

Safety Data Sheet

Five Star RV & Marine

SECTION 1: Identification

1.1 Product identifier

Product name Five Star RV & Marine

1.4 Supplier's details

Name Douglas Production Technologies LLC

Address 1500 East Old 210 Highway
Liberty, MO 64068
USA

Website www.douglasprotech.com

1.5 Emergency phone number(s) 816.781.4250

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Other hazards which do not result in classification

Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

3.1 Substances

Hazardous components

1. 64-17-5
Concentration > 0 - < 10 % (Volume)

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

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If inhaled	Move to fresh air. If not breathing, give rescue breathing. If breathing is difficult give oxygen. Seek medical attention if breathing is still difficult.
In case of skin contact	Use soap and water to remove from the skin, remove contaminated clothing, clean thoroughly before reuse.
In case of eye contact	Flush eyes with water immediately while holding eyelids open. Remove contacts, if worn, after initial flushing and continue flushing for at least 15 minutes. Seek medical attention if irritation persists.
If swallowed	If swallowed, get medical attention immediately. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus and protective suit. Keep containers and surroundings cool with water spray.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Remove all sources of ignition. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Wear proper PPE. Stop the source of the release if you are not put at risk. Use non-combustible absorbent material to absorb the spill, use non-sparking tools to consider proper disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure all equipment is electrically grounded before beginning transfer operations. Keep away from heat and sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

Ambient

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Ethyl alcohol (Ethanol) (CAS: 64-17-5)

PEL (Inhalation): 1000 ppm (OSHA)

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OSHA Annotated Table Z-1, www.osha.gov

2. Ethyl alcohol (Ethanol) (CAS: 64-17-5)

PEL (Inhalation): 1900 mg/m³ (OSHA)

OSHA Annotated Table Z-1, www.osha.gov

3. Ethyl alcohol (Ethanol) (CAS: 64-17-5)

PEL (Inhalation): 1000 ppm (Cal/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

4. Ethyl alcohol (Ethanol) (CAS: 64-17-5)

REL (Inhalation): 1000 ppm (NIOSH)

OSHA Annotated Table Z-1, www.osha.gov

8.3 Individual protection measures, such as personal protective equipment (PPE)

Body protection

Eyes: Wear safety goggles or safety glasses to prevent eye contact.

Body: Long sleeve shirts, long pants, socks, rubber boots and chemical resistant gloves.

Hands: Chemical resistant gloves

Respiratory protection

Wear an approved respirator that provides protection from this product if the airborne concentrations exceed the recommended exposure limits.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form	Liquid
Odor	Citrus
Odor threshold	Citrus
pH	8.1-8.5
Melting point/freezing point	- 50 °F
Initial boiling point and boiling range	370 °F
Flash point	
Evaporation rate	
Flammability (solid, gas)	
Upper/lower flammability limits	20.0 %(V)/4 %(V)
Upper/lower explosive limits	
Vapor pressure	
Vapor density	
Relative density	
Solubility(ies)	Complete in water
Partition coefficient: n-octanol/water	
Auto-ignition temperature	ca. 400 °C, 752 °F; ASTM D 2155;
Decomposition temperature	
Viscosity	
Explosive properties	
Oxidizing properties	

SECTION 10: Stability and reactivity

10.1 Reactivity

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Considered stable under normal ambient temperatures.

10.4 Conditions to avoid

May react with strong acids or strong oxidizing agents, such as chlorates, nitrates or peroxides.

10.6 Hazardous decomposition products

At elevated temperatures one can get aldehydes. If complete combustions oxides of carbon.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

LD50 rabbit: > 2,000 mg/kg; OECD Test Guideline 402

Test substance: Ethanol; (literature value)

LD50 rabbit: > 200 - 1,000 mg/kg

Test substance: Methanol

Skin corrosion/irritation

(rabbit): OECD Test Guideline 404

Test substance: Ethanol

Not irritating, (literature value)

Serious eye damage/irritation

(rabbit): OECD Test Guideline 405

Test substance: Ethanol

irritating, (literature value)

Respiratory or skin sensitization

guinea pig: not sensitizing; Maximization Test
(literature value)

Germ cell mutagenicity

Type: Ames test; OECD Test Guideline 471

System: Salmonella typhimurium; with and without metabolic activation

Result: In vitro tests did not show mutagenic effects.

Test substance: Ethanol

(literature value)

Carcinogenicity

Contains no ingredient listed as a carcinogen

Reproductive toxicity

No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Aspiration hazard

No data available

SECTION 12: Ecological information

Toxicity

Toxicity to fish LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; flow-through test

Test substance: Ethanol

(literature value)

LC50 (Pimephales promelas (fathead minnow)) 96 hours: 29,400 mg/l

Test substance: Methanol

Toxicity to aquatic

invertebrates

EC50 (Ceriodaphnia Dubia (water flea)) 48 hours: > 100 mg/l; static test

Test substance: Ethanol

(literature value)

Toxicity to algae EC50 (Chlorella vulgaris) 72 hours: > 100 mg/l; static test; OECD Test Guideline 201

Test substance: Ethanol

(literature value)

Chronic toxicity to

aquatic invertebrates

NOEC (Ceriodaphnia Dubia (water flea)) 10 d: 9.6 mg/l; semi-static test

Test substance: Ethanol

(literature value)

Mobility in soil

No data available.

SECTION 13: Disposal considerations

Disposal of the product

Ethanol D001 - Ignitability (RQ 100 LB). This product has the RCRA characteristic of ignitability.

Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification.

Disposal of contaminated packaging

Dispose of only in accordance with local, state, and federal regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

Other disposal recommendations

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, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

SECTION 14: Transport information

DOT (US)

UN Number:

Class:

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Packing Group:
Proper Shipping Name: Proprietary Antifreeze, NOI, NMFC #45970 Sub 2
Reportable quantity (RQ):
Marine pollutant:
Poison inhalation hazard:

IMDG

UN Number:
Class:
Packing Group:
EMS Number:
Proper Shipping Name:

IATA

UN Number:
Class:
Packing Group:
Proper Shipping Name:

SECTION 15: Regulatory information

SECTION 16: Other information

Intended as a heat transfer fluid for closed loop systems. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

16.1 Further information/disclaimer

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