioxide, or water spray. For large fires use alcohol type or all-purpose type foam.

Unsuitable extinguishing media

: Water may cause spattering of hot material and may spread burning. Water may be ineffective because it may not cool product below the flashpoint.

Special hazards arising from the substance or mixture / Conditions of flammability

: Extremely flammable liquid and vapor. Vapor may cause flash fire. Will be ignited by heat, sparks, flame, or other ignition sources. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Vapors may form explosive mixtures with air. Product may emit flammable vapors which when mixed with air may burn or explode. Vapors are heavier than air and may travel or be moved along the ground to an ignition source at locations distant from material handling. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply or any natural waterway. Risk of explosion.

Flammability classification (OSHA 29 CFR 1910.106)

: Flammable liquid- Category 1

Hazardous combustion products

: Carbon dioxide and carbon monoxide. Aldehydes Aromatic hydrocarbons and other irritating fumes and smoke

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

Special fire-fighting procedures

: Keep containers cool until after the fire is out. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply or any natural waterway. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Shut off ignition sources; no flares, smoking or flames in hazard area. Wear appropriate personal protective equipment (PPE). Wear suitable protective clothing (see Section 8). Wear chemically resistant personal protective equipment during cleanup. Only trained personnel should be permitted in area. Do not walk through spilled product as it may be on fire and not visible. Handle in accordance with good industrial hygiene and safety practice.

Environmental precautions : If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

- : Small spill: contain and collect spill with non-combustible, absorbent material such as sand, vermiculite, or diatomaceous earth. Place in a container for disposal according to local regulations. Large spill: prevent entry into sewers, waterways, basements, or confined areas. Isolate any hazards and deny entry to unnecessary personnel. Dike area for later disposal or recovery. Notify appropriate federal, state, and local agencies.

Special spill response procedures

- : Contact appropriate local and provincial environmental authorities for assistance and/or reporting requirements. Fire fighting foam may be useful in certain situations to reduce vapors. Use water fog to knock down vapors and contain run-off. If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
US CERCLA Reportable quantity (RQ): See section 15.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Do not breathe mist or vapor. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Use proper bonding and grounding techniques when transferring liquid. Do not cut, weld, drill or grind on or near this container. For use as a motor fuel only. Product should never be used as a solvent due to its flammable and potentially toxic properties. Siphoning by mouth can result in lung aspiration which can be harmful or fatal. Portable containers of 12 gallons (45 liters) or less should never be filled while they are in or on a motor vehicle or marine craft. Static electric discharge can ignite fuel vapors when filling non-grounded containers or vehicles on trailers. Containers should be placed on the ground.

The nozzle spout must be kept in contact with the container before and during the entire filling operation. Use only approved containers. A buildup of static electricity can occur upon re-entry into a vehicle during fueling especially in cold or dry climate conditions. The charge is generated by the action of dissimilar fabrics (i.e., clothing and upholstery) rubbing across each other as a person enters/exits the vehicle. A flash fire can result from this discharge if sufficient flammable vapors are present.

Therefore, do not get back in your vehicle while refueling. Cellular phones and other electronic devices may have the potential to emit electrical charges (sparks). Sparks in potentially explosive atmospheres (including fueling areas such as gas stations) could cause an explosion if sufficient flammable vapors are present. Therefore, turn off cellular phones and other electronic devices when working in potentially explosive atmospheres or keep devices inside your vehicle during refueling.

Conditions for safe storage : Store in a cool, dry, well-ventilated area. Flammable liquid. Keep away from excessive heat, open flames, sparks and other possible sources of ignition. Do not store in unmarked containers or storage devices. Do not store near any incompatible materials (see Section 10). Keep containers tightly closed when not in use. Storage area should comply with NFPA 30 "Flammable and Combustible liquid Code". Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not expose to heat, open flames, strong oxidizers or other sources of ignition.

Incompatible materials : Strong oxidizers (e.g. Chlorine, Peroxides, etc.).

