

SAFETY DATA SHEET

Gasoline Blend Stocks



Section 1. Identification

Product name : Gasoline Blend Stocks
Product code : Not available.
Synonyms : Alkylate, Cat Gas, Cat Gasoline, Cat Poly gasoline, CRU1 Reformate, CRU2 Reformate, Crude LSR Gasoline, Deiso bottoms - Alkylate, Deisohexanizer Bottoms, FCC Gasoline, FCCU Cat Gasoline, Heavy FCC Gasoline, Heavy Platformate, Heavy Straight Run (HSR), Isomerate, Isostripper bottoms - Alkylate, Jet Base, Light Cat Naphtha (LCN), Light FCC Gasoline, Light Plat. (BZSU Splitter OH), Light Straight Run, Low Sulfur Cat Gas, LSR, Naphtha Splitter Bottoms, Penate gasoline, Platformate, Raffinate, Reformate, Reformate gasoline, Scanfinate, Scanfiner Rundown, Sweet Naphtha, Total Plat

Relevant identified uses of the substance or mixture and uses advised against

Product use : Intermediate.
Area of application : Industrial applications.

Manufacturer : HollyFrontier Refining & Marketing LLC
2828 North Harwood
Suite 1300
Dallas, Texas 75201
USA
Customer Service: (888) 286-8836

Emergency telephone number : CHEMTREC® (800) 424-9300
CCN 201319

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 : H224 FLAMMABLE LIQUIDS - Category 1
H315 SKIN IRRITATION - Category 2
H340 GERM CELL MUTAGENICITY - Category 1
H350 CARCINOGENICITY - Category 1B
H361 TOXIC TO REPRODUCTION (Fertility) - Category 2
H361 TOXIC TO REPRODUCTION (Unborn child) - Category 2
H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H304 ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 15%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 32.5%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 21%

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H224 - Extremely flammable liquid and vapor.
H315 - Causes skin irritation.
H340 - May cause genetic defects.
H350 - May cause cancer.
H361 - Suspected of damaging fertility or the unborn child.
H304 - May be fatal if swallowed and enters airways.
H336 - May cause drowsiness or dizziness.

Precautionary statements

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling.
- Response** : IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. 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 soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention.
- Storage** : Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Avoid contact with skin and clothing. Wash thoroughly after handling.
- Hazards not otherwise classified** : Prolonged or repeated contact may dry skin and cause irritation. May release hydrogen sulfide a poisonous gas that can accumulate in confined spaces.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Other names	%	CAS number
Gasoline	-	0 - 80	86290-81-5
pentane	-	0 - 30	109-66-0
n-hexane	-	0 - 25	110-54-3
toluene	-	0 - 22	108-88-3
benzene	-	0 - 10	71-43-2
ethylbenzene	-	0 - 7	100-41-4
1,2,4-trimethylbenzene	-	0 - 5	95-63-6
naphthalene	-	0 - 1	91-20-3
hydrogen sulfide	-	<0.0001	7783-06-4

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

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified 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. Get medical attention. Continue to rinse for at least 15 minutes.
- 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** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : 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. Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 : May cause mild eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation. Defatting to the skin.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : pain or irritation; watering; redness

Inhalation : respiratory tract irritation; coughing; nausea or vomiting; headache; drowsiness/fatigue; dizziness/vertigo; unconsciousness

Skin contact : irritation; redness; dryness; cracking

Ingestion : nausea or vomiting

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

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents.

Specific treatments : No specific treatment.

Protection of medical responders : 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.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Extremely flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. May release hydrogen sulfide a poisonous gas that can accumulate in confined spaces.

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

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.

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. May release hydrogen sulfide a poisonous gas that can accumulate in confined spaces.
- 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

