

## Ethanol SOF 663 190 Proof

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**SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**


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|                       |  |  |                |
|-----------------------|--|--|----------------|
| <b>Trade name</b>     | Ethanol SOF 663 190 Proof  |  |                |
| <b>Synonyms</b>       | SOF 663 Duplicating Fluid / Denatured Alcohol  |  |                |
| <b>Use</b>            | Industrial use, Inks and Printing, Paint and Coatings, Raw material for chemical processes, Raw material for industry, Solvent |  |                |
| <b>Company</b>        | Sasol Chemicals (USA) LLC<br>(an affiliate of Sasol Chemicals North America LLC)   |  |                |
| <b>Address</b>        | 900 Threadneedle Ste 100 Houston TX 77079  |  |                |
| <b>Telephone</b>      | CHEMTREC North America Transportation Emergency (24-hr)  |  | (800) 424-9300 |
|                       | CHEMTREC World Wide  |  | (703) 527-3887 |
|                       | Other Emergencies (24-hr)  |  | (337) 494-5142 |
|                       | MSDS and Product Information (8:00am-4:30pm CST)   |  | (281) 588-3491 |
|                       | Health and Safety Information (7:30am-4:00pm CST)  |  | (281) 588-3492 |
| <b>E-mail address</b> | SasolElectronicSDS@us.sasol.com  |  |                |

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**SECTION 2 HAZARDS IDENTIFICATION**


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**GHS Hazards**

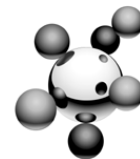
|                   |             |
|-------------------|-------------|
| Flammable liquids | Category 2  |
| Eye irritation    | Category 2A |

**LABEL ELEMENTS****Hazard symbols****Signal word** Danger

**Hazard statements** H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.

**Precautionary statements**

**Prevention** P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P280 Wear protective gloves/ eye protection/ face protection.  
P264 Wash skin thoroughly after handling.



## Ethanol SOF 663 190 Proof

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**Response** P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.

**Storage** P403 + P235 Store in a well-ventilated place. Keep cool.

**Disposal** P501 Dispose of contents/ container to an approved waste disposal plant.

### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

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| <u>Components</u> | <u>CAS-No.</u> | <u>Weight percent</u> |
|-------------------|----------------|-----------------------|
| Ethanol           | 64-17-5        | 81                    |
| 2-Propanol        | 67-63-0        | 18                    |
| Propyl Acetate    | 109-60-4       | 1                     |

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

### SECTION 4 FIRST AID MEASURES

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- Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use.
- Inhalation** Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. In case of shortness of breath, give oxygen. Call a physician immediately.
- Ingestion** If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

### SECTION 5 FIREFIGHTING MEASURES

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#### FLAMMABLE PROPERTIES

**Fire/explosion** Flash back possible over considerable distance. NFPA Class IB flammable liquid.

**Suitable extinguishing media** Water spray, Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO<sub>2</sub>)

**Protective equipment and precautions for firefighters** Wear self-contained breathing apparatus and protective suit. Keep containers and surroundings cool with water spray.

## Ethanol SOF 663 190 Proof

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Methods and materials for containment and cleaning up** 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.

**Spill precautions** Material can create slippery conditions.

**SECTION 7 HANDLING AND STORAGE**

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

**Storage/Transport pressure** Ambient

**Load/Unload temperature** Ambient

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION****ENGINEERING MEASURES**

Ensure adequate ventilation, especially in confined areas.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes** Wear as appropriate: Goggles, Face-shield

**Skin** Wear suitable protective clothing, gloves and eye/face protection.

**Inhalation** Respiratory protection is normally not required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. Use NIOSH approved respiratory protection.