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:				
Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Gasoline	N/Av	N/Av	N/Av	N/Av
Toluene	N/Av	N/Av	200 ppm	300 ppm (Ceiling)
Ethyl alcohol	N/Av	1000 ppm	1000 ppm (1900 mg/m ³)	N/Av
Pentane	1000 ppm	N/Av	1000 ppm (2950 mg/m ³)	N/Av
n-Hexane	50 ppm (skin)	N/Av	500 ppm (1800 mg/m ³)	N/Av
Xylene	100 ppm	150 ppm	100 ppm (435 mg/m ³)	N/Av
Heptane	400 ppm	500 ppm	500 ppm (2000 mg/m ³)	500 ppm
Butane	1000 ppm (listed under Aliphatic hydrocarbon gases: Alkane C1-4)	N/Av	800 ppm	N/Av
1,2,4-Trimethyl benzene	25 ppm (mixed isomers)	N/Av	25 ppm (trimethylbenzene isomers) (final rule limit)	N/Av
Benzene	0.5 ppm (skin)	2.5 ppm (skin)	10 ppm	25 ppm (Ceiling)
Ethylbenzene	20 ppm	N/Av	100 ppm (435 mg/m ³)	N/Av
Cyclohexane	300 ppm	N/Av	300 ppm ; 1050 mg/m ³	N/Av

Exposure controls

Ventilation and engineering measures

- : Provide adequate ventilation. General mechanical ventilation and local exhaust is required for use with this product. However, if operating conditions create high airborne concentrations of this material, special ventilation may be needed. Use explosion-proof electrical and ventilating equipment.

Respiratory protection

- : A NIOSH approved air-purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may be used to reduce exposure. A respiratory protection program that meets CSA/OSHA/MSHA Z94.4-02 requirements must be followed whenever workplace conditions warrant use of a respirator.

Skin protection

- : Wear protective gloves/clothing. Wear appropriate protective clothing to prevent skin contact, such as coveralls or long sleeved shirt, long pants, and shoes and socks. Advice should be sought from glove suppliers.

Eye / face protection

- : Safety glasses with side shields should be used with this product. If splashing is anticipated, splash goggles and a face shield are recommended.

Other protective equipment

- : Emergency showers and eyewash facilities should be nearby. Depending on conditions of use, safety shoes and additional protective clothing may also be necessary.

General hygiene considerations

- : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Clear, colored liquid.
Odor : Hydrocarbon odor
Odor threshold : Not available.

pH : Not available.
Melting Point/Freezing point : Not available.

Initial boiling point and boiling range

: 24-210°C
Flash point : -43 °C
Flashpoint (Method) : Not reported

Evaporation rate (BuAe = 1) : N/Av

Flammability (solid, gas) : N/Av
Lower flammable limit (% by vol.)
: 1.4 %

Upper flammable limit (% by vol.)
: 7.6 %
Oxidizing properties : N/Av

Explosive properties : N/Av
Vapor pressure : 5.5-15 psi
Vapor density : N/Av

Relative density / Specific gravity

: 0.70-0.76
Solubility in water : Appreciable.

Other solubility(ies) : N/Av

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution
: N/Av
Auto-ignition temperature : N/Av

Decomposition temperature : N/Av
Viscosity : N/Av
Volatiles (% by weight) : 100 WT%

Volatile organic Compounds (VOC's)
: N/Av

Absolute pressure of container

: N/Av
Flame projection length : N/Av

Other physical/chemical comments
: None reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

- Reactivity** : Avoid excessive heat, sparks and open flame. Avoid contact with incompatible materials.
- Chemical stability** : The material is stable at 70°F (21°C), 760 mmHg pressure. .
- Possibility of hazardous reactions** : Hazardous polymerization will not occur.
- Conditions to avoid** : Open flames, sparks, high heat and close proximity to incompatible substances.
- Incompatible materials** : Strong oxidizing agents. Contact with nitric and sulfuric acid will form nitroresols that can decompose violently.
- Hazardous decomposition products** : Smoke. Carbon dioxide and carbon monoxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

- Routes of entry inhalation** : YES
- Routes of entry skin & eye** : YES
- Routes of entry Ingestion** : YES

- Routes of exposure skin absorption** : YES

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

- : May cause anesthetic effects. Symptoms include intoxication, dizziness, nausea, headache. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure by inhalation.

