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6  
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9 **SUPERIOR COURT FOR THE STATE OF CALIFORNIA**  
10 **FOR THE COUNTY OF ALAMEDA**

11  
12 CENTER FOR ENVIRONMENTAL  
13 HEALTH,

14 Plaintiff,

15 v.

16 AERODYNAMIC AVIATION, *et al.*,

17 Defendants.

Case No. RG-11-600721

Hon. Somnath Raj Chatterjee

**DECLARATION OF CHRIS  
D'ACOSTA IN SUPPORT OF  
DEFENDANTS' OPPOSITION TO  
MOTION TO ENFORCE AND MODIFY  
CONSENT JUDGMENT**

Date: February 4, 2024

Time: 1:30 p.m.

Reservation Number: 690015831804

Complaint Filed: October 20, 2011

1 **DECLARATION OF CHRIS D'ACOSTA**

2 I, Chris D'Acosta, declare:

3 1. I am the CEO of Swift Fuels, LLC ("Swift"). I submit this declaration in support  
4 of Settling Defendant's Opposition to Plaintiff Center for Environmental Health's ("CEH")  
5 Motion to Enforce and Modify Consent Judgment in the above-captioned matter. I have personal  
6 knowledge of the matters set forth herein. If called and sworn as a witness, I could and would  
7 testify competently thereto.

8 2. I have worked in the international oil and gas industry for 44 years. I have been  
9 the CEO of Swift since May 2012. Swift is a privately-held research and development company  
10 focused on developing high-performance transportation fuels and new fuel technologies,  
11 including for aviation fuel ("Avgas"). Swift has invested heavily in the development of unleaded  
12 Avgas, including a 94-grade unleaded Avgas that is offered for sale across the United States  
13 ("UL94") and a 100-grade unleaded Avgas ("Swift 100R") that is designed to fully replace the  
14 current 100-grade leaded Avgas (100LL") currently used by much of the global piston fleet.

15 **Swift UL94**

16 3. In April 2015, Swift introduced the first unleaded Avgas into the United States  
17 market, UL94. The United States Federal Aviation Administration ("FAA") has approved UL94  
18 for use in up to 75 percent of the certificated U.S. piston fleet, i.e., approximately 134,000  
19 aircraft. UL94 is currently the only FAA-certified, ASTM-approved, and OEM-endorsed  
20 unleaded Avgas that is offered for sale across the entire United States. UL94 is not appropriate  
21 for aircraft that require fuel with an octane grade of 100, such as those with high-compression  
22 engines that are designed to operate on 100-octane Avgas, because UL94's motor octane rating is  
23 94.

24 4. Swift recognized the importance of obtaining a production specification from  
25 ASTM International ("ASTM Standard(s)") for UL94. The FAA does not regulate the  
26 production, distribution, handling, operation, and maintenance of Avgas before it reaches aircraft  
27 fuel tanks. An ASTM Aviation Gasoline Standard fills the gap between fuel refineries and  
28 aircraft by ensuring that Avgas meets specified international standards at every step in the

1 production and transportation process. This is important to ensure that each type of Avgas can be  
2 used with existing fueling, storage, and transportation equipment without harming the equipment,  
3 potentially causing leaks or fire or toxic hazards or contaminating the fuel. Specifically, ASTM-  
4 approved test methods are used to validate each of the itemized components, performance  
5 characteristics, and fuel properties (e.g., motor octane, vapor pressure, etc.) of any given fuel's  
6 production specification. Because it is important that each batch of an approved fuel meet the  
7 applicable standard as a quality control and safety measure, ASTM performance metrics are  
8 required to be measured on every batch of approved fuels that are produced, transported,  
9 received, handled, and sold in the United States marketplace.

10 5. An ASTM Aviation Gasoline Standard takes into consideration FAA certification  
11 test results from the administration's engine test and flight test programs, as well as technical  
12 considerations, issues, and concerns raised by original equipment manufacturers ("OEMs") of  
13 aircraft and engines and by the oil and gas supply chain and fuel distribution industries. All  
14 parties involved in the ASTM process routinely meet in person twice per year to evaluate the  
15 merits of every ASTM aviation-related fuel specification in the United States which includes for  
16 example: Autogas (D4814), Jet Fuel/SAF (D1655), and Avgas (D910, D7547). Diesel Fuel, fuel  
17 additives and lubricating oils are also represented in various ASTM forums.

18 6. To ensure the safety of all stakeholders in the general aviation industry—including  
19 refiners, transporters, and pilots—Swift earned an ASTM Standard for 94UL. The process of  
20 obtaining an ASTM Standard for 94UL took approximately 18 months from the start of initial  
21 testing. ASTM has certified that 94UL meets the ASTM D7547 Standard for Unleaded Avgas,  
22 and each batch of 94UL meets the specifications set forth in this standard. Swift is committed to  
23 obtaining an ASTM Standard for all fuels it places in the marketplace, including 100R.

24 7. Swift also worked with OEMs of aircraft and engines to obtain these OEMs'  
25 approval for the use of UL94 in their products. OEMs including Lycoming Engines, Continental  
26 Aerospace, Rotax Engines, Rolls Royce Engines, Robinson Helicopters, Textron Aviation, Piper  
27 Aircraft, and Grumman Aircraft, among others, have endorsed UL94 for use in their products.

1           8.       At present, Swift has 21 airfield customers in California who offer UL94 for sale.  
2 Several OEMs have formally approved UL94 unleaded avgas directly on their FAA Type  
3 Certificate Data Sheet (TCDS) for use in their aircraft and/or engines, including Lycoming  
4 Engines, Continental Aerospace, Textron Aviation, and Robinson Helicopter.

5                           **Center for Environmental Health’s Communications with Swift**

6           9.       In late 2015, I contacted CEH and numerous California FBO’s to inform them that  
7 Swift had made UL94 available for purchase across the United States, including California. The  
8 individuals at CEH with whom I corresponded included Caroline Cox, CEH’s former Senior  
9 Scientist, and Michelle Endo, CEH’s former Litigation Coordinator. After several months of  
10 collaborative conversations, Ms. Cox and Ms. Endo expressed that they did not wish to pursue  
11 litigation with the defendants who settled this action, as they did not want to interrupt Swift’s  
12 commercial business relationships in selling our commercially available unleaded Avgas.

13           10.     On January 22, 2024, I phoned and subsequently sent a letter to the current CEO of  
14 CEH, Kizzy Charles-Guzman after learning that CEH was attempting to enforce the Consent  
15 Judgment in a specific action to compel the distribution and sale of the G100UL Avgas. I  
16 informed Ms. Charles-Guzman of my prior correspondence with CEH, and I asked that CEH  
17 acknowledge that Swift’s unleaded Avgas is actively utilized nationwide – including across the  
18 California marketplace. A true and correct copy of my letter to CEH is attached hereto as  
19 **Exhibit A.**

20           11.     On February 26, 2024, Ms. Charles-Guzman sent me a response letter. Ms.  
21 Charles-Guzman advised that parties to the Consent Judgment in this action could comply with  
22 the Consent Judgment’s injunctive relief provisions by offering either UL94 or G100UL; they do  
23 not need to offer both fuels. “We then sent letters advising companies that CEH will not compel  
24 parties to sell or distribute UL94 to the extent that they seek to offer G100UL, **as either fuel will**  
25 **allow such parties to meet their obligations under the 2014 legal agreement.**” [Emphasis  
26 added.] A true and correct copy of this letter is attached hereto as **Exhibit B.**

27                           **100R Unleaded Avgas**

1           12.     In September 2018, Swift focused its unleaded Avgas program on the full-time  
2 development of its 100-grade unleaded Avgas, 100R.

3           13.     Swift has developed 100R to be identical to 100LL in several critical performance  
4 categories for Avgas, including:

- 5           • Minimum Motor Octane Rating = 99.6 MON (ASTM D2700), same as 100LL
- 6           • Minimum Supercharge Rating = 130 PN (ASTM D909), same as 100LL
- 7           • Vapor pressure @ 38°C = 38 to 49 kPa, same as 100LL
- 8           • Weight (density @ 15°C) = 5.87 lbs. per gallon, same as 100LL

9           14.     Swift has conducted an extensive series of ASTM D7826-specified fuel  
10 performance tests for 100R, including, *inter alia*: hot weather, cold weather, water solubility,  
11 carburetor icing, environmental toxicology, emissions, material compatibility of all OEM-  
12 specified metals, material compatibility of all OEM specified non-metals (bladders, O-rings,  
13 diaphragms, sealants, hoses, paints, filters/coalescers, housing, tank liners, etc.). Swift has also  
14 conducted a comprehensive series of FAA-conforming engine certification tests and FAA-  
15 conforming flight certification tests for 100R. The FAA has already accepted and approved all of  
16 these test results for our initial STC program for 100R – which also correspond with the technical  
17 directives of ASTM D7826 for newly proposed aviation gasolines.

