



SAFETY DATA SHEET

1. INFORMATION

Product Name: E-85 112 OCTANE UNLEADED RACING FUEL

Product Use: Unleaded racing gasoline with ethanol.

Synonym: Oxygenated Unleaded Racing Gasoline

Manufacturer: Rockett Brand Racing Fuel, A Division of Paragon Performance Products
411 E. Business Drive, Suite 115
Mount Prospect, IL. 60056
info@rockettbrand.com
http://www.rockettbrand.com
1-(847) 795-8400

Emergency Phone Numbers:

Chemtrec: www.chemtrec.com	1 (800) 424-9300
Poison Control Center: www.aapcc.org	1 (800) 222-1222

SDS Information:

Product Safety Information	1 (800) 345-00676
Email	info@rockettbrand.com

2. HAZARDS IDENTIFICATION



Signal Word: DANGER

2.1 Classification

CLP Classification

Category	Hazard Statement
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Category 2 Flammable Liquid	Highly flammable liquid and vapor (H225)
Category 2 Skin Irritation	Causes skin irritation (H315)
Category 2 Eye Irritant	Causes serious eye irritation (H319)
Specific Target Organ Toxicity 3	May cause respiratory irritation (H335) May cause drowsiness or dizziness (H336)
Category 2 Target organ system toxicant (Repeated exposure)	May cause damage to central nervous system, liver, kidney, cardiovascular and respiratory system through prolonged and repeated exposure (H371).
Category 3 Aquatic Environment (Acute)	Harmful to aquatic life (402)

DANGER

Hazard Statements

Highly flammable liquid and vapor (H225). Causes skin irritation (H315). Causes serious eye irritation (H319). May cause respiratory irritation (H335) May cause drowsiness or dizziness (H336). May cause damage to central nervous system, liver, kidney, cardiovascular and respiratory system through prolonged and repeated exposure (H371). Harmful to aquatic life (402).

Precautionary Statements

Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Keep away from heat/sparks/open flames/hot surfaces – No smoking (P210). Keep container tightly closed (P233). Ground/bond container and receiving equipment (P240). Use explosion-proof electrical/ventilating/light equipment (P241). Use only non-sparking tools (P242). Take precautionary measures against static discharge (P243). Avoid breathing mist, vapor, and spray (P261). Wash hands thoroughly after handling (P264). Do not eat, drink or smoke when using this product (P270). Use only outdoors or in a well-ventilated area (P271). Avoid release to the environment (P273). Wear protective gloves/protective clothing/eye protection/face protection (P280). Use personal protective equipment as required (P281).

IF SWALLOWED (P301): Immediately call a POISON CENTER or doctor/physician (P310). Do NOT induce vomiting (P331). IF ON SKIN (or hair) (P301): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower (P353). If skin irritation occurs (P332): Get medical attention (P313). Wash with plenty of soap and water (P352). IF INHALED (P304): Remove victim to fresh air and keep at rest in a position comfortable for breathing (P340). Call POISON CENTER (1 (800) 222-1222) or doctor/physician if you feel unwell (P312). Take off contaminated clothing and wash before reuse (P362). In case of fire (P370): Use foam or dry powder for extinction (P378). Collect spillage (P391). Store in well-ventilated place (P403). Keep container tightly closed (P233). Store locked up (P405). Dispose of contents/container to authorized hazardous waste facility (P501).

Precautionary Statements			
Prevention	Response	Storage	Disposal
P2XX	P3XX	P4XX	P5XX

• **EMERGENCY OVERVIEW**

Vapors may cause flash fire or explosion. May form an ignitable vapor/air mixture.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS#	Amount Vol%	Classification
ETHYL ALCOHOL	64-17-5	85-87	Flam. Liq2 H225
AKYLATE	64741-66-8	7-8	Asp Tox 1, Carc 1B, H304,H350
TOLUENE	108-88-3	6-8	Flam Liq 2, Repr.2 Asp. Tox 1, STOT RE2, Eye Irrit 2, Skin Irrit 2, STOT SE2, H225, H361,H304, H373, H315,H336
N-BUTANE	106-97-8	0.2 – 0.3	Flam Gas 1, H220

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**

Wash with soap and water for 20 minutes. Get medical attention if irritation develops or persists. Remove contaminated clothing. 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 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.

5. FIRE FIGHTING MEASURES

• **EXTINGUISHING MEDIA**

Dry chemical, carbon dioxide, or alcohol resistant foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water may be ineffective for extinguishment.

• **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

E85 has a liquid conductivity of > 2000 pS/m. Semi-conductive liquids can accumulate charges in properly grounded containers. This liquid may form an ignitable vapor-air mixture in closed tanks or containers.

Ethanol = 1.35×10^5 pS/m (Semi-Conductive), Unleaded Gasoline < 50 pS/m (Static Accumulator, Non-Conductive)

6. ACCIDENTAL RELEASE MEASURES

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 SDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required.