**EXPOSURE GUIDELINES**

| <u>Components</u> | <u>Exposure limit(s)</u>   |
|-------------------|--|
| <b>Ethanol</b>    | ACGIH STEL 1,000 ppm<br>OSHA PEL 1,000 ppm 1,900 mg/m <sup>3</sup> |

|                   |  |
|-------------------|--|
| <b>2-Propanol</b> | OSHA PEL 400 ppm 980 mg/m <sup>3</sup><br>ACGIH TLV (8-hour) 200 ppm<br>ACGIH STEL 400 ppm |
|-------------------|--|

|                       |  |
|-----------------------|--|
| <b>Propyl Acetate</b> | OSHA PEL 200 ppm 840 mg/m <sup>3</sup><br>ACGIH TLV (8-hour) 200 ppm<br>ACGIH STEL 250 ppm |
|-----------------------|--|

PEL= Permissible Exposure Limits  
TLV= Threshold Limit Value  
EL= Excursion Limit

TWA= Time Weighted Average (8 hr.)  
STEL= Short Term Exposure Limit (15 min.)  
WEEL= Workplace Environmental Exposure Level

**Ethanol SOF 663 190 Proof**

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**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

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|   |   |
|---|---|
| <b>Appearance</b>                             | liquid;   |
| <b>Colour</b>                                 | clear   |
| <b>Form</b>                                   | liquid  |
| <b>Odour</b>                                  | alcohol-like  |
| <b>Odour Threshold</b>                        | no data available   |
| <b>Flash point</b>                            | 17 °C, 63 °F;   |
| <b>Flammability</b>                           | Upper explosion limit: 20.0 %(V)<br>Lower explosion limit: 4.0 %(V) |
| <b>Boiling point/boiling range</b>            | 74 - 80 °C, 165.2 - 176 °F;   |
| <b>Melting point/range</b>                    | < -88 °C, < -127.3 °F;  |
| <b>Auto-ignition temperature</b>              | ca. 400 °C, 752 °F; ASTM D 2155;                                    |
| <b>Decomposition temperature</b>              | no data available   |
| <b>Flammability (solid, gas)</b>              | no data available   |
| <b>Vapour pressure</b>                        | ca. 66.661 hPa @ 20 °C, 68 °F;                                      |
| <b>Vapour density</b>                         | no data available   |
| <b>Density</b>                                | 0.81 g/cm <sup>3</sup> @ 15.5 °C, 60 °F;                            |
| <b>Specific gravity</b>                       | no data available   |
| <b>Water solubility</b>                       | completely soluble  |
| <b>Viscosity</b>                              | no data available   |
| <b>pH</b>                                     | no data available   |
| <b>Evaporation rate</b>                       | no data available   |
| <b>Partition coefficient: n-octanol/water</b> | no data available   |

**Ethanol SOF 663 190 Proof**

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**SECTION 10 STABILITY AND REACTIVITY**

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|   |  |
|---|--|
| <b>Reactivity</b>                       | Stable at normal ambient temperature and pressure.   |
| <b>Chemical stability</b>               | No decomposition if stored and applied as directed.  |
| <b>Conditions to avoid</b>              | Keep away from heat and sources of ignition.   |
| <b>Hazardous decomposition products</b> | Combustion products include carbon dioxide, carbon monoxide and possibly other unidentified organic compounds. |
| <b>Materials to avoid</b>               | Can react with strong oxidizers, inorganic acids, and halogens.  |
| <b>Hazardous polymerisation</b>         | None.  |

**SECTION 11 TOXICOLOGICAL INFORMATION**

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|                                  |  |
|----------------------------------|--|
| <b>Acute dermal toxicity</b>     | LD50 rabbit: > 2,000 mg/kg; OECD Test Guideline 402<br>Test substance: Ethanol; (literature value) |
|                                  | LD50 rabbit: > 2,000 mg/kg<br>Test substance: Isopropanol; (literature value)                      |
|                                  | LD50 rat: > 2,000 mg/kg<br>Test substance: Propyl Acetate; (literature value)                      |
| <b>Acute inhalation toxicity</b> | LC50 mouse (4 hours): > 20 mg/l<br>Test substance: Ethanol; (literature value)                     |
|                                  | LC50 rat (8 hours): 12,000 mg/l<br>Test substance: Isopropanol                                     |
| <b>Acute oral toxicity</b>       | LD50 rat: 2,000 mg/kg; OECD Test Guideline 401<br>Test substance: Ethanol; (literature value)      |
|                                  | LD50 rat: 5,800 mg/kg<br>Test substance: Isopropanol   |
|                                  | LD50 rat: > 2,000 mg/kg<br>Test substance: Propyl Acetate; (literature value)                      |
| <b>Skin corrosion/irritation</b> | (rabbit): OECD Test Guideline 404<br>Test substance: Ethanol<br>Not irritating, (literature value) |
|                                  | (rabbit)<br>Test substance: Isopropanol<br>Not irritating, (literature value)                      |
|                                  | (rabbit)   |