Sign and symptoms ingestion

- : Aspiration hazard if swallowed - can enter lungs and cause damage. May cause nausea, stomach pain and vomiting. May cause gastrointestinal irritation. May cause central nervous system effects.
In severe cases, may cause the following: tremors, convulsions, unconsciousness, coma, respiratory arrest, death.

Sign and symptoms skin

- : May cause skin irritation. Prolonged or repeated contact can result in de-fatting and drying of the skin which may result in skin irritation and dermatitis.

Sign and symptoms eyes

- : Symptoms may include stinging, tearing, redness, swelling and blurred vision. Causes serious eye irritation.

Potential Chronic Health Effects

- : Chronic exposure damages the brain and the central nervous system. Contains benzene, which can cause blood disease, including anemia and leukemia.

Mutagenicity

- : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification Germ cell mutagenicity - Category 1B. May cause genetic defects.

Carcinogenicity	: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Carcinogenicity Category 1. May cause cancer. This material is listed by IARC as Group 2B (possibly carcinogenic to humans). This material is listed as Group 3 (evidence of animal carcinogenicity) by ACGIH. Contains the following chemicals listed as confirmed or suspected human carcinogens by ACGIH: Benzene Contains the following chemicals listed as confirmed animal carcinogens (A3) by ACGIH: Ethyl benzene, Gasoline, Methyl tert-butyl ether. Contains the following chemical(s) listed as Group 1 (Human Carcinogens) by IARC: Benzene. Contains the following chemical(s) listed as Group 2B (possibly carcinogenic) by IARC: Ethyl benzene. Contains the following chemical(s) listed as Known Carcinogen by NTP: Benzene
Reproductive effects & Teratogenicity	: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Reproductive Toxicity-Category 1. May damage the unborn child.
Sensitization to material	: Not expected to be a skin sensitizer. Not expected to be a respiratory sensitizer.
Specific target organ effects	: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Specific target organ toxicity, single exposure - Category 3 (respiratory). May cause respiratory irritation. Specific target organ toxicity, single exposure - Category 3 (narcotic effects). May cause drowsiness or dizziness. Specific Target organ toxicity, repeated exposure- Category 1 (central nervous system). Causes damage to organs. Specific Target Organ Toxicity, Repeated Exposure - Category 2 (blood and immune, peripheral neuropathy). May cause damage to organs through prolonged or repeated exposure.
Medical conditions aggravated by overexposure	: Pre-existing skin and respiratory disorders. Liver and kidney injuries may occur. Central nervous system.
Synergistic materials	: None known.
Toxicological data	: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data. ATE Oral: 6130 mg/kg ATE Dermal: 8345 mg/kg ATE Inhalation: 38.6 mg/L

<u>Chemical name</u>	LC₅₀(4hr) <u>(Inhalation, rat)</u>	LD₅₀	
		<u>(Oral, rat)</u>	<u>(Dermal, rabbit)</u>
Gasoline	300 g/m ³ 5 min	N/Av	N/Av
Toluene	7585 ppm (28.1 mg/L)	5580 mg/kg	12 125 mg/kg
Ethyl alcohol	> 32 380 ppm (61 mg/L) (Vapor)	7060 mg/kg	> 15 800 mg/kg
Pentane	> 6106 ppm (18 mg/L) (Vapor) (No mortality)	> 2000 mg/kg (No mortality)	> 3000 mg/kg
n-Hexane	38 500 ppm (135.7 mg/L) (Vapor)	28 670 mg/kg	> 3350 mg/kg (No mortality)
Xylene	6350 ppm (27.6 mg/L) (Vapor)	3253 mg/kg	12 180 mg/kg
Heptane	25 000 ppm (102.5 mg/L) (Vapor)	> 15 000 mg/kg	> 2000 mg/kg (No mortality)
Butane	658 mg/L/4H	N/Av	N/Av
1,2,4-Trimethyl benzene	18 mg/L (Vapor)	5000 mg/kg	> 3160 mg/kg
Benzene	13 700 ppm (43.8 mg/L) (Vapor)	930 mg/kg	> 8240 mg/kg
Ethylbenzene	4000 ppm (17.4 mg/L) (Vapor)	3500 mg/kg	15 380 mg/kg
Cyclohexane	>32.70 mg/L	12,850 mg/kg	>2000 mg/kg