7. HANDLING AND STORAGE

• HANDLING

Use only in a well-ventilated area. Follow all SDS/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, inert 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, 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.

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 reconditioner, 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

EXPOSURE GUIDELINES

AKYLATE	Sunoco	100 PPM TWA
TOLUENE	US OSHA	200 PPM TWA
ETHYL ALCOHOL	US OSHA	1000 PPM TWA
N-BUTANE		800 PPM TWA

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(>8 hrs); Viton(>8hrs); Teflon(>8hrs).

- **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-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

- **OTHER**

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Property	Typical	Units
Appearance	Clear Green Liquid	N/A
Initial Boiling Point	90 32	F C
Boiling Range	90-437 32-225	F C
Liquid Conductivity	>2000	pS/m
Flash Point	- 20 Est. -29	F C
Melting Point	No Data	F
pH	Not Applicable	
Octanol/Water Partition Coefficient	2-7	N/A
Lower Explosion Limit	1.5	%

Upper Explosion Limit	7.6	%
Specific Gravity	0.789	N/A
Solubility In Water	NIL TO 15%	wt %
Odor	Gasoline Odor.	
Odor Threshold	<1	ppm
Vapor Pressure	3 - 5	psia
Viscosity (F)	no data	SUS
Viscosity (C)	no data	CsT
% Volatile	100	wt %
Auto Ignition	495 Est. 275 Est.	F C

10. STABILITY AND REACTIVITY

- **STABILITY**

Stable

- **CONDITIONS TO AVOID**

Avoid heat, sparks and open flame. Avoid static discharge.

- **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.

11. TOXICOLOGICAL INFORMATION

- **Acute Toxicity:**

Component	Inhalation LC50 Rat	Oral LD50 Rat	Skin LD50 Rabbit
Alkylate	>5.0mg/L/4H	>7,000 mg/kg	>2000 mg/kg
Toluene	>26700 ppm/1H	636 mg/kg	8390 mg/kg
Ethyl Alcohol	124.7 mg/L/4H	1501 mg/kg	No data
N-Butane	658 gm/m ³ /4H	No data	No data

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. Contains material or materials that can cause birth defects.

- **Skin Corrosion / Irritation:** Skin absorption of the material is expected to be minimal. May cause mild to moderate irritation to the skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

Serious Eye Damage / Irritation: Contact with the eye may cause moderate to severe irritation with prolonged and repeated contact. Contact with the eye may cause redness, burning, tearing and/or blurred vision.

- **Respiratory or Skin Sensitization:** No data of respiratory or skin sensitization.
- **Germ Cell Mutagenicity:** No data
- **Carcinogenicity:** No data
- **Reproductive Toxicity:** Product contains a chemical which is a known or suspected reproductive hazard.

- **Specific Target Organ Toxicity (STOT)**

- **Single Exposure:** Negligible unless heated to produce vapors. Vapors or finely misted materials may irritate the mucous membranes and cause irritation, dizziness, and nausea. No hazards expected from ingestion accidental to industrial exposure.
 - **Repeated Exposure:** 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 rhythm and sudden death.
- **Aspiration:** Harmful or fatal if swallowed. Pulmonary aspiration hazard.

Additional Toxicology Information

No data

Component Toxicity Information

Most adverse health effects associated with **ethanol**, a component of this material, are related to the chronic ingestion of alcoholic beverages. Alcoholism has been associated with liver, stomach, heart, and nervous system damage, cancer, adverse reproductive effects, and effects on the developing fetus. Many of these effects may be related to metabolic changes that result from constantly high blood levels of alcohol. This exposure pattern is significantly different from that of persons handling industrial ethanol in the workplace or from refueling cars with gasoline containing ethanol.

12. ECOLOGICAL INFORMATION

Gasoline spills are toxic to fish and aquatic flora.

Ecotoxicity Alkylate – 64741-66-8

Freshwater Algae Data	72 Hr EC50 Selenastrum capricornutum: 30000 mg/L
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Ecotoxicity Toluene 108-88-3

Species	96 Hr LC50
Pimephales promelas	15.22-19.05 mg/L [flow-through] (1 day old); 12.6 mg/L [static];
Oncorhynchus mykiss	5.89-7.81 mg/L [flow-through]; 14.1-17.16 mg/L [static]; 5.8 mg/L [semi-static];
Lepomis macrochirus	11.0-15.0 mg/L [static];
Poecilia reticulata	28.2 mg/L [semi-static];

Environmental Fate and Pathways

Unleaded gasoline data: partition into air 97-99.7%, soil 0.00 to 1.2%, water 0.003 to 2.7%, sediment 0.001 to 0.02.

Photo-Degradation

Gasoline: Indirect photolysis: ½ life range = 0.789 to 15.985 days based on 12 hr day and gasoline constituents from m-xylene to isopentane, respectively.

Biodegradation

Ethanol in gasoline: Readily biodegradable, as it is both a metabolite and nutrient for microbes.