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert 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, waterways, 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 swallow. Avoid breathing vapor or mist. 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. High pressure skin injections are serious medical emergencies. Injury will not appear serious at first. Within a few hours, tissue will become swollen, discolored and extremely painful. May release hydrogen sulfide a poisonous gas that can accumulate in confined spaces.
- 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. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Gasoline	<p>ACGIH TLV (United States, 3/2017). TWA: 300 ppm 8 hours. TWA: 890 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 1480 mg/m³ 15 minutes.</p>
pentane	<p>NIOSH REL (United States, 10/2016). TWA: 120 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 610 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.</p>
	<p>ACGIH TLV (United States, 3/2017). TWA: 1000 ppm 8 hours.</p>
	<p>OSHA PEL (United States, 6/2016). TWA: 1000 ppm 8 hours. TWA: 2950 mg/m³ 8 hours.</p>
n-hexane	<p>NIOSH REL (United States, 10/2016). TWA: 50 ppm 10 hours. TWA: 180 mg/m³ 10 hours.</p>
	<p>ACGIH TLV (United States, 3/2017). Absorbed through skin. TWA: 50 ppm 8 hours.</p>
	<p>OSHA PEL (United States, 6/2016). TWA: 500 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
toluene	<p>OSHA PEL Z2 (United States, 2/2013). TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes.</p>
	<p>NIOSH REL (United States, 10/2016). TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes.</p>
	<p>ACGIH TLV (United States, 3/2017). TWA: 20 ppm 8 hours.</p>
benzene	<p>ACGIH TLV (United States, 3/2017). Absorbed through skin. TWA: 0.5 ppm 8 hours. TWA: 1.6 mg/m³ 8 hours. STEL: 2.5 ppm 15 minutes. STEL: 8 mg/m³ 15 minutes.</p>
	<p>OSHA PEL Z2 (United States, 2/2013). TWA: 10 ppm 8 hours. CEIL: 25 ppm AMP: 50 ppm 10 minutes.</p>
	<p>NIOSH REL (United States, 10/2016). TWA: 0.1 ppm 10 hours. STEL: 1 ppm 15 minutes.</p>
	<p>OSHA PEL (United States, 6/2016). TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.</p>
ethylbenzene	<p>ACGIH TLV (United States, 3/2017). TWA: 20 ppm 8 hours.</p>
	<p>NIOSH REL (United States, 10/2016). TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes.</p>
	<p>OSHA PEL (United States, 6/2016). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.</p>
1,2,4-trimethylbenzene	<p>ACGIH TLV (United States, 3/2017). TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours.</p>
	<p>NIOSH REL (United States, 10/2016). TWA: 25 ppm 10 hours. TWA: 125 mg/m³ 10 hours.</p>
naphthalene	<p>ACGIH TLV (United States, 3/2017). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 52 mg/m³ 8 hours.</p>
	<p>NIOSH REL (United States, 10/2016). TWA: 10 ppm 10 hours. TWA: 50 mg/m³ 10 hours. STEL: 15 ppm 15 minutes. STEL: 75 mg/m³ 15 minutes.</p>

hydrogen sulfide	<p>OSHA PEL (United States, 6/2016). TWA: 10 ppm 8 hours. TWA: 50 mg/m³ 8 hours.</p> <p>ACGIH TLV (United States, 3/2017). TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.</p> <p>OSHA PEL Z2 (United States, 2/2013). CEIL: 20 ppm AMP: 50 ppm 10 minutes.</p> <p>NIOSH REL (United States, 10/2016). CEIL: 10 ppm 10 minutes. CEIL: 15 mg/m³ 10 minutes.</p>
------------------	--

- 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. May release hydrogen sulfide a poisonous gas that can accumulate in confined spaces.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : 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.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Clear. to Amber.
- Odor** : Gasoline
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : -77 to -33°C (-107 to -27°F)

Boiling point	: -5 to 47°C (23 to 116°F)
Flash point	: <38°C (<100°F)
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not applicable.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: 8.3 to 128.2 kPa (62.053 to 961.82 mm Hg) 1.2 - 18.6 psi
Vapor density	: Not available.
Specific gravity	: 0.66 to 0.87
Density	: Not available.
Solubility	: Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (40°C (104°F)): 0.0016 to 0.012 cm ² /s (0.16 to 1.2 cSt)
Flow time (ISO 2431)	: Not available.
Molecular weight	: Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur. 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.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
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
Gasoline	LC50 Inhalation Vapor	Rat	>5.2 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Based on CONCAWE assessment of low boiling point naphthas (Gasolines).