Other important toxicological hazards

- : Aspiration hazard - material may cause lung inflammation or damage if it enters lungs through vomiting or swallowing.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

- : Toxic to aquatic life with long lasting effects. Avoid release to the environment. See data for individual ingredient ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Gasoline	8006-61-9	96 Hr LC50 Oncorhynchus mykiss: 56 mg/L	N/Av	N/Av
Toluene	108-88-3	5.4 mg/L (pink salmon)	1.4 - 4 mg/L	None.
Ethyl alcohol	64-17-5	> 100 mg/L (Fathead minnow)	N/Av	None.
Pentane	109-66-0	4.26 mg/L (Rainbow trout)	6.165 mg/L/28-day (QSAR)	None.
n-Hexane	110-54-3	2.5 mg/L (Fathead minnow)	2.8 mg/L/28-day (Rainbow trout)	None.
Xylene	1330-20-7	8.2 mg/L (Rainbow trout)	N/Av	None.
Heptane	142-82-5	5.738 mg/L (Rainbow trout)	1.284 mg/L/28-day (Rainbow trout)	None.
Butane	106-97-8	N/Av	N/Av	N/Av
1,2,4-Trimethyl benzene	95-63-6	7.72 mg/L (Fathead minnow)	N/Av	None.
Benzene	71-43-2	5.3 mg/L (Rainbow trout) (OECD)	0.8 mg/L/32 days NOEL (OECD)	None.
Ethylbenzene	100-41-4	4.2 mg/L (Rainbow trout)	1.13 mg/L (30 days) (QSAR)	None.
Cyclohexane	110-82-7	4.53 mg/L (Fathead minnow)	n/av	none

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Gasoline	8006-61-9	N/Av	N/Av	N/Av
Toluene	108-88-3	3.78 mg/L (Daphnia magna)	0.53 - 1 mg/L	None.
Ethyl alcohol	64-17-5	5012 mg/L (Daphnia magna)	N/Av	None.
Pentane	109-66-0	2.7 mg/L (Daphnia magna)	10.76 mg/L (QSAR)	None.
n-Hexane	110-54-3	3.9 mg/L (Daphnia magna)	4.9 mg/L (QSAR)	None.
Xylene	1330-20-7	3.2 - 9.56 mg/L (Daphnia magna)	N/Av	None.
Heptane	142-82-5	0.2 mg/L Chaetogammarus marinus (Water flea)	0.06 - 0.23 mg/L	1
Butane	106-97-8	N/Av	N/Av	N/Av
1,2,4-Trimethyl benzene	95-63-6	3.6 mg/L (Daphnia magna)	N/Av	None.
Benzene	71-43-2	10 mg/L (Daphnia magna) (OECD)	N/Av	None.
Ethylbenzene	100-41-4	1.81 mg/L (Daphnia magna)	N/Av	None.
Cyclohexane	110-82-7	n/av	n/av	none

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Gasoline	8006-61-9	72 Hr EC50 Pseudokirchneriella subcapitata: 4700 mg/L	N/Av	N/Av
Toluene	108-88-3	N/Av	10 mg/L/72hr (Green algae)	None.
Ethyl alcohol	64-17-5	1000 mg/L/96hr (Green algae)	N/Av	None.
Pentane	109-66-0	7.5 mg/L/72hr (Green algae)	2.0 mg/L/72hr	None.
n-Hexane	110-54-3	0.89 mg/L/96hr (Green algae)	N/Av	1
Xylene	1330-20-7	3.2 - 4.9 mg/L/72hr (Green algae)	N/Av	None.
Heptane	142-82-5	4.338 mg/L/72hr (Green algae)	0.97 mg/L/72hr	None.
Butane	106-97-8	N/Av	N/Av	N/Av
1,2,4-Trimethyl benzene	95-63-6	2.356 mg/L/96hr (Green algae) (QSAR)	N/Av	None.
Benzene	71-43-2	29 mg/L/72hr (Green algae) (literature)	N/Av	None.
Ethylbenzene	100-41-4	3.6 mg/L/96hr (Green algae)	3.4 mg/L/96hr	None.
Cyclohexane	110-82-7	3.4 mg/L/72 hours (Green algae)	n/av	none