18           15.     Swift has made significant progress in obtaining an ASTM Standard for 100R.  
19 Swift is in the process of obtaining an ASTM Standard for 100R and has presented its ASTM  
20 D7826 specified test results and FAA engine and flight test certification results, described above,  
21 to ASTM International. Adjudication proceedings at ASTM are underway for a full Production  
22 Specification of 100R unleaded avgas.

23           16.     Upon information and belief, on the bases of these adjudication proceedings and  
24 the information Swift has reported to ASTM International, Swift expects to earn a formal ASTM  
25 standard for 100R from ASTM International (i.e., a Production Specification) within the first  
26 three to four months of 2025.

27           17.     Swift has also presented the results of its FAA engine and flight test certification  
28 program results to the FAA's Certification Office. Swift has received formal FAA certification

1 for 100R for the Cessna 172R and 172S model aircraft operating the Lycoming IO-360-L2A  
2 engine in the form of one engine and one airframe supplemental type certificate (“STC”).

3 18. Within the first two months of 2025, Swift expects to obtain FAA certification for  
4 hundreds of additional engine and airframes of generally equal or lower power than the Cessna  
5 172R and 172S aircraft.

6 19. Within the first three to four months of 2025, Swift expects to complete FAA-  
7 conforming engine testing on the Continental TSIO-550-K engine, which powers the Cirrus  
8 SR22T (turbocharged) aircraft. Additional high compression, naturally-aspirated Continental  
9 engine certification approvals are also expected around this timeframe, which will trigger a  
10 further expansion of the FAA-certified list of aircraft engines and airframes with which 100R can  
11 be used.

12 20. As was the case with UL94, Swift intends to work with OEMs of various aircraft  
13 and engine makes and models to confirm that the fuel is compatible with their products. Swift  
14 expects that these OEMs will test 100R and, assuming the results are acceptable, endorse 100R  
15 for use in their aircraft and/or engines. Among other OEMs, Swift intends to work with  
16 Lycoming Engines, Continental Aerospace, Rotax Engines, Rolls Royce Engines, Robinson  
17 Helicopters, Textron Aviation, Piper Aircraft, and Grumman Aircraft.

18 21. Swift’s goal is that 100R will replace the leaded 100-octane Avgas 100LL on a  
19 global basis over the next four to eight years. Swift recognizes that it is not possible for the  
20 general aviation industry to immediately transition from leaded Avgas to unleaded Avgas, but for  
21 its part, Swift is moving as quickly as it can to promote this global transition. Our 100R avgas has  
22 now been introduced on a restricted basis (i.e. Cessna 172R/S models) to 3 US flight schools plus  
23 initial shipments to Rotterdam to serve the European Union.

### 24 **G100UL: Material Compatibility Concerns**

25 22. In March 2024, G100UL was presented to the marketplace with a Safety Data  
26 Sheet (“SDS”) from the website of its manufacturer (GAMI) that reported the use of up to 6  
27 percent meta-toluidine in G100UL. A true and correct copy of this Safety Data Sheet is attached  
28 hereto as **Exhibit C**. This SDS public disclosure was consistent with earlier USPTO patent claims

1 by GAMI that expressed their intent to use between 2% to 15% aromatic amines in various  
2 unleaded fuel formulations. The common feature of many of GAMI's aviation gasoline patent  
3 claims was a minimum of 2% meta-toluidine up to about 4 or 6% meta toluidine added to the fuel  
4 formulation.

5 23. Meta-toluidine is an aromatic amine, a well-known gasoline octane booster since  
6 the 1920's, but it is also a very aggressive solvent which tends to limit its commercial use in  
7 transportation fuels. Swift conducted private testing between 2012 to 2022 that exposed the risks  
8 of using meta-toluidine for piston aircraft along with other known aromatic amines in Avgas.  
9 Specifically, meta-toluidine was shown to be prone to damaging aircraft paint and anti-corrosion  
10 epoxy coatings, O-rings, sealants, fuel bladders, structural-reinforcing fabrics, carburetor  
11 diaphragms, and various elastomeric parts used extensively in aircraft fuel systems. Our product  
12 liability insurance providers advised my firm to make clear the flight safety risks associated with  
13 any unapproved intermixing of meta-toluidine with our proprietary fuels. Thus, over the past  
14 several years, we have presented the risk factors of meta-toluidine to pilots, FBO's, prospective  
15 fuel customers, visitors to our website, FAA Safety Team webinars and various industry forums.  
16 These communications increased in Q1 2024 when CEH seemed to threaten many airport FBO's  
17 across California to use G100UL without citing any of the inherent risks that have been presented  
18 to the industry for years. Now in just the past 30 to 60 days, there is emerging evidence of these  
19 types of problems beginning to become apparent to local pilots at Reid Hillview airfield in  
20 California from the standalone use of G100UL in their aircraft. These have been reported online  
21 in blogs organized by Mooney, Beechtalk, and Avweb among others.

22 24. On the basis of our proprietary testing, Swift does not authorize the mixing of  
23 UL94 with G100UL. Swift will not indemnify any contractual claim, physical harm, tort,  
24 property damage, or any other liability arising from the mixing of G100UL with UL94.

25 25. Unlike Swift has been doing with our UL94 and 100R fuels, it has been reported  
26 that GAMI is not working collaboratively with OEMs of aircraft and engines to test G100UL and  
27 obtain approval for the use of G100UL in their products. Furthermore, GAMI has reported on  
28 their website that they will not present their G100UL fuel to ASTM International for a global peer

1 evaluation. Ironically, GAMI representatives currently participate in Swift Fuels’ own ASTM  
2 International task force among about 80 member companies and GAMI has publicly challenged  
3 our FAA-approved test results – without merit - in front of various industry forums.

4 26. In fact, several aviation OEMs have refused to approve the use of G100UL in their  
5 products. In June and November 2024, Cirrus Aircraft (“Cirrus”), the largest manufacturer of  
6 piston aircraft, issued an Advisory Circular instructing that it does not approve the use of  
7 G100UL in any Cirrus SR Series Airplanes (i.e. SR-20, SR-22, SR-22T). Cirrus advised that it  
8 “identified specific concerns regarding material compatibility”. They reported that “lab and on-  
9 aircraft testing, in coordination with FAA representatives, revealed degradation of the [fuel] tank  
10 sealant when in contact with GAMI G100UL fuel that could result in airworthiness concerns.” A  
11 true and correct copy of the Cirrus Service Advisory for G100UL (as updated in November  
12 2024), is attached hereto as **Exhibit D**.

13 27. Similarly, on December 19, 2024, Textron Aviation (“Textron”), an OEM that  
14 manufactures Beechcraft and Cessna aircraft, issued a “Single-Engine Communiqué” addressing  
15 unleaded Avgas. That document advised that neither Textron, nor the large engine suppliers,  
16 Lycoming Engines and Continental Aerospace, have had the opportunity to conduct  
17 comprehensive and wide-ranging performance, compatibility, and operational testing of G100UL.  
18 As a result, neither Textron nor Lycoming its engine manufacturer has approved G100UL for use  
19 in their products. A true and correct copy of this document is attached hereto as **Exhibit E**.

20 28. Textron also advised that it was aware of reported issues with fuel tank sealant  
21 degradation following exposure of those sealants to G100UL. “These kinds of reported materials  
22 compatibility issues give rise to concerns about the continuing airworthiness of aircraft that may  
23 be operated on fuels that have not yet been comprehensively tested by Textron Aviation and/or by  
24 its engine suppliers.”

25  
26 I declare under penalty of perjury under the laws of the State of California that the  
foregoing is true and correct. Executed this 10th day of January 2025, at West Lafayette, Indiana.

27 By: *Chris D'Acosta*

28 Chris D'Acosta  
CEO - SWIFT FUELS, LLC



# **EXHIBIT A**



Center for Environmental Health  
Attn: Kizzy Charles-Guzman, CEO  
2201 Broadway, Suite 508  
Oakland, CA 94612

January 22, 2024

**Re: Commercially Available Unleaded Avgas in California**

Dear Ms. Charles-Guzman –

It has come to my attention that in the past several weeks the Center for Environmental Health has had your legal representative sending letters to various fuel customers of Swift Fuels, LLC in California calling for some type of action - prescribed by your lawyer's letter per the Consent Judgement dated December 9, 2014 (Case RG-11600721). I find the letter's specific fuel recommendation quite offensive as it seems to interfere with the commercial interests of many of my existing California avgas customers.

