Ethanol SDA 40B 200 Proof
Ultra Pure, LLC
Safety Data Sheet

Revision date: 29 October 2020
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1. Product and Company Identification

1.1 Product identifiers

Product Name	Ethanol SDA 40B 200 Proof
Producer	Ultra Pure, LLC
Product Number	No data available
CAS-No.	Mixture

1.2 Identified uses of the product and uses advised against

Identified Uses	Solvent

1.3 Details of the chemical supplier

Company	Ultra Pure, LLC
Address	50 Old Kings Highway N. Darien, CT 06820 USA
Telephone:	(1)-203-662-9761

1.4 Emergency phone number

Emergency phone number	1-800-424-9300

2. Hazards Identification

2.1 Classification of the substance or mixture

GHS Class	Flammable liquid, Category 2 Eye Irritation, Category 2A Specific Target Organ Toxicity (Single Exposure), Category 3

Classification according to Regulation (EC) No 1272/2008

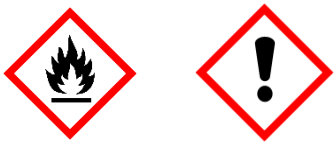
Based on present data no classification and labeling is required according to Directive 1272/2008/EC and its amendments (CLP Regulation, GHS).

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

According to present data no classification and labeling is required according to Directives 67/548/EEC or 1999/45/EC.

2.2 GHS Label elements, including precautionary statements

GHS Pictograms



Signal word	Danger
Hazard statements	H225 – Highly flammable liquid and vapor H315 – Causes skin irritation H319 – Causes eye irritation H335 – May cause respiratory irritation H336 – May cause drowsiness or dizziness
Precautionary statements	P240 – Ground/bond container and receiving equipment P241 – Use explosion-proof electrical/ventilating/light equipment. P242 – Use only non-sparking tools

P243 – Take precautionary measures against static discharge
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray
P264 – Wash with soap and water thoroughly after handling
P271 – Use only outdoors or in a well-ventilated area
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 – If on skin: Wash with soap and water
P304 + P340 – If inhaled: Remove victim to fresh air & keep at rest in a position comfortable for breathing.
P305 + P351 + P338 – If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P312 – Call a poison center or doctor/physician if you feel unwell.
P332 + P313 – If skin irritation occurs: get medical advice/attention.
P337 + P313 – If eye irritation persists: get medical advice/attention.
P361 – Remove/Take off immediately all contaminated clothing.
P363 – Wash contaminated clothing before reuse.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - None

3. Composition/Information on Ingredients

3.1 Product mixture

Synonyms	Solvent
Formula	No data available; mixture
Molecular wt	Mixture
CAS-No.	Mixture
EC-No.	Mixture

Chemical Name	CAS-No.	EC-No.	Ingredient Percent
Ethanol	64-17-5	200-578-6	95-100%
t-Butanol	75-65-0	200-889-7	0-1%
Denatonium Benzoate	3734-33-6	223-095-2	0-1%

Remarks: There are no additional hazardous ingredients greater than or equal to 1.0 wt% concentration or carcinogenic ingredients greater than or equal to 0.1 wt% concentration.

4. First Aid Measures

4.1 Description of first aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
Skin contact	Wash off with soap and water. Consult a physician if symptoms occur.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if symptoms occur.
Inhalation	In case of difficult breathing, move person to fresh air. Consult a physician if symptoms occur.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water and consult a physician if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects: The most important known symptoms and effects are described in the labelling (see section 2.2) and in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Other first aid: No data available

5. Fire Fighting Measures

5.1 Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use dry powder, alcohol-resistant foam, water in large amounts, carbon dioxide. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

Special hazards — Isolate from oxidizers, heat, sparks, electrical equipment and open flame. Closed containers may explode if exposed to extreme heat. Applying to hot surfaces requires special precautions. Empty container very hazardous! Continue all label precautions.

5.3 Advice for firefighters

Protective equipment — Water spray may be ineffective on fire but can protect fire-fighters and cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gearWear self-contained breathing apparatus for firefighting if necessary.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures

Personal precautions — Vapors may ignite explosively & spread long distances. Prevent vapor buildup. Keep unprotected personnel away. Ventilate spill area. Remove all ignition sources. Filter respirator for organic vapors. For personal protection see section 8.