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**Ethanol SOF 663 190 Proof**

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Test substance: Propyl Acetate  
slight irritation, (literature value)

**Eye damage/irritation** (rabbit): OECD Test Guideline 405  
Test substance: Ethanol  
irritating, (literature value)

(rabbit)  
Test substance: Isopropanol  
irritating, (literature value)

(rabbit)  
Test substance: Propyl Acetate  
irritating, (literature value)

**Respiratory or skin sensitization** guinea pig: not sensitizing; Maximisation Test  
Ethanol, (literature value)

guinea pig: not sensitizing; Buehler Test  
Isopropanol, (literature value)

**Germ cell mutagenicity** **Genotoxicity in vitro:**  
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)  
Type: Ames test  
System: Salmonella typhimurium; with and without metabolic activation  
Result: In vitro tests did not show mutagenic effects.  
Test substance: Isopropanol  
(literature value)

**Genotoxicity in vivo:**  
no data available

**Assessment Mutagenicity:**  
Based on available data, the classification criteria are not met.

**Reproductive toxicity** **Reproductive toxicity:**  
no data available

**Assessment Reproductive toxicity:**  
no data available

**Teratogenicity:**  
no data available

**Assessment teratogenicity:**  
no data available

**STOT - single exposure** The substance or mixture is not classified as specific target organ toxicant, single exposure.

## Ethanol SOF 663 190 Proof

**STOT - repeated exposure** rat; Oral; 90-day;  
 NOAEL: 1,730 mg/kg  
 LOAEL: 3,160 mg/kg  
 Test substance: Ethanol  
 Based on available data, the classification criteria are not met.

rat; Oral; 90-day;  
 NOAEL: 1,730 mg/kg  
 LOAEL: 3,160 mg/kg  
 Test substance: Isopropanol  
 Based on available data, the classification criteria are not met.

**Aspiration toxicity** no data available

**Carcinogenicity** **Assessment carcinogenicity:**  
 Contains no ingredient listed as a carcinogen

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**SECTION 12 ECOLOGICAL INFORMATION**


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**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: > 100 mg/l; flow-through test  
 Test substance: Isopropanol  
 (literature value)

LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 10 - 100 mg/l; static test  
 Test substance: Propyl Acetate  
 (literature value)

**Toxicity to aquatic invertebrates** EC50 (Ceriodaphnia Dubia (water flea)) 48 hours: > 100 mg/l; static test  
 Test substance: Ethanol  
 (literature value)

EC50 (Daphnia magna (Water flea)) 24 hours: > 100 mg/l; static test  
 Test substance: Isopropanol  
 (literature value)

EC50 (Daphnia magna (Water flea)) 48 hours: > 10 - 100 mg/l; static test  
 Test substance: Propyl Acetate  
 (literature value)

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

EC50 (Scenedesmus quadricauda (Green algae)) 7 d: > 100 mg/l; static test  
 Test substance: Isopropanol  
 (literature value)

EC50 (Pseudokirchneriella subcapitata (green algae)) 72 hours: > 100 mg/l; static test

## Ethanol SOF 663 190 Proof

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Test substance: Propyl Acetate  
(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)

**Biodegradation** Readily biodegradable.

OECD Test Guideline 301B (28 d): > 60 %  
Test substance: Ethanol  
(literature value)

BOD5 (5 d): 53 %  
Test substance: Isopropanol  
(literature value)

OECD Test Guideline 301D (20 d): > 60 %  
Test substance: Propyl Acetate  
(literature value)

**Bioaccumulation** Test substance: Ethanol  
No bioaccumulation is to be expected (log Pow <= 4).

Test substance: Isopropanol  
No bioaccumulation is to be expected (log Pow <= 4).