Please be advised that Swift Fuels contacted the Center for Environmental Health (via Caroline Cox, Michelle Endo, et al) in late 2015 as Swift Fuels began our program to distribute commercially available unleaded avgas throughout California. Now, eight years later, our firm has developed a solid base of customers (airports, FBO's and fuel distributors) that utilize our commercially available unleaded avgas.

I would appreciate a professional communication from you to acknowledge that my unleaded avgas is actively utilized in the California marketplace, and furthermore, that comments from your lawyer to my customers could be seen as a form of interference with my firms' avgas contracts and active business relationships involving the sale of commercially available unleaded avgas in California.

Finally, various formulations of the fuel recommended by your lawyer in his letter may have defects previously reported to FAA and ASTM International that could pose challenges in the US commercial aviation marketplace. FAA does not certify fuel. ASTM International oversees commercial fuel quality.

At Swift Fuels, we believe that our unleaded avgas products provide the global marketplace with commercially available alternatives to replace 100LL considering cost, drop-in-readiness, environmental toxicology, clean emissions, durability, fuel system compatibility, ASTM compliance, supply-chain friendliness, pilot satisfaction, and much more. We constantly strive to earn the respect of the pilot community in California and across the nation as we stand by our premium-grade avgas products.

I would welcome a conversation on these matters.

Respectfully,

A handwritten signature in blue ink, appearing to be 'CD', written over a horizontal line.

Chris D'Acosta  
CEO – Swift Fuels, LLC

# **EXHIBIT B**

February 26, 2024

Chris D'Acosta  
Swift Fuels  
1435 Win Hentschel Blvd., Suite 205  
West Lafayette, IN 47906  
[Chris.dacosta@swiftfuels.com](mailto:Chris.dacosta@swiftfuels.com)

Re: Protecting Children, Families, and Individuals from Leaded Avgas in California

Mr. Chris D'Acosta:

Thank you for your letter regarding unleaded avgas in California. I understand you have previously had communication with our attorneys and Caroline Cox. I would like to emphasize that the Center for Environmental Health is a non-profit organization that works with communities and the private sector to protect people from toxic chemical exposures. We do not seek to influence which unleaded fuel options are made available in California, but simply that unleaded fuel options are available.

According to the Environmental Protection Agency, leaded aviation fuel is the largest source of lead air pollution in the US and is responsible for over 500 tons of lead emission per year. Lead is a well-documented neurotoxicant that is particularly harmful to children and no amount of lead is safe for humans. The negative public and environmental health impacts of not phasing out the use of leaded avgas are a serious matter. Protecting public health is what matters most to me. It is time to eliminate all leaded aviation gas.

The estimated 5 million people that live near an airport where piston-engine aircraft operate deserve to have the chance to breathe cleaner air. The 2014 legal agreement CEH reached with FBOs and fuel distributors sought to create one mechanism through which leaded avgas could be replaced by unleaded avgas. Within the Court-approved agreement, all parties agreed to distribute and sell the airplane fuel with the lowest lead content that is commercially available. CEH seeks to enforce those agreements, so that we can continue to tackle the ongoing air pollution issue resulting from leaded avgas.

When CEH became aware of the commercial availability of UL94 as an unleaded fuel option, we sent letters to parties involved to ensure they complied with purchasing, distributing, and selling it as the option with the lowest lead content. We most recently also became aware of G100UL as another unleaded fuel option that will soon be available in California. More recently, we sent letters to a number of distributors seeking to ensure that they offer G100UL once it becomes available in order to comply with the 2014 agreement. We then sent letters advising companies that CEH will not compel parties to sell or distribute UL94 to the extent that they seek to offer G100UL, as either fuel will allow such parties to meet their obligations under the 2014 legal agreement.



I hope that you can see the clear focus of our efforts. I appreciate you taking the time to write and your partnership over the years. Together, we can continue to protect communities across the United States from toxic lead avgas emissions.

Sincerely,  
Kizzy Charles-Guzman

---

2201 BROADWAY, SUITE 508 OAKLAND, CA 94612 T 510.655.3900

CEH.ORG

# **EXHIBIT C**

General Aviation Modifications, Inc. (GAMI)  
Safety Data Sheet  
G100UL Unleaded Aviation Gasoline  
Version 1.1 (August 20, 2024)



## SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY INFORMATION

**Product Name:** G100UL<sup>®</sup> Unleaded Aviation Gasoline  
**Product Use:** High Octane Unleaded Aviation Gasoline  
**Product Description:** Hydrocarbons and additives  
**Intended Use:** Aviation fuel for spark ignition piston powered aircraft

**Company Identification:**

General Aviation Modifications, Inc. (GAMI)  
2800 Airport Road  
Ada, Oklahoma 74820

**Emergency Phone Numbers:**

**GAMI** (888) 359-4264 or  
(580) 272-3594 or  
(580) 421-3344 or  
(580) 421-5645

**CHEMTREC** (800) 424-9300 or  
(703) 527-3887  
- or -  
911

**Information:**

Product Safety Information (580) 436-4833  
MSDS Internet Address [www.g100ul.com/msds](http://www.g100ul.com/msds)

General Aviation Modifications, Inc. (GAMI)  
 Safety Data Sheet  
 G100UL Unleaded Aviation Gasoline  
 Version 1.1 (August 20, 2024)



## 2. HAZARDS IDENTIFICATION



**Signal Word: DANGER**

**Flammable liquid and vapor: Category 3**

**Keep away from heat/sparks/open flames/hot surfaces. No Smoking.**

**Causes skin irritation: Category 2.**

**May be fatal if swallowed and enters airways**

**May cause drowsiness or dizziness**

**May cause cancer**

**May damage fertility**

**Toxic to aquatic life with long lasting effects**

Obtain special instructions before use; Do not handle until all safety precautions have been read and understood; Keep away from heat/sparks/open flames/hot surfaces. - No smoking; Keep container tightly closed; Ground/bond container and receiving equipment; Use explosion-proof electrical (ventilation and lighting) equipment; Use only non-sparking tools; Take precautionary measures against static discharge; Avoid breathing dust/fume/gas/mist/vapors/spray; Avoid contact during pregnancy/while nursing; Wash skin thoroughly after handling; Use only outdoors or in a well-ventilated area; Avoid release to the environment; Wear protective gloves/protective clothing and eye/face protection; IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician; Do NOT induce vomiting; IF INHALED: Remove person to fresh air and keep comfortable for breathing; IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower; Call a POISON CENTER or doctor/physician if you feel unwell; Take off contaminated clothing and wash before reuse; In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction; Collect spillage; Store in a well-ventilated place. Keep container tightly closed; Dispose of contents/container to an approved waste disposal plant.

### • EMERGENCY OVERVIEW

Danger! Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Static accumulator. May form an ignitable vapor/air mixture. Excessive exposure to mists or vapors generated by heat may cause irritation to eyes, nose, throat, lungs and respiratory tract. Harmful or fatal if swallowed. Pulmonary aspiration hazard. While ingesting or vomiting, may enter lungs and produce damage. Harmful if inhaled. Overexposure may lead to serious disturbances of heart rhythm and nervous system effects, including drowsiness, dizziness, nausea, headaches, paralysis, loss of consciousness and even death. May be absorbed through the skin causing systemic effects. May cause skin irritation. May cause eye irritation. Contains material or materials that can cause cancer. May cause target organ or system damage to the following: central nervous system, eye, kidney, liver, respiratory system, skin, blood, cardiovascular system, heart, reproductive system, peripheral nervous system, bone marrow,

### Hazards Ratings:

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>PPI</u>
NFPA	1	3	0	
HMIS	2	3	0	X

### • POTENTIAL HEALTH EFFECTS

#### ▪ PRE-EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

The following diseases or disorders may be aggravated by exposure to this product: skin, eye, blood forming organs, nervous system, respiratory system, lung (asthma-like conditions), cardiovascular system, liver, kidney,

#### ▪ INHALATION

High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness and even death). May cause serious disturbances of heart rhythm. Excessive exposure to mists or vapors generated by heat may cause irritation to eyes, nose, throat, lungs and respiratory tract. Solvent "huffing/sniffing" (abuse) or intentional prolonged overexposure to high levels of vapors can produce abnormal behavior, convulsions, hallucinations, delirium, nervous system damage, serious disturbances of heart



General Aviation Modifications, Inc. (GAMI)  
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 G100UL Unleaded Aviation Gasoline  
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rhythm and sudden death. Repeated excessive exposures may cause blood disorders such as anemia and leukemia. Contains a material that has been related to cancer in humans.

**LC50 (mg/l):** no data

**LC50 (mg/m3):** no data

**LC50 (ppm):** no data

▪ **SKIN**

Moderately irritating to the skin. May be absorbed through the skin causing systemic effects. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

**Draize Skin Score:** no data

**LD50 (mg/kg):** no data

▪ **EYES**

Moderately irritating to the eyes. Contact with the eye may cause redness, burning, tearing and/or blurred vision.