6.2 Environmental precautions

Environmental precautions — In case of large spills, dike spill to prevent runoff into sewers and drains. Recover as much of the material as possible.

6.3 Methods and materials for containment and cleaning up

Methods for cleanup — Soak up with inert absorbent material and dispose. Keep in suitable, closed containers for disposal.

6.4 References to other sections

Other references — For disposal see section 13.

7. Handling and Storage

7.1 General hygiene considerations

General hygiene — Avoid contact with skin and eyes. In case of large quantities of vapor or mist, use local exhaust or general dilution ventilation to control exposure within applicable limits. For precautions see section 2.2.

7.2 Precautions for safe handling

Safe handling precautions — Isolate from oxidizers, heat, sparks, electric equipment & open flame. Use explosion-proof equipment. Use only with adequate ventilation. Avoid breathing of vapor or spray mist. Avoid contact with skin & eyes. Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse. Avoid free fall of liquid. Ground containers when transferring. Do not flame cut, saw, drill, braze, or weld. Empty container very hazardous! Continue all label precautions! Keep container tightly closed in a dry and well-ventilated place.

7.3 Conditions for safe storage, including any incompatibilities

Other storage conditions — Keep in fireproof surroundings. Keep separated from strong oxidants. Keep cool. Do not store above 49 C/128 F. Keep container tightly closed & upright when not in use to prevent leakage.

8. Exposure Controls/Personal Protection

8.1 Control and exposure limits recommended by the chemical manufacturer

MATERIAL	CAS-No.	EC-No.	TWA (OSHA)	TLVA (ACGIH)
Ethanol	64-17-5	288-578-6	1000 ppm	1000 ppm A4
Water	7732-18-5	231-791-2	None Known	None Known
t-Butanol	75-65-8	288-889-7	100 ppm	100 ppm
Denatonium Benzoate	3734-33-6	223-095-2	None Known	None Known

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 8.1%.

8.2 Appropriate engineering controls

Engineering controls — Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Use adequate ventilation where dust forms to keep concentration under exposure control limits.

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection	None required for consumer use. For manufacturing quantities: where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Eye/face protection	None required for consumer use. For manufacturing quantities: safety glasses with side-shields conforming to EN166 are recommended. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Hand protection	None required for consumer use. For manufacturing quantities: handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body protection	None required for consumer use. For manufacturing quantities: wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Liquid, Water-White
b)	Odor	Alcohol
c)	Odor threshold	No data available
d)	pH	No data available
e)	Melting/freezing point	No data available
f)	Boiling point	75-77°C (167-172°F)
g)	Flash point	4°C (40°F)
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	Class I B
j)	Upper/lower flammability or explosive limits	Upper (UEL): 28 Lower (LEL): 4.3
k)	Vapor pressure	44.0 mm of Hg @ 28°C
l)	Vapor density	1.6
m)	Relative density	0.794
n)	Water solubility	Complete
o)	Partition coefficient octanol/water	No data available
p)	Auto-ignition temp	371°C (700°F)
q)	Decomposition temp	No data available
r)	Viscosity	No data available

10. Stability and Reactivity

10.1 Reactivity

Reactivity — No data available

10.2 Chemical stability

Chemical stability — Stable under ordinary conditions of use and storage. Hygroscopic.

10.3 Possibility of hazardous reactions

Hazardous reactions — Isolate from oxidizers, heat, sparks, electric equipment & open flame.

10.4 Conditions to avoid

Conditions to avoid — Contact with incompatible chemicals and exposure to extremely high temperatures.

10.5 Incompatible materials

Incompatible materials — Reacts with strong oxidants, causing fire & explosion hazard.

10.6 Hazardous decomposition products

Hazardous products	Carbon Monoxide, Carbon Dioxide from burning. In the event of fire, see section 5.