**Mobility in soil** no data available

**Other adverse effects** no data available

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## SECTION 13 DISPOSAL CONSIDERATIONS

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

**Empty containers.** 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.

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## SECTION 14 TRANSPORT INFORMATION



## Ethanol SOF 663 190 Proof

**DOT** UN 1170, Ethanol solutions, 3, II

**IATA** UN 1170, Ethanol solutions, 3, II

**IMDG** UN 1170, Ethanol solutions, 3, II

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**Remarks** no data available

## SECTION 15 REGULATORY INFORMATION

### U.S. FEDERAL REGULATIONS

#### OSHA Hazards (HCS 1994)

Flammable liquid, Eye irritation, Skin irritation

#### TSCA Inventory Listing

##### Components

Ethanol

2-Propanol

Acetic acid, propyl ester

##### CAS-No.

64-17-5

67-63-0

109-60-4

#### SARA 302 Status

##### Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### CAS-No.

##### Weight percent

#### SARA 311/312 Classification

"Fire hazard", "Immediate (acute) health hazard"

#### SARA 313 Chemical

##### Components

2-Propanol

##### CAS-No.

67-63-0

##### Weight percent

18 %

#### US. EPA CERCLA Hazardous Substances (40 CFR 302)

##### Components

none

##### Reportable Quantity

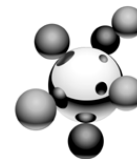
##### Weight percent

### INTERNATIONAL REGULATIONS

#### WHMIS Classification

Class B, Division 2: Flammable liquid.

Class D, Division 2, Subdivision B: Toxic material.



## Ethanol SOF 663 190 Proof

**European Union**

Classification according to Regulation (EU) 1272/2008.

Flammable liquids, Category 2

Eye irritation, Category 2

|   |            |
|---|------------|
| <b>Australia. Inventory of Chemical Substances (AICS)</b>                             | Listed     |
| <b>Japan. Inventory of Existing and New Chemical Substances (ENCS)</b>                | Listed     |
| <b>Japan. Industrial Safety &amp; Health Law (ISHL) Inventory</b>                     | Listed     |
| <b>Canada. Domestic Substances List (DSL) Inventory</b>                               | Listed     |
| <b>Canadian Non-Domestic Substance Listing (NDSL)</b>                                 | Not listed |
| <b>European Inventory of Existing Commercial Chemical Substances (EINECS) Listing</b> | Listed     |
| <b>Philippines. Inventory of Chemicals / Chemical Substances (PICCS)</b>              | Listed     |
| <b>Korea. Existing Chemicals Inventory (KECI)</b>                                     | Listed     |
| <b>China. Inventory of Existing Chemical Substances (IECSC)</b>                       | Listed     |
| <b>Mexico. National Inventory of Chemical Substances (INSQ)</b>                       | Listed     |
| <b>New Zealand. Inventory of Chemicals (NZIoC)</b>                                    | Listed     |
| <b>Switzerland. Inventory of Notified New Substances (CHINV)</b>                      | Listed     |
| <b>Taiwan. National Existing Chemical Inventory (NECI)</b>                            | Listed     |

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

**STATE REGULATIONS**

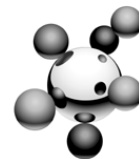
California Prop. 65

Components

none

CAS-No.**SECTION 16 OTHER INFORMATION****HAZARD RATINGS**

|              | <u>Health</u> | <u>Flammability</u> | <u>Physical Hazard/<br/>Instability</u> |
|--------------|---------------|---------------------|---|
| <b>HMIS®</b> | 2             | 3                   | 0                                       |
| <b>NFPA</b>  | 2             | 3                   | 0                                       |



**Ethanol SOF 663 190 Proof**

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