▪ **INGESTION**

Harmful or fatal if swallowed. Pulmonary aspiration hazard. While ingesting or vomiting, may enter lungs and produce damage. Irritating to mouth, throat, and stomach. May produce central nervous system effects, which includes dizziness, loss of balance and coordination, unconsciousness, coma and even death.

**LD50 (g/kg):** no data

**3. COMPOSITION/INFORMATION ON INGREDIENTS (This material is defined as a mixture.)**

Component	CAS No.	Amount (Vol %)
LIGHT PETROLEUM DISTILLATE	8006-61-9	40-60
TOLUENE	108-88-3	0 – 5
ISOPENTANE	78-78-4	5 – 15
BUTANE	106-97-8	0 – 6
ISOBUTANE	75-28-5	0 – 3
N-HEXANE	110-54-3	0.01 - 0.2
BENZENE	71-43-2	0.001 - 0.01
ETHYL BENZENE	100-41-4	0.01-15
CYCLOPENTANE	287-92-3	0.001 - 0.005
1,3,5 Tri-Methyl Benzene	108-67-8	0-1
M-Toluidine	108-44-1	0-6
XYLENE	1330-20-7	20-40

**EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)**

	CAS No.	Governing Body	Exposure Limits
BENZENE	71-43-2	ACGIH	STEL 2.5 Ppm
BENZENE	71-43-2	OSHA	STEL 5 Ppm
BENZENE	71-43-2	ACGIH	TWA 0.5 Ppm
BENZENE	71-43-2	OSHA	TWA 1 Ppm
BUTANE	106-97-8	ACGIH	TWA 1000 Ppm
ETHYL BENZENE	100-41-4	ACGIH	STEL 125 Ppm
ETHYL BENZENE	100-41-4	ACGIH	TWA 100 Ppm

General Aviation Modifications, Inc. (GAMI)  
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ETHYL BENZENE	100-41-4	OSHA	TWA	100	Ppm
ISOPENTANE	78-78-4	Sunoco	STEL	750	Ppm
ISOPENTANE	78-78-4	ACGIH	TWA	600	Ppm
ISOPENTANE	78-78-4	Sunoco	TWA	600	Ppm
N-HEXANE	110-54-3	ACGIH	TWA	50	Ppm
N-HEXANE	110-54-3	OSHA	TWA	500	Ppm
TOLUENE	108-88-3	NIOSH	STEL	150	Ppm
TOLUENE	108-88-3	ACGIH	TWA	20	Ppm
TOLUENE	108-88-3	OSHA	TWA	200	Ppm
XYLENE	1330-20-7	ACGIH	STEL	150	Ppm
XYLENE	1330-20-7	ACGIH	TWA	100	Ppm
XYLENE	1330-20-7	OSHA	TWA	100	Ppm
MESITYLENE	108-67-8	NIOSH	TLV	25	Ppm
M-TOLUIDINE	108-44-1	ACGIH	TLV	2	Ppm
LIGHT PETROLEUM DISTILLATE	8006-61-9	ACGIH	STEL	500	ppm
LIGHT PETROLEUM DISTILLATE	8006-61-9	ACGIH	TWA	300	ppm
CYCLOPENTANE	287-92-3	ACGIH	TWA	600	ppm

#### **4. FIRST AID MEASURES**

- **INHALATION**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get immediate medical attention.

- **SKIN**

Immediately flush with large amounts of water for 20 minutes, use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. Get prompt medical attention. Injection injuries may not appear serious at first but within a few hours, without proper treatment, the area will become swollen, discolored and extremely painful. Wash clothing before reuse.

- **EYES**

Flush eye with water for 20 minutes. Get medical attention.

- **INGESTION**

If swallowed, immediately contact a physician or Poison Control Center. Never give anything by mouth to an intoxicated, unconscious or convulsing person. Get immediate medical attention. Do not induce vomiting!

**NOTE TO PHYSICIANS:**

Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

#### **5. FIRE FIGHTING MEASURES**

- **EXTINGUISHING MEDIA**

The following media may be used to extinguish a fire involving this material: Water spray; Regular foam; Dry chemical; Carbon dioxide;

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• **FIRE FIGHTING INSTRUCTIONS**

Use water spray to cool fire exposed tanks and containers. Wear structural fire fighting gear. The use of fresh air equipment such as Self Contained Breathing Apparatus (SCBA) or Supplied Air Respirators should be worn for fire fighting if exposure or potential exposure to products of combustion is expected.

• **FLAMMABLE PROPERTIES**

STATIC ACCUMULATOR. This liquid may form an ignitable vapor-air mixture in closed tanks or containers.

COMBUSTION PRODUCTS: Carbon dioxide, water. Incomplete combustion may produce carbon monoxide.

	Typical	Minimum	Maximum	Text Result	Units	Method
Flash Point	-40			Estimated	F	N/A
Autoignition Temperature	536			Estimated	F	N/A
Lower Explosion Limit	1.4			Estimated	%	N/A
Upper Explosion Limit	7			Estimated	%	N/A

**6. ACCIDENTAL RELEASE MEASURES**

CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (703)527-3887  
International Collect Calls Accepted

Prevent ignition, stop leak and ventilate the area. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Do not use spark-generating metals for sweeping up spilled material. Avoid runoff into storm sewers and ditches which lead to waterways. Vapor can be controlled using a water fog. Water streams should not be directed to the liquid as this will cause the liquid to boil and generate more vapor. Keep personnel upwind from leak. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required.

**7. HANDLING AND STORAGE**

• **HANDLING**

This product presents an extreme fire hazard. Liquid quickly evaporates, even at low ambient temperatures. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, electrical motors, switches and other sources. Follow all MSDS/label precautions even after container is emptied because it may retain product residue. Use only in a well-ventilated area.

STATIC ACCUMULATOR. This liquid may form an ignitable vapor-air mixture in closed tanks or containers. This liquid may accumulate static electricity even when transferred into properly grounded containers. Bonding and grounding may be insufficient to remove static electricity. Static electricity accumulation may be significantly increased by the presence of small quantities of water. Always bond receiving container to the fill pipe before and during loading, following NFPA-77 and/or API RP 2003 requirements. Automatic gauging devices and other floats in vessels or tanks which contain static accumulating liquids should be electrically bonded to the shell. Bonding and grounding alone may be inadequate to eliminate fire and explosion hazards associated with electrostatic charges. In addition to bonding and grounding, efforts to mitigate the hazards of an electrostatic discharge may include, but are not limited to, ventilation, inerting and/or reduction of transfer velocities. Always keep the nozzle in contact with the container throughout the loading process.

Do not fill any portable containers in or on a vehicle. Special precautions, such as reduced loading rates and increased monitoring, must be observed during "switch loading" operations (i.e. loading this material in tanks or shipping compartments that previously contained middle distillates or similar products). Non-equilibrium conditions may increase the risks associated with static electricity such as tank and container filling, tank cleaning, sampling, gauging,

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loading, filtering, mixing, agitation, etc. Dissipation of electrostatic charges may be improved with the use of conductivity additives when used with other mitigating efforts, including bonding and grounding.

Never siphon gasoline by mouth. Use only as a motor fuel for aircraft spark ignition piston engines. Do not use for cleaning, pressure appliance fuel, or any other such use. DO NOT USE OR STORE near heat, sparks or open flames. USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

Avoid breathing (dust, vapor, mist, gas). Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Never siphon by mouth. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioned, or properly disposed of.

- **STORAGE**

Keep away from heat, sparks, and flame. Keep container closed when not in use. Store in a cool dry place. Consult NFPA and / or OSHA codes for additional information. NFPA class IB storage. Flash point is less than 73 degrees F and boiling point is greater than or equal to 100 degrees F. Outside or detached storage is preferred.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Consult With a Health and Safety Professional for Specific Selections

- **ENGINEERING CONTROLS**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use with adequate ventilation. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

- **PERSONAL PROTECTION**

- **EYE PROTECTION**

Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).

- **GLOVES or HAND PROTECTION**

The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Protective gloves are recommended to protect against contact with product. Nitrile; Viton; Teflon;

- **RESPIRATORY PROTECTION**

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health) or there is the possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face supplied air respirator with escape bottle or SCBA. Wear a NIOSH-approved (or equivalent) full-face piece airline respirator in the positive pressure mode with emergency escape provisions.