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-hexane toluene	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
benzene	Eyes - Moderate irritant	Rabbit	-	88 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2	-

ethylbenzene	Skin - Mild irritant	Rat	-	milligrams 8 hours 60	-
	Skin - Mild irritant	Rabbit	-	microliters 24 hours 15	-
	Skin - Moderate irritant	Rabbit	-	milligrams 24 hours 20	-
	Eyes - Severe irritant	Rabbit	-	milligrams 500	-
naphthalene	Skin - Mild irritant	Rabbit	-	milligrams 24 hours 15	-
	Skin - Mild irritant	Rabbit	-	milligrams 495	-
	Skin - Severe irritant	Rabbit	-	milligrams 24 hours 0.05 Milliliters	-

Conclusion/Summary

- Skin** : Based on CONCAWE assessment of low boiling point naphthas (Gasolines). Slight to moderate/severe irritating to skin.
- Eyes** : Based on CONCAWE assessment of low boiling point naphthas (Gasolines). Non-irritating to the eyes.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Gasoline	skin	Guinea pig	Not sensitizing

Conclusion/Summary

- Skin** : Based on CONCAWE assessment of low boiling point naphthas (Gasolines). Not sensitizing.
- Respiratory** : No data available.

Carcinogenicity

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

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Gasoline	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
n-hexane	Category 2	Not determined	nervous system and peripheral nervous system
toluene	Category 2	Inhalation	nervous system
benzene	Category 1	Not determined	blood system, bone marrow, immune system, kidneys and liver
ethylbenzene	Category 2	Not determined	hearing organs
naphthalene	Category 2	Not determined	blood system, kidneys and liver
hydrogen sulfide	Category 2	Inhalation	lungs

Aspiration hazard

Name	Result
Gasoline	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

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

Conclusion/Summary : Based on CONCAWE assessment of low boiling point naphthas (Gasolines). Inhalation: No systemic toxicity. Dermal: No systemic toxicity.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

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

Mutagenicity : May cause genetic defects.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	3478.7 mg/kg
Inhalation (vapors)	568.8 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Gasoline	Acute EC50 1 to 10 mg/l	Daphnia	48 hours
	Acute IC50 1 to 10 mg/l	Algae	96 hours
	Acute LC50 1 to 10 mg/l	Fish	96 hours

Conclusion/Summary : Based on CONCAWE assessment of low boiling point naphthas (Gasolines).

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
toluene	301C Ready Biodegradability - Modified MITI Test (I)	100 % - 14 days	-	-
benzene	301C Ready Biodegradability - Modified MITI Test (I)	100 % - 14 days	-	-

Conclusion/Summary : Based on CONCAWE assessment of low boiling point naphthas (Gasolines).

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Gasoline	-	-	Inherent

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Gasoline	>4	10 to 2500	high

Mobility in soil

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

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Benzene (I,T)	71-43-2	Listed	U019
Toluene; Benzene, methyl-	108-88-3	Listed	U220

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN3295	UN3295	UN3295
UN proper shipping name	Hydrocarbons, liquid, n.o.s.	HYDROCARBONS, LIQUID, N. O.S.	Hydrocarbons, liquid, n.o.s.
Transport hazard class(es)	3 	3  	3 
Packing group	I	I	I
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

DOT Classification : **Reportable quantity** 200 lbs / 90.8 kg [31.355 gal / 118.69 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: 201. Bulk: 243.

Quantity limitation Passenger aircraft/rail: 1 L. Cargo aircraft: 30 L.

Special provisions 144, T11, TP1, TP8, TP28

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

Emergency schedules F-E, S-D

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 1 L. Packaging instructions: 351. Cargo Aircraft Only: 30 L. Packaging instructions: 361. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden.
Special provisions A3, A324

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.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR:** pentane; naphthalene
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Water Act (CWA) 307: benzene; toluene; ethylbenzene; naphthalene
Clean Water Act (CWA) 311: benzene; toluene; ethylbenzene; naphthalene; hydrogen sulfide
Clean Air Act (CAA) 112 regulated flammable substances: pentane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
hydrogen sulfide	<0.0001	Yes.	500	-	100	-

SARA 304 RQ : 111111111.1 lbs / 50444444.4 kg [17419624.1 gal / 65940450.3 L]

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 1
 SKIN IRRITATION - Category 2
 GERM CELL MUTAGENICITY - Category 1
 CARCINOGENICITY - Category 1B
 TOXIC TO REPRODUCTION (Fertility) - Category 2
 TOXIC TO REPRODUCTION (Unborn child) - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 ASPIRATION HAZARD - Category 1
 HNOC - Defatting irritant

