

SAFETY DATA SHEET

Originally Prepared: 09/20/2022

Version: 01

1. IDENTIFICATION**1.1 Product Identification: Dextro-Limonene (D-Limonene)**

Product SKU(s):

ABXIS0018H, ABXIS0018G, ABXIS0018E, ABXIS0018C, ABXIS0018A, ABXIS0018D, ABXIS0018F, ABXIS0018Y, ABXIS0018X

CAS NUMBER: 5989-27-5

EC NUMBER(EINECS): 227-813-5

E NUMBER: N/A

FEMA NUMBER: 2633

1.2 Product Use

Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA guidelines

1.3 Company Identification

Abstrax Tech Inc. 2026 Cecilia Circle, Corona, CA. 92881, USA; 1-562-294-5805

www.abstraxtech.com

SDS inquiries can also be submitted to regulatory@abstraxtech.com

1.4 Emergency Telephone Number

USA 1-562-294-5805 (only during office hours, 9:00am – 5:00pm PST)

2. HAZARD(S) IDENTIFICATION**2.1 Classification of the Product:**

Flammable liquids (Category 3), H226

Aspiration hazard (Category 1), H304

Acute toxicity, dermal (Category 4), H312

Skin corrosion/irritation (Category 2), H315

Sensitization, Skin (Category 1 &1B), H317

Serious eye damage/eye irritation (Category 2A), H319

Acute toxicity, inhalation (Category 4), H332

Hazardous to the aquatic environment, acute hazard (Category 1), H400

Hazardous to the aquatic environment, long-term hazard (Category 1), H410

Hazardous to the aquatic environment, long-term hazard (Category 3), H412

2.2 GHS Label Elements

Pictogram:



Signal Word: Danger

Hazard Statement(s):

H226 Flammable liquid and vapor

H304 May be fatal if swallowed and enters airways

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

H412 Harmful to aquatic life with long lasting effects

Precautionary Statement(s):

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

P261 Avoid breathing mist or vapors
P264 Wash skin thoroughly after handling
P264+P265 Wash hands (and...) thoroughly after handling. Do not touch eyes
P272 Contaminated work clothing must not be allowed out of the workplace
P273 Avoid release to the environment
P280 Wear protective gloves/ eye protection/ face protection
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor
P301+P316 IF SWALLOWED: Get emergency medical help immediately
P302+P352 IF ON SKIN: wash with plenty of water/...
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
P305+P351+P338 IF IN EYES: Rinse eyes cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing
P321 Specific treatment (see supplemental first aid instructions on this label)
P331 Do NOT induce vomiting
P332+P317 If skin irritation occurs: Get medical help
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention
P362 Take off contaminated clothing and wash before reuse
P362+P364 Take off contaminated clothing and wash before reuse
P337+P317 If eye irritation persists: Get medical help
P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
P391 Collect spillage
P403 + P235 Store in a well-ventilated place. Keep cool
P405 Store locked up
P501 Dispose of contents/ container to an approved waste disposal plant

2.3 Other Hazards

No Data Available

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Dextro-Limonene (D-Limonene)

Molecular Formula: C₁₀H₁₆

CAS NUMBER: 5989-27-5

EC NUMBER(EINECS): 227-813-5

4. FIRST-AID MEASURES

4.1 General First-Aid Instructions

INHALATION: If headache, irritation, nausea, or drowsiness occurs, move patient to a place with clear air. Ventilate. Obtain medical advice if irritation persists.

SKIN CONTACT: Remove contaminated clothing. Wash with water and soap. Obtain medical advice if irritation persists. An eyewash and safety shower should be readily available.

EYE CONTACT: Check for and remove any contact lenses. Flush opened eye (including under eyelids) with running water for 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eyes and lids. Do not allow person to rub eyes or keep eyes closed. Obtain medical advice if irritation persists. An eyewash and safety shower should be readily available.

INGESTION: If patient is conscious and can swallow, administer lots of water to dilute substance. Do not induce vomiting. Call a poison control center and obtain medical advice if irritation persists.

OTHER: Personal protective equipment (PPE) for first aid responders is recommended; Chemical resistant clothing, boots and gloves.

4.2 Most Important Symptoms and Effects, Acute and Delayed

May irritate eyes, lungs, skin and stomach. Call a poison control center and obtain medical advice if irritation persists after following above instructions.