- **OTHER**

Where splashing is possible, full chemically resistant protective clothing and boots are required. The following materials are acceptable for use as protective clothing: Nitrile; Viton; Teflon; Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Remove contaminated clothing and wash before reuse. For non-fire emergencies, positive pressure SCBA and structural firefighter's protective clothing will provide only limited protection.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Property	Typical	Units	Text Result	Reference
Appearance		N/A	Yellow-Green to Green to Blue-Green tint when viewed in bright white light through a clear container.	
Boiling Point		F	100-260	
Bulk Density		lb/gal	6.0 to 6.5 lbs/gal	
Liquid Conductivity		pS/m	> 25	
Melting Point		F	no data	
Molecular Weight		g/mole	no data	
Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	~0.78	N/A		
Solubility In Water		wt %	nil to 15%	
Odor		N/A	Gasoline odor	
Odor Threshold		ppm	< 1	
Vapor Pressure		psia	5.8 – 7.1	
Viscosity (F)		SUS	no data	
Viscosity (C)		CsT	no data	
% Volatile	100	wt %		

## **10. STABILITY AND REACTIVITY**

- **STABILITY**  
Stable
- **CONDITIONS TO AVOID**  
See section 7. Avoid heat, sparks and open flame. Avoid static discharge. Avoid inhalation or skin contact.
- **INCOMPATIBILITY**  
The following materials are incompatible with this product: Strong oxidizers Alkaline materials; Acids; Chlorine; Concentrated oxygen; Halogens and halogenated compounds; Hydrogen peroxide;
- **HAZARDOUS DECOMPOSITION PRODUCTS**  
Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**  
Will not polymerize.

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## 11. TOXICOLOGY

### INFORMATION ON TOXICOLOGICAL EFFECTS

Hazard Class	Conclusion / Remarks
<b>Inhalation</b>	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.
<b>Ingestion</b>	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
<b>Skin</b>	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	Irritating to the skin. Based on assessment of the components.
<b>Eye</b>	
Serious Eye Damage/Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
<b>Sensitization</b>	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: Data available.	Not expected to be a skin sensitizer. Based on assessment of the components.
<b>Aspiration:</b> Data available.	May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material.
<b>Germ Cell Mutagenicity:</b> Data available.	Not expected to be a germ cell mutagen. Based on assessment of the components.
<b>Carcinogenicity:</b> Data available.	Not expected to cause cancer. Based on assessment of the components.
<b>Reproductive Toxicity:</b> Data available.	Not expected to be a reproductive toxicant. Based on assessment of the components.
<b>Lactation:</b> No end point data for material.	Not expected to cause harm to breast-fed children.
<b>Specific Target Organ Toxicity (STOT)</b>	
Single Exposure: No end point data for material.	May cause drowsiness or dizziness.
Repeated Exposure: Data available.	Contains a substance that may cause damage to organs from prolonged or repeated exposure. Based on assessment of the components.

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**OTHER INFORMATION**

- **For the product itself:**

Target Organs Repeated Exposure: Central Nervous system

Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema. Exposure to this material, or one of its components, in situations where there is the potential for high levels, such as in confined spaces or with abuse, may result in abnormal heart rhythm (arrhythmia). High-level exposure to hydrocarbons (above occupational exposure limits) may initiate arrhythmia in a worker that is undergoing stress or is taking a heart-stimulating substance such as epinephrine, a nasal decongestant, or an asthma or cardiovascular drug.

Information on Toxicological Effects of Components

**Light alkylate naphtha:** Carcinogenic in animal tests. Chronic inhalation studies resulted in kidney tumors in male rats. This result was not considered significant for human health risk assessment by the United States EPA and others. Did not cause mutations In vitro or in vivo. Inhalation of vapors did not result in reproductive or developmental effects in test animals. Inhalation of high concentrations in animals resulted in reversible central nervous system depression, but no persistent toxic effect on the nervous system. Non-sensitizing in test animals.

**Xylenes (o-, m-, p- isomers) Reproductive Toxicity:** Both mixed xylenes and the individual isomers produced limited evidence of developmental toxicity in laboratory animals. Inhalation and oral administration of xylene resulted in decreased fetal weight, increased incidences of delayed ossification, skeletal variations and resorptions, but no evidence of teratogenicity.

**Target Organ(s):** Rats exposed to xylenes at 800, 1000 or 1200 ppm 14 hours daily for 6 weeks demonstrated high frequency hearing loss. Another study in rats exposed to 1800 ppm 8 hours daily for 5 days demonstrated middle frequency hearing loss.

**Toluene may be** present in this product in small concentrations, typically less than 2%, and incidental to its presence in the production of Xylenes.

**Carcinogenicity:** Exposure of rats and mice to toluene at concentrations ranging from 120-1200 ppm for two years did not demonstrate evidence of carcinogenicity. Toluene has not been listed as a carcinogen by IARC.

**Reproductive Toxicity:** Exposure to toluene during pregnancy has demonstrated limited evidence of developmental toxicity in laboratory animals. Decreased fetal body weight and increased skeletal variations in both inhalation and oral studies, but only at doses that were maternally toxic. No fetal toxicity was seen at doses that were not maternally toxic. Decreased sperm counts have been observed in male rats in the absence of a reduction in fertility. Toluene has been reported to cause mental or growth retardation in the children of solvent abusers who directly inhale toluene during pregnancy.

**Target Organ(s):** Epidemiology studies suggest that chronic occupational overexposure to toluene may damage color vision. Sub chronic and chronic inhalation studies with toluene produced kidney and liver damage, hearing loss and central nervous system (brain) damage in laboratory animals. Intentional misuse by deliberate inhalation of high concentrations of toluene has been shown to cause liver, kidney, and central nervous system damage, including hearing loss and visual disturbances.

**Ethylbenzene Carcinogenicity:** Rats and mice exposed to 0, 75, 250, or 750 ppm ethyl benzene in a two year inhalation study demonstrated limited evidence of kidney, liver, and lung cancer. Ethyl benzene has been listed as a possible human carcinogen by IARC.

**Target Organ(s):** In rats and mice exposed to 0, 75, 250, or 750 ppm ethyl benzene in a two year inhalation study there was mild damage to the kidney (tubular hyperplasia), liver (eosinophilia foci, hypertrophy, necrosis), lung (alveolar epithelium metaplasia), thyroid (hyperplasia), thyroid (hyperplasia) and pituitary (hyperplasia). In animal models (particularly rats), ethyl benzene affects the auditory function mainly in the cochlear mid-frequency range and ototoxicity was observed after combined exposure to noise and ethyl benzene. There is no evidence of either ethyl benzene-induced hearing losses or ototoxicity with combined exposure to ethyl benzene and noise in workers



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**Meta-Toluidine**

**Acute toxicity**

LD50 Oral - Rat - male - 922 mg/kg Remarks: (ECHA)

Symptoms: Nausea, Vomiting

Oral: (Regulation (EC) No 1272/2008, Annex VI) LC50 Inhalation - 4 h - 3 mg/l - vapor

Remarks: (Regulation (EC) No 1272/2008, Annex VI) Inhalation: No data available

LD50 Dermal - 300 mg/kg

Remarks: (Regulation (EC) No 1272/2008, Annex VI) Dermal: No data available

No data available

**Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 24 h Remarks: (ECHA)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation Remarks: (ECHA)

**Respiratory or skin sensitization** Local lymph node assay (LLNA) - Mouse Result: negative  
(OECD Test Guideline 429)

**Germ cell mutagenicity**

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test. Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476

Result: negative

Test Type: Chromosome aberration test in vitro Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473

Result: negative

**Carcinogenicity:**

Not identified as probable, possible or confirmed human carcinogen by IARC, NTP, or OSHA.

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Aspiration hazard**

No data available

**11.1 Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - 42 Days - LOAEL (Lowest observed adverse effect level) - 30 mg/kg

RTECS: XU2800000

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.



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To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Systemic effects:

After absorption:

Confusion

Dizziness ataxia (impaired locomotor coordination)

Headache

CNS disorders

Risk of methaemoglobin formation. Impaired vision and hearing defect cardiovascular disorders

Cardiac irregularities Coma

Symptoms may be delayed. Danger of cumulative effects.

Handle in accordance with good industrial hygiene and safety practice.

Stomach - Irregularities - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence

## **12. ECOLOGICAL INFORMATION**

Gasoline spills are expected to be toxic to fish, aquatic organisms, and aquatic flora.

Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline.

Meta-Toluidine is harmful or toxic to aquatic life.

## **13. DISPOSAL CONSIDERATIONS**

Use material for its intended purpose or recycle if possible.