Persistence and degradability

- : Expected to be inherently biodegradable. The presence of ethanol in this product may impede the biodegradation of benzene, toluene, ethylbenzene and xylene in groundwater resulting in elongated plumes of these constituents.

Bioaccumulation potential

- : May bioaccumulate. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Gasoline (CAS 8006-61-9)	2.1 - 6.0	N/Av
Benzene (CAS 71-43-2)	2.13	10 (Fish)
Butane (CAS 106-97-8)	2.89	N/Av
Ethylbenzene (CAS 100-41-4)	3.15	1.1 - 1.5
n-Hexane (CAS 110-54-3)	3.9	200
Toluene (CAS 108-88-3)	2.65	
Xylene (CAS 1330-20-7)	3.12 - 3.2	50 - 58
Cyclohexane (CAS 110-82-7)	3.44	N/Av
Heptane (CAS 142-82-5)	4.66	2000
Ethyl alcohol (CAS 64-17-5)	- 0.31	N/Av
1,2,4-Trimethyl benzene (CAS 95-63-6)	3.78	31 - 275
Pentane (CAS 109-66-0)	3.45	171 (Fathead minnow) (calcu

Mobility in soil

- : May partition into air, soil and water.

Other Adverse Environmental effects

- : Product can cause fouling of shoreline and may be harmful to aquatic life in low concentrations.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

- : See Section 7 (Handling and Storage) for further details.

Methods of Disposal

- : Dispose of in accordance with federal, provincial and local hazardous waste laws.

RCRA

- : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. Under the RCRA, it is the responsibility of the waste generator to determine the proper waste identification and disposal method.

SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	UN1203	GASOLINE	3	II	
TDG Additional information	Please consult the TDG guidelines for further information.				
49CFR/DOT	UN1203	GASOLINE	3	II	
49CFR/DOT Additional information	Please contact 49CFR/DOT guidelines for further information.				
ICAO/IATA	UN1203	Gasoline	3	II	 
ICAO/IATA Additional information	Please consult the IATA/ICAO guidelines for further information.				
IMDG	UN1203	GASOLINE	3	II	 
IMDG Additional information	Consult the IMDG regulations for exceptions.				

Special precautions for user : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking.

Environmental hazards : This product meets the criteria for an environmentally hazardous material according to the IMDG Code. See Section 12 for more environmental information.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Gasoline	8006-61-9	Yes	N/Ap	N/Av	No	N/Ap
Toluene	108-88-3	Yes	1000 lb/ 454 kg	None.	No	1%
Ethyl alcohol	64-17-5	Yes	None.	None.	No	N/Ap
Pentane	109-66-0	Yes	None.	None.	No	N/Ap
n-Hexane	110-54-3	Yes	5000 lb/ 2270 kg	None.	Yes	1%
Xylene	1330-20-7	Yes	100 lbs / 45.4 kg	None.	Yes	1%
Heptane	142-82-5	Yes	None.	None.	No	N/Ap
Butane	106-97-8	Yes	N/Ap	N/Av	No	N/Ap
1,2,4-Trimethyl benzene	95-63-6	Yes	None.	None.	Yes	1%
Benzene	71-43-2	Yes	10 lb / 4.54 kg	None.	Yes	0.1%
Ethylbenzene	100-41-4	Yes	1000 lb/ 454 kg	None.	Yes	0.1%
Cyclohexane	110-82-7	Yes	1000 lb/ 454 kg	N/Av	Yes	1%

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Flammable; Skin irritation; Eye irritation; Carcinogenicity; Germ cell mutagenicity; Reproductive toxicity; Specific target organ toxicity, single exposure; Specific target organ toxicity, repeated exposure; Aspiration hazard.