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	Swallowing can cause abdominal irritation, nausea, vomiting, and diarrhea.
Acute dermal toxicity	Primary irritation to skin, defatting, dermatitis.
Acute inhalation toxicity	Anesthetic. Irritates respiratory tract. Acute overexposure can cause serious nervous system depression. Vapor harmful. Breathing vapor can cause irritation. Acute overexposure can cause harm to affected organs by routes of entry.

Skin corrosion/irritation

Skin corrosion irritation	No data available

Serious eye damage/eye irritation

Eye damage/eye irritation	Can cause eye irritation

Respiratory or skin sensitization

Respiratory sensitizer	No data available
Skin sensitizer	No data available

Germ cell mutagenicity

Mutagenicity	No data available

Suspected cancer agent

ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

Reproductive toxicity

Reproductive toxicity	This product is not reported to produce mutagenic, embryotoxic, teratogenic, or reproductive effects in humans.

Aspiration hazard

Aspiration hazard	No data available

12. Ecological Information

12.1 Ecotoxicity (aquatic and terrestrial)

Ecotoxicity	Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) - 15.3 mg/l - 96 h Sigma-Aldrich - E7023 Page 7 of 8 Toxicity to daphnia and other aquatic invertebrates LC50 - Ceriodaphnia dubia (water flea) - 5,012 mg/l - 48 h NOEC - Daphnia magna (Water flea) - 9.6 mg/l - 9 d Toxicity to algae EC50 - Chlorella vulgaris (Fresh

12.2 Persistence and degradability

Degradability	aerobic - Exposure time 15 d Result: 95 % - Readily biodegradable. (OECD Test Guideline 301E)

12.3 Bioaccumulation potential

Bioaccumulation	Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

12.4 Mobility in soil

Mobility in soil	No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment	Not available as chemical safety assessment not required/not conducted.

13. Disposal Considerations

13.1 Waste treatment methods

Waste treatment disposal	Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority

14. Transport Information

DOT
UN number: 1987 Class: 3 Packing group: II
Proper shipping name: Alcohols
Reportable Quantity (RQ):
Poison Inhalation Hazard: No
TDG
UN number: 1987 Class: 3 Packing group: II EMS-No: F-E, S-D Proper shipping name: Alcohols
IMDG
UN number: 1987 Class: 3 Packing group: II EMS-No: F-E, S-D Proper shipping name: Alcohols
IATA
UN number: 1987 Class: 3 Packing group: II EMS-No: F-E, S-D Proper shipping name: Alcohols

27. Regulatory Information

15.1 Safety, health, and environmental regulations specific to the product or mixture

SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 311/312 Hazards	Acute Health, Fire
SARA 313 Components	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
TSCA	All components of this product are on the TSCA list.
EINECS	No components of this product are on the European Inventory of Existing Commercial Chemical Substances.
Canada DSL	All components of this product are on the Canada Domestic Substance List.
CA Prop. 65 Components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

28. Other Information

HMIS Rating	Health hazard: 2 Flammability: 3 Physical Hazard: 0
NFPA Rating	Health hazard: 0 Fire Hazard: 3 Reactivity Hazard: 0
Revision Date	29 October 2020

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Ultra Pure, LLC assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Ultra Pure, LLC assumes no responsibility for injury to vendee or third persons proximately caused by use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

Abbreviations and acronyms	IMDG - International Maritime Code for Dangerous Goods TDG - Transportation of Dangerous Goods IATA - International Air Transport Association GHS - Globally Harmonized System of Classification and Labelling of Chemicals PBT - Persistent, bioaccumulative and toxic assessment vPvB - Very persistent and very bioaccumulative assessment ACGIH - American Conference of Governmental Industrial Hygienists NIOSH - National Institute for Occupational Safety and Health TLV - Threshold Limit Values CAS - Chemical Abstracts Service (division of the American Chemical Society) NFPA - National Fire Protection Association HMIS - Hazardous Materials Identification System CFR - Code of Federal Regulations

SARA - Superfund Amendments and Reauthorization Act
DOT - US Department of Transportation
EC50 - Half maximal effective concentration
LD50 - Median lethal dose
LC50 - Median lethal concentration
SDS - Safety Data Sheet