13. DISPOSAL INFORMATION

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. EWC 13 07 02

14. TRANSPORT INFORMATION

Governing Body	DOT
Mode	Ground

Proper Shipping Name	Gasohol
Hazard Class	3 (Flammable liquid)
Packing Group	II
UN/UN No.	NA 1203
Label	Flammable
Governing Body	ARD/RID
Mode	Ground
Proper Shipping Name	Gasoline
Hazard Class	3 (Flammable liquid)
Packing Group	II
UN/UN No.	UN 1203
Label	Flammable
Flashpoint	-20 F
Governing Body	IMDG
Mode	Vessel
Proper Shipping Name	Gasoline
Hazard Class	3 (Flammable liquid)
Packing Group	II
UN/UN No.	UN 1203
Label	Flammable
Flash point	-20 F cc

14. REGULATORY INFORMATION

Regulatory List	Component	CAS No.
ACGIH - Occupational Exposure Limits - Carcinogens	ETHYL ALCOHOL	64-17-5
ACGIH - Occupational Exposure Limits - Carcinogens	TOLUENE	108-88-3
CAA (Clean Air Act) - HON Rule - Organic HAPs	TOLUENE	108-88-3
CAA (Clean Air Act) - HON Rule - SOCM Chemicals	TOLUENE	108-88-3
CAA - 1990 Hazardous Air Pollutants	TOLUENE	108-88-3
California - Prop. 65 - Developmental Toxicity	ETHYL ALCOHOL	64-17-5
California - Prop. 65 - Developmental Toxicity	TOLUENE	108-88-3
Canada - WHMIS - Ingredient Disclosure	BUTANE	106-97-8
Canada - WHMIS - Ingredient Disclosure	ETHYL ALCOHOL	64-17-5
Canada - WHMIS - Ingredient Disclosure	TOLUENE	108-88-3
CERCLA/SARA - Haz Substances and their RQs	TOLUENE	108-88-3
CERCLA/SARA - Section 313 - Emission Reporting	TOLUENE	108-88-3
CWA (Clean Water Act) - Hazardous Substances	TOLUENE	108-88-3
CWA (Clean Water Act) - Priority Pollutants	TOLUENE	108-88-3
CWA (Clean Water Act) - Toxic Pollutants	TOLUENE	108-88-3
IARC - Group 3 (not classifiable)	TOLUENE	108-88-3
Inventory - Australia (AICS)	ALKYLATE	Present
Inventory - Australia (AICS)	BUTANE	Present
Inventory - Australia (AICS)	ETHYL ALCOHOL	Present
Inventory - Australia (AICS)	TOLUENE	Present
Inventory - Canada - Domestic Substances List	ALKYLATE	Present
Inventory - Canada - Domestic Substances List	BUTANE	Present
Inventory - Canada - Domestic Substances List	ETHYL ALCOHOL	Present
Inventory - Canada - Domestic Substances List	TOLUENE	Present
Inventory - China	ALKYLATE	Present
Inventory - China	BUTANE	Present
Inventory - China	ETHYL ALCOHOL	Present
Inventory - China	TOLUENE	Present
Inventory - European EINECS Inventory	ALKYLATE	Present
Inventory - European EINECS Inventory	BUTANE	Present
Inventory - European EINECS Inventory	ETHYL ALCOHOL	Present
Inventory - European EINECS Inventory	TOLUENE	Present

Inventory - Japan - (ENCS)	BUTANE	Present
Inventory - Japan - (ENCS)	ETHYL ALCOHOL	Present
Inventory - Japan - (ENCS)	TOLUENE	Present
Inventory - Korea - Existing and Evaluated	ALKYLATE	Present
Inventory - Korea - Existing and Evaluated	BUTANE	Present
Inventory - Korea - Existing and Evaluated	ETHYL ALCOHOL	Present
Inventory - Korea - Existing and Evaluated	TOLUENE	Present
Inventory - Philippines Inventory (PICCS)	ALKYLATE	Present
Inventory - Philippines Inventory (PICCS)	BUTANE	Present
Inventory - Philippines Inventory (PICCS)	ETHYL ALCOHOL	Present
Inventory - Philippines Inventory (PICCS)	TOLUENE	Present
Inventory - TSCA - Sect. 8(b) Inventory	ALKYLATE	Present
Inventory - TSCA - Sect. 8(b) Inventory	BUTANE	Present
Inventory - TSCA - Sect. 8(b) Inventory	ETHYL ALCOHOL	Present
Inventory - TSCA - Sect. 8(b) Inventory	TOLUENE	Present

Title III Classifications Sections 311,312:

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

Canadian WHMIS Information



Class B-2, Class D-2A, Class D-2B

16. OTHER INFORMATION

Follow all SDS/label precautions even after container is emptied because it may retain product residue. Completely denatured alcohol. Unfit for human consumption. Keep out of reach of children. 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. For use as motor fuel only. Do not use for any other purpose.