Follow federal, state and local regulations. This material is a RCRA hazardous waste. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

## **14. TRANSPORT INFORMATION**

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Proper Shipping Name</u></b>
DOT	Ground	Gasoline

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Hazard Class</u></b>	<b><u>UN/NA No.</u></b>	<b><u>Packing Group</u></b>	<b><u>Label</u></b>
DOT	Ground	3 (Flammable liquid)	1203	II (Medium danger)	

## **15. REGULATORY INFORMATION**

This product contains the following EPCRA section 313 chemical subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): Toluene- CAS Number 108-88-3, please check section 2 of the MSDS for the specific concentration. The remaining Sara 313 components listed in Section 14 of the MSDS are less than the reported *de minimis* levels. This information must be included in all MSDSs that are copied and distributed for this material.

<b><u>Regulatory List</u></b>	<b><u>Component</u></b>	<b><u>CAS No.</u></b>
ACGIH - Occupational Exposure Limits - Carcinogens	BENZENE	71-43-2
ACGIH - Occupational Exposure Limits - Carcinogens	TOLUENE	108-88-3
ACGIH - Occupational Exposure Limits - Carcinogens	XYLENE	1330-20-7
ACGIH - Occupational Exposure Limits - TWAs	BENZENE	71-43-2

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ACGIH - Occupational Exposure Limits - TWAs	BUTANE	106-97-8
ACGIH - Occupational Exposure Limits - TWAs	CYCLOPENTANE	287-92-3
ACGIH - Occupational Exposure Limits - TWAs	ETHYL BENZENE	100-41-4
ACGIH - Occupational Exposure Limits - TWAs	ISOPENTANE	78-78-4
ACGIH - Occupational Exposure Limits - TWAs	N-HEXANE	110-54-3
ACGIH - Occupational Exposure Limits - TWAs	TOLUENE	108-88-3
ACGIH - Occupational Exposure Limits - TWAs	XYLENE	1330-20-7
ACGIH - Occupational Exposure Limits - TWAs	M-TOLUIDINE	108-44-1
ACGIH - Short Term Exposure Limits	BENZENE	71-43-2
ACGIH - Short Term Exposure Limits	ETHYL BENZENE	100-41-4
ACGIH - Short Term Exposure Limits	XYLENE	1330-20-7
ACGIH - Short Term Exposure Limits	M-TOLUIDINE	108-44-1
ACGIH - Skin Absorption Designation	BENZENE	71-43-2
ACGIH - Skin Absorption Designation	N-HEXANE	110-54-3
CAA (Clean Air Act) - High Risk Haz Air Pollutants	BENZENE	71-43-2
CAA (Clean Air Act) - HON Rule - Organic HAPs	BENZENE	71-43-2
CAA (Clean Air Act) - HON Rule - Organic HAPs	ETHYL BENZENE	100-41-4
CAA (Clean Air Act) - HON Rule - Organic HAPs	N-HEXANE	110-54-3
CAA (Clean Air Act) - HON Rule - Organic HAPs	TOLUENE	108-88-3
CAA (Clean Air Act) - HON Rule - Organic HAPs	XYLENE	1330-20-7
CAA (Clean Air Act) - HON Rule - Organic HAPs	M-TOLUIDINE	108-44-1
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	BENZENE	71-43-2
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	ETHYL BENZENE	100-41-4
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	N-HEXANE	110-54-3
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	TOLUENE	108-88-3
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	XYLENE	1330-20-7
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	M-TOLUIDINE	108-44-1
CAA (Clean Air Act) - VOCs in SOCM	BENZENE	71-43-2
CAA (Clean Air Act) - VOCs in SOCM	ETHYL BENZENE	100-41-4
CAA (Clean Air Act) - VOCs in SOCM	ISOPENTANE	78-78-4
CAA (Clean Air Act) - VOCs in SOCM	TOLUENE	108-88-3
CAA (Clean Air Act) - VOCs in SOCM	XYLENE	1330-20-7
CAA (Clean Air Act) - VOCs in SOCM	M-TOLUIDINE	108-44-1
CAA - 1990 Hazardous Air Pollutants	BENZENE	71-43-2
CAA - 1990 Hazardous Air Pollutants	ETHYL BENZENE	100-41-4
CAA - 1990 Hazardous Air Pollutants	N-HEXANE	110-54-3
CAA - 1990 Hazardous Air Pollutants	TOLUENE	108-88-3
CAA - 1990 Hazardous Air Pollutants	XYLENE	1330-20-7
CAA - 1990 Hazardous Air Pollutants	M-TOLUIDINE	108-44-1
California - Prop. 65 - Developmental Toxicity	BENZENE	71-43-2
California - Prop. 65 - Developmental Toxicity	TOLUENE	108-88-3
California - Prop. 65 - Reproductive - Female	TOLUENE	108-88-3
California - Prop. 65 - Reproductive - Male	BENZENE	71-43-2
California - Proposition 65 - Carcinogens List	BENZENE	71-43-2
California - Proposition 65 - Carcinogens List	ETHYL BENZENE	100-41-4
California - Proposition 65 - Carcinogens List	M-TOLUIDINE	108-44-1
Canada - CEPA - Sch. I - List of Toxic Substances	BENZENE	71-43-2
Canada - WHMIS - Ingredient Disclosure	BUTANE	106-97-8
Canada - WHMIS - Ingredient Disclosure	CYCLOPENTANE	287-92-3
Canada - WHMIS - Ingredient Disclosure	ETHYL BENZENE	100-41-4
Canada - WHMIS - Ingredient Disclosure	N-HEXANE	110-54-3
Canada - WHMIS - Ingredient Disclosure	TOLUENE	108-88-3
Canada - WHMIS - Ingredient Disclosure	M-TOLUIDINE	108-44-1
CERCLA/SARA - Haz Substances and their RQs	BENZENE	71-43-2
CERCLA/SARA - Haz Substances and their RQs	ETHYL BENZENE	100-41-4
CERCLA/SARA - Haz Substances and their RQs	N-HEXANE	110-54-3
CERCLA/SARA - Haz Substances and their RQs	TOLUENE	108-88-3

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CERCLA/SARA - Haz Substances and their RQs	M-TOLUIDINE	108-44-1
CERCLA/SARA - Section 313 - Emission Reporting	BENZENE	71-43-2
CERCLA/SARA - Section 313 - Emission Reporting	ETHYL BENZENE	100-41-4
CERCLA/SARA - Section 313 - Emission Reporting	N-HEXANE	110-54-3
CERCLA/SARA - Section 313 - Emission Reporting	TOLUENE	108-88-3
CERCLA/SARA - Section 313 - Emission Reporting	XYLENE	1330-20-7
CWA (Clean Water Act) - Hazardous Substances	BENZENE	71-43-2
CWA (Clean Water Act) - Hazardous Substances	ETHYL BENZENE	100-41-4
CWA (Clean Water Act) - Hazardous Substances	TOLUENE	108-88-3
CWA (Clean Water Act) - Hazardous Substances	XYLENE	1330-20-7
CWA (Clean Water Act) - Priority Pollutants	BENZENE	71-43-2
CWA (Clean Water Act) - Priority Pollutants	ETHYL BENZENE	100-41-4
CWA (Clean Water Act) - Priority Pollutants	TOLUENE	108-88-3
CWA (Clean Water Act) - Priority Pollutants	BENZENE	71-43-2
CWA (Clean Water Act) - Toxic Pollutants	ETHYL BENZENE	100-41-4
CWA (Clean Water Act) - Toxic Pollutants	TOLUENE	108-88-3
CWA (Clean Water Act) - Toxic Pollutants	M-TOLUDINE	108-44-1
CWA (Clean Water Act) - Toxic Pollutants	TOLUENE	108-88-3
CWA (Clean Water Act) - Toxic Pollutants	BENZENE	71-43-2
CWA (Clean Water Act) - Toxic Pollutants	ETHYL BENZENE	100-41-4
CWA (Clean Water Act) - Toxic Pollutants	TOLUENE	108-88-3
DEA - List II Essential Chemicals	M-TOLUDINE	108-44-1
IARC - Group 1 (carcinogenic to humans)	TOLUENE	108-88-3
IARC - Group 2B (Possibly carcinogenic to humans)	BENZENE	71-43-2
IARC - Group 2B (Possibly carcinogenic to humans)	ETHYL BENZENE	100-41-4
	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
IARC - Group 3 (not classifiable)	TOLUENE	108-88-3
IARC - Group 3 (not classifiable)	XYLENE	1330-20-7
Inventory - Australia (AICS)	BENZENE	71-43-2
Inventory - Australia (AICS)	BUTANE	106-97-8
Inventory - Australia (AICS)	CYCLOPENTANE	287-92-3
Inventory - Australia (AICS)	ETHYL BENZENE	100-41-4
Inventory - Australia (AICS)	ISOPENTANE	78-78-4
Inventory - Australia (AICS)	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
Inventory - Australia (AICS)	N-HEXANE	110-54-3
Inventory - Australia (AICS)	TOLUENE	108-88-3
Inventory - Australia (AICS)	XYLENE	1330-20-7
Inventory - Canada - Domestic Substances List	BENZENE	71-43-2
Inventory - Canada - Domestic Substances List	BUTANE	106-97-8
Inventory - Canada - Domestic Substances List	ETHYL BENZENE	100-41-4
Inventory - Canada - Domestic Substances List	ISOPENTANE	78-78-4
Inventory - Canada - Domestic Substances List	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
Inventory - Canada - Domestic Substances List	N-HEXANE	110-54-3
Inventory - Canada - Domestic Substances List	TOLUENE	108-88-3
Inventory - Canada - Domestic Substances List	XYLENE	1330-20-7
Inventory - China	BENZENE	71-43-2
Inventory - China	BUTANE	106-97-8
Inventory - China	ETHYL BENZENE	100-41-4
Inventory - China	ISOPENTANE	78-78-4
Inventory - China	LIGHT PETROLEUM	8006-61-9
Inventory - China	N-HEXANE	110-54-3
Inventory - China	TOLUENE	108-88-3
Inventory - China	XYLENE	1330-20-7
Inventory - European EINECS Inventory	BENZENE	71-43-2
Inventory - European EINECS Inventory	BUTANE	106-97-8
Inventory - European EINECS Inventory	CYCLOPENTANE	287-92-3
Inventory - European EINECS Inventory	ETHYL BENZENE	100-41-4
Inventory - European EINECS Inventory	ISOPENTANE	78-78-4

