

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	SDA 40B Ethanol 190 Proof
CAS number	See Section 3
Synonyms	SDA 40B, 190; Denatured Ethanol; Ethanol 190 Proof Specially Denatured Alcohol SDA 40B with tert-Butyl Alcohol & Denatonium Benzoate

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	General purpose solvent.
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable Liquids	Category 2
Eye Irritation	Category 2A

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Highly flammable liquid and vapor.
Causes serious eye irritation.

Precautionary statements

Prevention: Keep away from heat, open flame, sparks. No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use explosion-proof electrical, lighting, ventilating equipment. Use only non-sparking tools. Wash hands, forearms, and exposed areas thoroughly after handling. Wear eye protection, protective gloves, protective clothing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.

Fire: In case of fire, use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents and container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Ethanol	Ethyl alcohol; EtOH	64-17-5	$\geq 95\%$
Water	Aqua; H ₂ O	7732-18-5	$< 5\%$
t-Butanol	tert-Butyl alcohol; TBA	75-65-0	$\leq 0.125\%$
Denatonium benzoate	lidocaine benzyl benzoate	3734-33-6	$\leq 0.125\%$

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	If symptoms are experienced, remove source of contamination or move to fresh air. If breathing is difficult, get medical attention.
In case of skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If irritation is experienced, flush with water. Get medical attention if irritation develops and persists.
In case of eye contact	Immediately flush eyes with water for at least 15 minutes while holding. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms persist.
If swallowed	Rinse mouth. Do NOT induce vomiting. If the material is swallowed, get medical advice or attention.

4.2 Most important symptoms and effects, both acute and delayed

Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Water fog. Alcohol-resistant foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Specific hazards arising from the substance or mixture

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Combustion products may include: Carbon oxides.

5.3 Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Use standard firefighting procedures and consider the hazards of other involved materials. Highly flammable liquid and vapor.

5.4 Further information

Flash Point 57.2 - 69.8 °F (14.0 - 21.0 °C) Closed Cup

Autoignition Temperature 685.4 °F (363 °C) - Ethyl Alcohol

Explosion limits

Upper 19%

Lower 3.30%

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
2	3	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not inhale vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.2 Environmental precautions

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

6.3 Methods and materials for containment and cleaning up

Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite, or diatomaceous earth. Place in container for disposal according to local / national regulations.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Keep away from heat, sparks and flame. Use only with adequate ventilation. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting, and material handling) equipment. Handle empty containers with care because residual vapors are flammable.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Incompatibilities

Alkali metals, oxidizing agents, peroxides.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Ethanol	PEL-TWA	1000 ppm 1900 mg/m3
t-Butanol	STEL	150 ppm

US. ACGIH Threshold Limit Values

Component	Type	Value
Ethanol	STEL	1000 ppm
t-Butanol	TWA	100 ppm 300 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Ethanol	IDLH	3300 ppm
	TWA	1000 ppm 1900 mg/m3

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Personal protective equipment

Eye/face protection

Chemical goggles are recommended.

Skin protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Wear appropriate chemical resistant clothing. Wear appropriate thermal protective clothing when necessary.

Body Protection

Wear appropriate clothing to minimize skin exposure.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Respirator type: Chemical respirator with organic vapor cartridge.

Control of environmental exposure

Avoid discharge into drains, water courses, or onto the ground.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear
Odor	Ethanollic smell
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-173.2 - -50.8 °F (-114 - -46 °C)
Boiling Point/Range	172.9 - 176 °F (78.3 - 80 °C)
Evaporation Rate	Expected to be rapid
Flammability (solid)	Not applicable
Flammability or explosive limit	
Upper	19%
Lower	3.30%
Vapor Pressure	44.6 mm Hg (100% Ethyl alcohol) (68 °F (20 °C))
Vapor Density	1.4 - 1.6 (air = 1)
Density	0.796 - 0.881 g/ml (77 °F (25 °C))
Solubility	Soluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	363°C
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	C ₂ H ₅ OH
Molecular Weight	46.07 g/mol
VOC Content(%)	No information available
Oxidizing properties	Not oxidizing

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Vapors may form explosive mixture with air.

10.4 Conditions to avoid

Heat, flames, and sparks. Extreme temperature and direct sunlight. Incompatible materials.

10.5 Incompatible materials

Alkali metals, oxidizing agents, peroxides.

10.6 Hazardous decomposition products

Carbon oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	10470 mg/kg (Rat)	-	117-125 mg/L/4h (Rat)
t-Butanol	2,743 mg/kg (Rat)	>2000 mg/kg (Rabbit)	-
Denatonium benzoate	584 mg/kg (Rat)	-	-

Skin corrosion/irritation

May cause irritation, cracking, flaking, and defatting of skin on prolonged contact.

Serious eye damage/eye irritation

Liquid and vapor may cause irritation. Splashes may cause temporary pain and blurred vision.

Respiratory or skin sensitization

Not a respiratory sensitizer.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Ethanol	64-17-6	Not listed	Not listed	Not listed	Not listed	Not listed
t-Butanol	75-65-0	Not listed	Not listed	Not listed	Not listed	Not listed
Denatonium benzoate	3834-33-6	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

None known.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity

Alcohol is a developmental toxin when consumed during pregnancy.

Chronic effects

No information available.

11.2 Additional Information

No information available.

SECTION 12: Ecological information**12.1 Toxicity**

Product		Species	Test Results
Ethanol	EC10	Freshwater Algae	11.5 mg/L, 72 hours
	EC50	Freshwater Algae	275 mg/L, 72 hours
	LC50	Freshwater Fish	11200 mg/L, 24 hours
	NOEC	Freshwater Fish	250 mg/L
	EC50	Freshwater Invertebrate Marine Invertebrate	5012 mg/L, 48 hours 857 mg/L, 48 hours
t-Butanol	NOEC	Freshwater Invertebrate Marine Invertebrate	9.6 mg/L, 10 days 79 mg/L, 96 hours
	LC50	Freshwater Fish	6140 mg/L, 96 hours
Denatonium benzoate	EC50	Freshwater Algae	1000 mg/L, 96 hours
	LC50	Freshwater Fish	> 1000 mg/L, 96 hours

12.2 Persistence and degradability

Readily biodegradable.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

The product is water soluble and may spread in water systems.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN-no	UN1987
Proper Shipping Name	Alcohols, n.o.s.
Hazard Class	3
Packing Group	II

IMDG

UN-no	UN1987
Proper Shipping Name	Alcohols, n.o.s.
Hazard Class	3
Packing Group	II

IATA

UN-no	UN1987
Proper Shipping Name	Alcohols, n.o.s.
Hazard Class	3
Packing Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not applicable.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

See Section 2 for more information.

SARA 313 (TRI reporting)

Listed, tert-Butyl alcohol (CAS #75-65-0).

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Listed, Ethanol (CAS #64-17-5)..

US state regulations

US. Massachusetts RTK - Substance List

Listed, Ethanol (CAS #64-17-5).

Listed, tert-Butyl alcohol (CAS #75-65-0).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Ethanol (CAS #64-17-5).

Listed, tert-Butyl alcohol (CAS #75-65-0).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Ethanol (CAS #64-17-5).

Listed, tert-Butyl alcohol (CAS #75-65-0).

California Proposition 65

Listed, Ethanol (CAS #64-17-5).

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.