



Section 1: IDENTIFICATION

Product Name: Avgas Aviation Fuel
Avgas Dyed

Synonyms: AVGAS 100LL.

Product Use: This product is used as fuel for internal combustion aircraft engines.

Restrictions on Use: Not available.

Manufacturer/Supplier: Husky Oil Marketing Company
PO Box 6525 Station 'D'
Calgary, Alberta T2P 3G7

Phone Number: 403-298-6111

Emergency Phone: 403-262-2111

Date of Preparation of SDS: April 4, 2017

Section 2: HAZARD(S) IDENTIFICATION

GHS INFORMATION

Classification: Flammable Liquids, Category 1
Skin Irritation, Category 2
Germ Cell Mutagenicity, Category 1B
Carcinogenicity, Category 1A
Toxic to Reproduction, Category 2
Specific Target Organ Toxicity (Single Exposure), Category 3 - Narcotic Effects
Specific Target Organ Toxicity (Repeated Exposure), Category 2
Aspiration Hazard, Category 1

LABEL ELEMENTS

Hazard

Pictogram(s):



Signal Word: Danger

Hazard Statements: Extremely flammable liquid and vapor.
Causes skin irritation.
May cause genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.

Precautionary Statements

Prevention: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.



Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical, ventilating, and lighting equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Do not breathe mist, vapours, or spray.
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves, protective clothing and eye protection.

Response: If swallowed: Immediately call a poison center or doctor.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.
 Do NOT induce vomiting.
 If skin irritation occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 In case of fire: Use dry chemical, CO2, water spray or regular foam to extinguish.

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

Disposal: Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: 100% of this product mixture consists of ingredient(s) of unknown acute toxicity.

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200). This material is considered hazardous by the Hazardous Products Regulations.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt.
Naphtha (petroleum), full-range alkylate, butane-contg.	Not available.	68527-27-5	85 - 95
Benzene, methyl-Benzene	Toluene Not available.	108-88-3 71-43-2	5 - 15 variable

Section 4: FIRST-AID MEASURES

Inhalation: If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. If breathing or the heart stops, trained personnel should immediately begin artificial respiration (AR) or cardiopulmonary resuscitation (CPR) respectively. Get medical attention immediately.



Acute and delayed symptoms and effects: May cause drowsiness or dizziness. May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness. Inhalation of Toluene may result in peculiar skin sensations (e. g. pins and needles) or numbness.

Eye Contact: If in eyes: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center or doctor if you feel unwell.

Acute and delayed symptoms and effects: May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact: If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Acute and delayed symptoms and effects: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: If swallowed: Do NOT induce vomiting. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Never give anything by mouth to an unconscious person. If breathing or the heart stops, trained personnel should immediately begin artificial respiration (AR) or cardiopulmonary resuscitation (CPR) respectively. Get medical attention immediately.

Acute and delayed symptoms and effects: May be fatal if swallowed and enters airways. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION

Extremely flammable liquid and vapor. Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water.

If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

Fire involving Tanks or Car/Trailer Loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after



fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Sensitivity to Mechanical Impact: This material is not sensitive to mechanical impact.
Sensitivity to Static Discharge: Take precautionary measures against static discharge. This material is sensitive to static discharge.

MEANS OF EXTINCTION

Suitable Extinguishing Media: Small Fire: Dry chemical, CO2, water spray or regular foam.
Large Fire: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.

Unsuitable Extinguishing Media: Do not use straight streams. CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

Products of Combustion: Oxides of carbon.

Protection of Firefighters: Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures: As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded.

Personal Precautions: Do not touch or walk through spilled material. Use personal protection recommended in Section 8.

Environmental Precautions: Prevent entry into waterways, sewers, basements or confined areas.

Methods for Containment: Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors.

Methods for Clean-Up: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

Other Information: See Section 13 for disposal considerations.



Section 7: HANDLING AND STORAGE

Handling:

Do not swallow. Do not breathe mist, vapours, or spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames, and hot surfaces. – No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. See Section 8 for information on Personal Protective Equipment.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component

Naphtha (petroleum), full-range alkylate, butane-contg. [CAS No. 68527-27-5]

ACGIH: No TLV established.

OSHA: No PEL established.

Toluene [CAS No. 108-88-3]

ACGIH: 20 ppm (TWA); A4; BEI (2006)

OSHA: 200 ppm (TWA); 300 ppm (C); 500 ppm (Peak) (Maximum duration: 10 minutes.)
100 ppm (TWA); 150 ppm (STEL) [Vacated];

Benzene [CAS No. 71-43-2]

ACGIH: 0.5 ppm (TWA); 2.5 ppm (STEL); Skin; A1; BEI (1996)

OSHA: 1 ppm (TWA); 5 ppm (STEL);

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

C: Ceiling

Engineering Controls:

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits. Use explosion-proof electrical, ventilating, and lighting equipment.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



Eye/Face Protection:

Wear safety glasses. Use equipment for eye protection that meets the standards referenced by CSA Standard



CAN/CSA-Z94.3-92 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.