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Gasoline	8006-61-9	No	N/Ap	Yes	Yes	Yes	Yes	No	Yes
Toluene	108-88-3	Yes	Developmental	No	No	Yes	No	No	Yes
Ethyl alcohol	64-17-5	Yes	Cancer (in alcoholic beverages) Developmental (in alcoholic beverages)	Yes	Yes	Yes	Yes	Yes	Yes
Pentane	109-66-0	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
n-Hexane	110-54-3	No	N/Ap	No	Yes	Yes	Yes	Yes	Yes
Xylene	1330-20-7	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Heptane	142-82-5	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Butane	106-97-8	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
1,2,4-Trimethyl benzene	95-63-6	No	N/Ap	No	Yes	Yes	Yes	Yes	No
Benzene	71-43-2	Yes	Cancer; male reproductive toxicity; Developmental	Yes	Yes	Yes	Yes	Yes	Yes
Ethylbenzene	100-41-4	Yes	Cancer	Yes	Yes	Yes	Yes	Yes	Yes
Cyclohexane	110-82-7	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Gasoline	8006-61-9	232-349-1	Present	Present	(9)-1694	KE-21971	Present	Not listed
Toluene	108-88-3	203-625-9	Present	Present	(3)-2	KE-33936	Present	HSR001227
Ethyl alcohol	64-17-5	200-578-6	Present	Present	(2)-202	KE-13217	Present	HSR001144
Pentane	109-66-0	203-692-4	Present	Present	(2)-5	KE-27968	Present	HSR001212
n-Hexane	110-54-3	203-777-6	Present	Present	(2)-6	KE-18626	Present	HSR001166
Xylene	1330-20-7	215-535-7	Present	Present	(3)-60; (3)-3	KE-35427	Present	HSR000983
Heptane	142-82-5	205-563-8	Present	Present	(2)-7	KE-18271	Present	HSR001164
Butane	106-97-8	203-448-7	Present	Present	(2)-4	KE-03751	Present	HSR000989
1,2,4-Trimethyl benzene	95-63-6	202-436-9	Present	Present	(3)-7; (3)-3427	KE-34410	Present	HSR001382
Benzene	71-43-2	200-753-7	Present	Present	(3)-1	KE-02150	Present	HSR001038
Ethylbenzene	100-41-4	202-849-4	Present	Present	(3)-60; (3)-28	KE-13532	Present	HSR001151
Cyclohexane	110-82-7	203-806-2	Present	Present	(3)-2233	KE-18562	Present	HSR001111

SECTION 16. OTHER INFORMATION

Legend

- : ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstract Services
- CSA: Canadian Standard Association
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- DOT: Department of Transportation
- EPA: Environmental Protection Agency
- HSDB: Hazardous Substances Data Bank
- IARC: International Agency for Research on Cancer
- LC: Lethal Concentration
- LD: Lethal Dose
- N/Ap: Not Applicable
- N/Av: Not Available
- NIOSH: National Institute of Occupational Safety and Health
- OSHA: Occupational Safety and Health Administration
- PEL: Permissible exposure limit
- RCRA: Resource Conservation and Recovery Act
- RTECS: Registry of Toxic Effects of Chemical Substances
- SARA: Superfund Amendments and Reauthorization Act
- STEL: Short Term Exposure Limit
- TLV: Threshold Limit Values
- TWA: Time Weighted Average
- WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2019.
- 2. International Agency for Research on Cancer Monographs, searched 2018.
- 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2018 (Chempendium, HSDB and RTECS).
- 4. Safety Data Sheets from manufacturer.
- 5. US EPA Title III List of Lists - June 2019 version.
- 6. California Proposition 65 List - November 23, 2018 version.
- 7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2018.

Preparation Date (mm/dd/yyyy)

: 07/17/2019

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

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