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Inventory - European EINECS Inventory	LIGHT PETROLEUM	8006-61-9
Inventory - European EINECS Inventory	N-HEXANE	110-54-3
Inventory - European EINECS Inventory	TOLUENE	108-88-3
Inventory - European EINECS Inventory	XYLENE	1330-20-7
Inventory - Japan - (ENCS)	BENZENE	71-43-2
Inventory - Japan - (ENCS)	BUTANE	106-97-8
Inventory - Japan - (ENCS)	CYCLOPENTANE	287-92-3
Inventory - Japan - (ENCS)	ETHYL BENZENE	100-41-4
Inventory - Japan - (ENCS)	ISOPENTANE	78-78-4
Inventory - Japan - (ENCS)	N-HEXANE	110-54-3
Inventory - Japan - (ENCS)	TOLUENE	108-88-3
Inventory - Japan - (ENCS)	XYLENE	1330-20-7
Inventory - Korea - Existing and Evaluated	BENZENE	71-43-2
Inventory - Korea - Existing and Evaluated	BUTANE	106-97-8
Inventory - Korea - Existing and Evaluated	CYCLOPENTANE	287-92-3
Inventory - Korea - Existing and Evaluated	ETHYL BENZENE	100-41-4
Inventory - Korea - Existing and Evaluated	ISOPENTANE	78-78-4
Inventory - Korea - Existing and Evaluated	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
Inventory - Korea - Existing and Evaluated	N-HEXANE	110-54-3
Inventory - Korea - Existing and Evaluated	TOLUENE	108-88-3
Inventory - Korea - Existing and Evaluated	XYLENE	1330-20-7
Inventory - New Zealand	BENZENE	71-43-2
Inventory - New Zealand	BUTANE	106-97-8
Inventory - New Zealand	CYCLOPENTANE	287-92-3
Inventory - New Zealand	ETHYL BENZENE	100-41-4
Inventory - New Zealand	ISOPENTANE	78-78-4
Inventory - New Zealand	LIGHT PETROLEUM	8006-61-9
Inventory - New Zealand	N-HEXANE	110-54-3
Inventory - New Zealand	TOLUENE	108-88-3
Inventory - New Zealand	XYLENE	1330-20-7
Inventory - Philippines Inventory (PICCS)	BENZENE	71-43-2
Inventory - Philippines Inventory (PICCS)	BUTANE	106-97-8
Inventory - Philippines Inventory (PICCS)	CYCLOPENTANE	287-92-3
Inventory - Philippines Inventory (PICCS)	ETHYL BENZENE	100-41-4
Inventory - Philippines Inventory (PICCS)	ISOPENTANE	78-78-4
Inventory - Philippines Inventory (PICCS)	LIGHT PETROLEUM	8006-61-9
Inventory - Philippines Inventory (PICCS)	N-HEXANE	110-54-3
Inventory - Philippines Inventory (PICCS)	TOLUENE	108-88-3
Inventory - Philippines Inventory (PICCS)	XYLENE	1330-20-7
Inventory - TSCA - Sect. 8(b) Inventory	BENZENE	71-43-2
Inventory - TSCA - Sect. 8(b) Inventory	BUTANE	106-97-8
Inventory - TSCA - Sect. 8(b) Inventory	CYCLOPENTANE	287-92-3
Inventory - TSCA - Sect. 8(b) Inventory	ETHYL BENZENE	100-41-4
Inventory - TSCA - Sect. 8(b) Inventory	ISOPENTANE	78-78-4
Inventory - TSCA - Sect. 8(b) Inventory	LIGHT PETROLEUM	8006-61-9
Inventory - TSCA - Sect. 8(b) Inventory	N-HEXANE	110-54-3
Inventory - TSCA - Sect. 8(b) Inventory	TOLUENE	108-88-3
Inventory - TSCA - Sect. 8(b) Inventory	XYLENE	1330-20-7
Massachusetts - Right To Know List	BENZENE	71-43-2
Massachusetts - Right To Know List	BUTANE	106-97-8
Massachusetts - Right To Know List	CYCLOPENTANE	287-92-3
Massachusetts - Right To Know List	ETHYL BENZENE	100-41-4
Massachusetts - Right To Know List	ISOPENTANE	78-78-4
Massachusetts - Right To Know List	N-HEXANE	8006-61-9
Massachusetts - Right To Know List	TOLUENE	78-00-2
Massachusetts - Right To Know List	XYLENE	108-88-3

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Massachusetts - Right To Know List	BENZENE	1330-20-7
New Jersey - Department of Health RTK List	BUTANE	71-43-2
New Jersey - Department of Health RTK List	CYCLOPENTANE	106-97-8
New Jersey - Department of Health RTK List	ETHYL BENZENE	287-92-3
New Jersey - Department of Health RTK List	ISOPENTANE	100-41-4
New Jersey - Department of Health RTK List	LIGHT PETROLEUM	78-78-4
New Jersey - Department of Health RTK List	N-HEXANE	8006-61-9
New Jersey - Department of Health RTK List	TOLUENE	78-00-2
New Jersey - Department of Health RTK List	XYLENE	108-88-3
New Jersey - Department of Health RTK List	BENZENE	1330-20-7
New Jersey - Env Hazardous Substances List	BUTANE	71-43-2
New Jersey - Env Hazardous Substances List	ETHYL BENZENE	106-97-8
New Jersey - Env Hazardous Substances List	ISOPENTANE	100-41-4
New Jersey - Env Hazardous Substances List	LIGHT PETROLEUM	78-78-4
New Jersey - Env Hazardous Substances List	N-HEXANE	8006-61-9
New Jersey - Env Hazardous Substances List	TOLUENE	78-00-2
New Jersey - Env Hazardous Substances List	XYLENE	108-88-3
New Jersey - Env Hazardous Substances List	BENZENE	1330-20-7
New Jersey - Special Hazardous Substances	BUTANE	71-43-2
New Jersey - Special Hazardous Substances	CYCLOPENTANE	106-97-8
New Jersey - Special Hazardous Substances	ETHYL BENZENE	287-92-3
New Jersey - Special Hazardous Substances	ISOPENTANE	100-41-4
New Jersey - Special Hazardous Substances	LIGHT PETROLEUM	78-78-4
New Jersey - Special Hazardous Substances	N-HEXANE	8006-61-9
New Jersey - Special Hazardous Substances	TOLUENE	78-00-2
New Jersey - Special Hazardous Substances	XYLENE	108-88-3
New Jersey - Special Hazardous Substances	BENZENE	1330-20-7
NTP - Report on Carcinogens - Known Carcinogens	BENZENE	71-43-2
OSHA - Final PELs - Ceiling Limits	TOLUENE	71-43-2
OSHA - Final PELs - Ceiling Limits	BENZENE	108-88-3
OSHA - Final PELs - Short Term Exposure Limits	TETRAETHYL LEAD	71-43-2
OSHA - Final PELs - Skin Notations	BENZENE	78-00-2
OSHA - Final PELs - Time Weighted Averages	ETHYL BENZENE	71-43-2
OSHA - Final PELs - Time Weighted Averages	N-HEXANE	100-41-4
OSHA - Final PELs - Time Weighted Averages	TOLUENE	78-00-2
OSHA - Final PELs - Time Weighted Averages	XYLENE	108-88-3
OSHA - Final PELs - Time Weighted Averages	BENZENE	1330-20-7
OSHA - Hazard Communication Carcinogens	ETHYL BENZENE	71-43-2
OSHA - Hazard Communication Carcinogens	LIGHT PETROLEUM	100-41-4
OSHA - Hazard Communication Carcinogens	BENZENE	8006-61-9
OSHA - Specifically Regulated Carcinogens	BENZENE	71-43-2
Pennsylvania - RTK (Right to Know) List	BUTANE	71-43-2
Pennsylvania - RTK (Right to Know) List	CYCLOPENTANE	106-97-8
Pennsylvania - RTK (Right to Know) List	ETHYL BENZENE	287-92-3
Pennsylvania - RTK (Right to Know) List	ISOPENTANE	100-41-4
Pennsylvania - RTK (Right to Know) List	N-HEXANE	78-78-4
Pennsylvania - RTK (Right to Know) List	TOLUENE	78-00-2
Pennsylvania - RTK (Right to Know) List	XYLENE	108-88-3
Pennsylvania - RTK (Right to Know) List	BENZENE	1330-20-7
Pennsylvania - RTK - Environmental Hazard List	ETHYL BENZENE	71-43-2
Pennsylvania - RTK - Environmental Hazard List	TETRAETHYL LEAD	100-41-4
Pennsylvania - RTK - Environmental Hazard List	TOLUENE	78-00-2
Pennsylvania - RTK - Environmental Hazard List	XYLENE	108-88-3
Pennsylvania - RTK - Environmental Hazard List	BENZENE	1330-20-7
Pennsylvania - RTK - Special Hazardous Substances	BENZENE	71-43-2
U.S. - DOT - Hazardous Substances and RQs (App A)	ETHYL BENZENE	71-43-2
U.S. - DOT - Hazardous Substances and RQs (App A)	N-HEXANE	100-41-4