Composition/information on ingredients

Name	%	Classification
Gasoline	0 - 80	FLAMMABLE LIQUIDS - Category 1 SKIN IRRITATION - Category 2 GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1B TOXIC TO REPRODUCTION (Fertility) - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
pentane	0 - 30	FLAMMABLE LIQUIDS - Category 2 SIMPLE ASPHYXIANTS HNOC - Defatting irritant
n-hexane	0 - 25	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A

toluene	0 - 22	<p>TOXIC TO REPRODUCTION (Fertility) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (nervous system, peripheral nervous system) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (nervous system) (inhalation) - Category 2 ASPIRATION HAZARD - Category 1</p>
benzene	0 - 10	<p>HNOC - Defatting irritant FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, bone marrow, immune system, kidneys, liver) - Category 1 ASPIRATION HAZARD - Category 1</p>
ethylbenzene	0 - 7	<p>HNOC - Defatting irritant FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2 ASPIRATION HAZARD - Category 1</p>
1,2,4-trimethylbenzene	0 - 5	<p>HNOC - Defatting irritant HNOC - Static-accumulating flammable liquid FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1</p>
naphthalene	0 - 1	<p>HNOC - Defatting irritant FLAMMABLE SOLIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)</p>

hydrogen sulfide	<0.0001	(Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, kidneys, liver) - Category 2 FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas ACUTE TOXICITY (inhalation) - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) (inhalation) - Category 2
------------------	---------	--

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	n-hexane	110-54-3	0 - 25
	toluene	108-88-3	0 - 22
	benzene	71-43-2	0 - 10
	ethylbenzene	100-41-4	0 - 7
	1,2,4-trimethylbenzene	95-63-6	0 - 5
	naphthalene	91-20-3	0 - 1
Supplier notification	n-hexane	110-54-3	0 - 25
	toluene	108-88-3	0 - 22
	benzene	71-43-2	0 - 10
	ethylbenzene	100-41-4	0 - 7
	1,2,4-trimethylbenzene	95-63-6	0 - 5
	naphthalene	91-20-3	0 - 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: PENTANE; BENZENE; TOLUENE; METHYLBENZENE; HEXANE; N-HEXANE; ETHYL BENZENE; ETHYLBENZENE; PSEUDOCUMENE

New York

: The following components are listed: Benzene; Toluene; Hexane; Ethylbenzene; Naphthalene

New Jersey

: The following components are listed: PENTANE; BENZENE; TOLUENE; BENZENE, METHYL-; n-HEXANE; HEXANE; ETHYL BENZENE; BENZENE, ETHYL-; PSEUDOCUMENE; 1,2,4-TRIMETHYL BENZENE; NAPHTHALENE; MOTH FLAKES

Pennsylvania

: The following components are listed: GASOLINE; PENTANE; BENZENE; BENZOL DILUENT; BENZENE, METHYL-; HEXANE; BENZENE, ETHYL-; PSEUDOCUMENE; NAPHTHALENE

California Prop. 65

⚠ WARNING: This product can expose you to Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Ethylbenzene, Naphthalene, which are known to the State of California to cause cancer, and Toluene, 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.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Ethylbenzene	Yes.	-
Toluene	-	Yes.
Naphthalene	Yes.	-
Benzene	Yes.	Yes.

International regulations**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

[Montreal Protocol \(Annexes A, B, C, E\)](#)

Not listed.

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Ingredient name	List name	Status
PAHs	POPs - Annex 3	Listed

Section 16. Other information[National Fire Protection Association \(U.S.A.\)](#)

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

[Procedure used to derive the classification](#)

Classification	Justification
Flam. Liq. 1, H224 Skin Irrit. 2, H315 Muta. 1, H340 Carc. 1B, H350 Repr. 2, H361 (Fertility) Repr. 2, H361 (Unborn child) STOT SE 3, H336 Asp. Tox. 1, H304	On basis of test data Calculation method Calculation method Expert judgment Calculation method Calculation method Expert judgment Calculation method

Date of issue/Date of revision : 05/09/2018

Date of previous issue : 11/12/2015

Version : 3

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
UN = United Nations

▣ Indicates information that has changed from previously issued version.

[Notice to reader](#)

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

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