- Hand Protection:** Wear protective gloves. Nitrile or Viton® gloves are recommended. Consult manufacturer specifications for further information.
- Skin and Body Protection:** Wear protective clothing. Flame resistant clothing that meets the NFPA 2112 and CAN/CGSB 155.20 standards is recommended in areas where material is stored or handled.
- Respiratory Protection:** If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4-11, with organic vapor cartridge, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.
- General Hygiene Considerations:** Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

- Appearance:** Clear bright blue liquid.
- Colour:** Bright blue.
- Odour:** Gasoline.
- Odour Threshold:** 0.12 to 0.15 ppm (recognition)
0.06 to 0.08 ppm (threshold)
- Physical State:** Liquid.
- pH:** Not available.
- Melting Point / Freezing Point:** Not available.
- Initial Boiling Point:** 30 °C (86 °F)
- Boiling Range:** 30 to 170 °C (86 to 338 °F)
- Flash Point:** -50 °C (-58 °F) (TCC)
- Evaporation Rate:** Not available.
- Flammability (solid, gas):** Not applicable.
- Lower Flammability Limit:** 1.4 %
- Upper Flammability Limit:** 7.6 %



Husky Energy

SAFETY DATA SHEET

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Vapor Pressure:	38 kPa at 20 °C (68 °F)
Vapor Density:	> 1 (Air = 1)
Relative Density:	0.69 (Water = 1)
Solubilities:	Insoluble in water.
Partition Coefficient: n- Octanol/Water:	Not available.
Auto-ignition Temperature:	257 °C (494.6 °F)
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Percent Volatile, wt. %:	100
VOC content, wt. %:	Not available.
Density:	Not available.
Coefficient of Water/Oil Distribution:	Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity:	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Chemical Stability:	Stable under normal storage conditions.
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Incompatible Materials:	Strong acids. Strong oxidizers. Oxides of nitrogen. Chlorine.
Hazardous Decomposition Products:	Not available.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

Oral:	Not available.
Dermal:	Not available.
Inhalation:	Not available.



SAFETY DATA SHEET

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Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Naphtha (petroleum), full-range alkylate, butane-contg.	68527-27-5	Not available.	Not available.	Not available.
Toluene	108-88-3	2600 mg/kg (rat)	14.1 mL/kg (rabbit)	49000 mg/m ³ (rat); 4H
Benzene	71-43-2	930 mg/kg (rat)	> 9400 µL/kg (rabbit)	10000 ppm (rat); 7H

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion. Skin absorption.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Bone marrow. Central nervous system.

Symptoms (including delayed and immediate effects)

Inhalation: May cause drowsiness or dizziness. May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness. Inhalation of Toluene may result in peculiar skin sensations (e. g. pins and needles) or numbness.

Eye: May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: May be fatal if swallowed and enters airways. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Medical Conditions Aggravated By Exposure: Not available.

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Central nervous system. Cardiovascular system. Blood. Cardiovascular system. Bone marrow. Liver. Kidneys. Central nervous system.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation. High vapour concentrations, generally greater than 10% by volume, may sensitize the heart and lead to lethal cardiac arrhythmias. Reports of chronic poisoning with Benzene or Toluene describe anemia, decreased blood cell count and bone marrow hypoplasia. Liver and kidney damage may occur. Immunodepressive effects have also been reported for Benzene.



Carcinogenicity: May cause cancer. Chronic exposure to benzene has been associated with an increased incidence of leukemia and multiple myeloma (tumour composed of cells of the type normally found in the bone marrow).

Component Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Prop 65
Toluene	A4	Group 3	Not listed.	Not listed.	Not listed.
Benzene	A1	Group 1	List 1	OSHA Carcinogen.	Listed.

Mutagenicity: May cause genetic defects.

Reproductive Effects: Suspected of damaging fertility or the unborn child.

Developmental Effects

Teratogenicity: Not available.

Embryotoxicity: Possible risk of harm to the unborn child. Exposure to Toluene may affect the developing fetus. Benzene has caused adverse fetal effects in laboratory animals.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Other Adverse Effects: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

Proper Shipping Name: UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, PG I

Class: 3

UN Number: UN1863

Packing Group: I

Label Code:





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Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name: UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, PG I

Class: 3

UN Number: UN1863

Packing Group: I

Label Code:



Section 15: REGULATORY INFORMATION

Chemical Inventories

US (TSCA)

The components of this product are in compliance with the chemical notification requirements of TSCA.

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

Federal Regulations

United States

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III

Component	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313	RCRA CODE	CAA 112(r) TQ (lbs.)
Toluene	Not listed.	Not listed.	1000	313	U220	Not listed.
Benzene	Not listed.	Not listed.	10	313	U019	Not listed.

State Regulations

Massachusetts

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Component	CAS No.	RTK List
Toluene	108-88-3	Listed.
Benzene	71-43-2	E

Note: E = Extraordinarily Hazardous Substance

New Jersey

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Component	CAS No.	RTK List
Toluene	108-88-3	SHHS
Benzene	71-43-2	SHHS

Note: SHHS = Special Health Hazard Substance



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Pennsylvania

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Component	CAS No.	RTK List
Toluene	108-88-3	E
Benzene	71-43-2	ES

Note: E = Environmental Hazard; S = Special Hazardous Substance

California

California Prop 65:



WARNING This product can expose you to chemicals including Toluene, Benzene, Ethylbenzene, and Polycyclic Aromatic Hydrocarbons which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his own particular use.

Date of Preparation of SDS: April 4, 2017

Version: 2.1

GHS SDS Prepared by: Deerfoot Consulting Inc.

Phone: (403) 720-3700