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U.S. - DOT - Hazardous Substances and RQs (App A)	TOLUENE	78-00-2
U.S. - DOT - Hazardous Substances and RQs (App A)	XYLENE	108-88-3
U.S. - DOT - Hazardous Substances and RQs (App A)	M-TOLUIDINE	108-44-1

**Title III Classifications Sections 311,312:**

- Acute: **YES**
- Chronic: **YES**
- Fire: **YES**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

**16. OTHER INFORMATION**

Precautionary labeling for pumps, portable containers, and drums is required. A "hazardous when empty" pictogram and D.O.T. flammable liquid label are also required for drums. Details available upon request. Follow all MSDS/label precautions even after container is emptied because it may retain product residue. **NOTE TO PHYSICIAN:** Catecholamines and similar adrenergic drugs are generally contraindicated because of potential for increased sensitivity of the heart from hydrocarbon overexposure and subsequent ventricular fibrillation. EKG monitoring may be indicated and bronchodilators should be selected with care. Following injection, prompt debridement of the wound is necessary to minimize necrosis and tissue loss.

# **EXHIBIT D**

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**Number:** SA24-14R1  
**Issued:** 18 Jun 2024  
**Revised:** 05 Nov 2024

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**SUBJECT:** Transition to Unleaded Fuel and Use of Non-Cirrus Approved Fuel in SR Series Aircraft

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**As part of our proactive participation in the unleaded fuel initiative, Cirrus has been collaborating with potential fuel producers conducting materials compatibility and on-aircraft fuel performance testing for over a decade.**

Cirrus is engaged in a comprehensive testing and evaluation program of the GAMI G100UL fuel. Working in coordination with GAMI, our key powerplant partners (Continental and Lycoming), and the FAA during this process, the goal is to ensure operational safety of both the powerplant and airframe fuel systems. **While some aspects of the initial Cirrus testing of the GAMI G100UL fuel are encouraging, Cirrus has identified specific concerns regarding material compatibility. Lab and on-aircraft testing, in coordination with FAA representatives, revealed degradation of tank sealant when in contact with GAMI G100UL fuel that could result in airworthiness concerns. At this time, Cirrus does not approve the use of GAMI G100UL fuel in any Cirrus SR Series airplanes.** Additionally, Cirrus currently does not warrant or represent in any way an operator's use of the GAMI G100UL fuel in SR Series airplanes.

Per Continental and Lycoming, only approved fuels may be used for an engine to be covered by warranty. **As the GAMI G100UL fuel is a non-approved fuel per Continental and Lycoming, engines known to have run this fuel may not be covered by the current OEM engine warranty.** For specific details, please refer to the respective Continental and Lycoming engine warranty documents.

Cirrus is dedicated to proactively addressing the evolving landscape of sustainability regulations, particularly the shift away from leaded aviation fuels. We continue to actively support industry efforts to develop, evaluate, and advance new fuels while supporting a safe industry transition to a future unleaded fuel environment.

These efforts include working directly with industry associations and all stakeholders including AOPA, GAMA, the FAA, and the FAA-Industry EAGLE program through the PAFI certification program. EAGLE is actively pursuing three potentially viable alternatives/replacements for 100LL: GAMI G100UL, LyondellBasell/VP Racing UL100E, and Swift 100R. Cirrus is dedicated to supporting all major fuel companies in their pursuit to bring alternative high-octane fuels to market.

Shell recently announced that 100VLL will be shipping to airports in Europe beginning in April 2024. Cirrus confirms this fuel can be used in all Cirrus SR Series airplanes as it complies with the ASTM D910 standard specification for leaded aviation gasoline. Please refer to FAA SAIB NE-11-55 "Grade 100VLL Aviation Gasoline," for additional details.

The continued safe operation of all Cirrus aircraft around the world remains our top priority. As progress continues, we will provide updates as soon as they are available. We look forward to ensuring a safe and smooth transition to unleaded fuel for all Cirrus SR Series owners.



# **EXHIBIT E**



# Single-Engine Piston Communiqué

Communiqué SE-P-006  
December 19, 2024

## **ATA 28 – Use of Unleaded Fuels Not Yet Approved by Textron Aviation or Engine Manufacturers**

### **Affected Models:**

**All Single Engine Cessna and Beechcraft models that utilize aviation gasoline.**

Textron Aviation has been working with FAA, fuel manufacturers and distributors, airports, and other Original Equipment Manufacturers for a number of years in an effort to identify, test and certify alternative fuels to replace leaded fuels in order to eliminate lead-based additives from aviation fuel. For example, Textron Aviation has previously approved UL91 and UL94 (manufactured under ASTM D7547) for use in certain Textron Aviation aircraft.

As a part of these ongoing efforts, Textron Aviation has been actively involved in and providing technical and in-kind support to both the FAA Piston Engine Aviation Fuels Initiative (PAFI) and in the Eliminate Aviation Gasoline Lead Emissions (EAGLE) programs. Each of these programs seeks to provide comprehensive testing of candidate replacement fuels for engine performance, materials compatibility, and operational safety.

Textron Aviation is aware that there are certain aviation fuels that have been granted Supplemental Type Certification (STC) for use in certain aircraft engines through the FAA in a process that is separate and apart from the PAFI and EAGLE programs. For example, the GAMI G100UL fuel received such an STC approval. Because the STC process, unlike the PAFI and EAGLE programs, does not involve broad aviation industry coalition participation, neither Textron Aviation nor its engine suppliers, Lycoming and Continental Motors, have had the opportunity to conduct the type of comprehensive and wide-ranging performance, compatibility and operational testing with respect to that fuel needed to provide a basis for approval of the fuel for use in Textron Aviation's current and legacy fleet of Cessna and Beechcraft aircraft.

Textron Aviation has been made aware that at least one other aircraft OEM has begun more comprehensive testing of GAMI G100UL in their airframes. Textron Aviation has also been made aware of reports indicating that two different OEMs have been advised of reported issues with fuel tank sealant degradation following exposure of those sealants to G100UL. These kinds of reported materials compatibility issues give rise to concerns about the continuing airworthiness of aircraft that may be operated on fuels that have not yet been comprehensively tested by Textron Aviation and/or by its engine suppliers.

The continued airworthiness and operational safety of our products and their reliable service to our customers and their passengers is of paramount importance to Textron Aviation. For these reasons, Textron Aviation has not yet approved G100UL for use in its piston engine products. Such approval can only be made by Textron Aviation if the fuel is approved by its engine

suppliers and has also undergone testing to confirm its airframe fuel systems performance, compatibility, and operational safety.

Please refer to applicable Textron Aviation approved Owner's Manuals, Pilot Operating Handbooks, Aircraft Flight Manuals, placards, and Service Bulletins SEB-28-04R1 or MEB-28-01 (or later revisions) for a listing of fuels that are Textron Aviation approved for use in your aircraft.