4.1 Immediate Medical Care and Special Treatment

Call a poison control center and obtain medical advice if irritation persists.

5. FIRE-FIGHTING MEASURES

5.1 SUITABLE EXTINGUISHING MEDIA: CO₂, Foam, Dry Chemicals, Water Spray

NON-SUITABLE EXTINGUISHING MEDIA: Do not use a heavy water stream.

5.2 SPECIFIC FIRE AND EXPLOSION HAZARDS: Heat may generate irritating or corrosive vapors. Product is not considered to be a fire or explosion hazard.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, carbon monoxide, fumes.

- 5.3 SPECIAL PROTECTIVE EQUIPMENT OR PRECAUTIONS FOR FIREFIGHTERS: Exercise caution when fighting any chemical fire. Use protective clothing and breathing equipment appropriate for surrounding fire. Prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Keep away from heat, sparks, open flames, hot surfaces. No smoking. Ventilate site. Evacuate unnecessary personnel. Wear safety glasses or goggles, rubber chemical resistant gloves, and apron when handling chemical. Pressure demand air supplied respirators should always be worn when the airborne concentration of the contaminant or oxygen is unknown. Otherwise, wear NIOSH approved respiratory protection and other personal protective equipment as appropriate for the potential exposure hazard. Do not get into eyes, on skin, or clothing.

METHODS AND MATERIALS FOR CONTAINMENT: Contain large spills to prevent migration and entry into sewers or streams.

METHODS AND MATERIALS FOR CLEAN UP: Shovel up material and place in approved disposal container. Dispose of in accordance with current local, state, and federal laws and regulations. Flush the area with warm water. Small spills may be flushed to the drain with excess water or absorbed with a damp cloth.

7. HANDLING AND STORAGE

7.1 Handling

Maintain good ventilation. Consistent with good hygiene and lab practices, wear safety glasses or goggles, rubber gloves and apron when handling. Where aerosols of chemical are created, use suitable dust mask or breathing apparatus. Do not eat, drink or smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Avoid prolonged or repeated exposure to chemical. Wash thoroughly after handling. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

7.2 Storage

Keep container tightly sealed. Store in a dry, cool place. Protect from light, avoid uncoated metal containers, and keep air contact to a minimum. Incompatible with strong oxidizing agents, acids and bases. Avoid extended storage by using as soon as possible within designated shelf life. Keep away from heat and sources of ignition.

7.3 Specific Uses

For use in products in which added flavoring is permitted. It is the user's responsibility to ensure that the conditions and possible uses of this flavor chemical conform to local laws and regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Limit Values: TWA

Control Parameters: 30ppm

8.2 Exposure Controls

VENTILATION AND OTHER ENGINEERING CONTROLS: Normal ventilation is generally adequate. Keep airborne concentration of flavor chemical low by enclosing production processes whenever possible.



EYE: Wear protective glasses, goggles or face shield. An eyewash and safety shower should be readily available.

HAND: Wear protective chemical resistant gloves during manufacture or handling of this flavor chemical.

SPECIAL CLOTHING: Special clothing is not normally necessary when manufacturing or handling this flavor chemical within a closed system. Wear chemical resistant full body coveralls whenever there is a possibility of splash or appreciable contact with vapors during manufacturing or handling.

OTHER PROTECTIVE DEVICES AND PROCEDURES: Follow good manufacturing practice.

RESPIRATORY: Work in well ventilated area. If irritation is experienced, approved respiratory protection should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General Information

APPEARANCE: Colorless to pale yellow liquid

ODOR: Citrus, Fresh, Mild Orange

ODOR THRESHOLD: Data not available

9.2 Important Health, Safety and Environmental Information

pH: Data not available

MELTING POINT/FREEZING POINT: -74 °C (-101.2 °F)

BOILING POINT: 176 °C (348.8 °F)

FLASH POINT: 51 °C (123.8 °F)

FLAMMABILITY: Data not available

EXPLOSIVE PROPERTIES: Data not available

OXIDISING PROPERTIES: Data not available

VAPOR PRESSURE: 2 hPa @ 25 °C (77 °F)

RELATIVE DENSITY: 0.844 at 20 °C (68 °F)

SOLUBILITY: Data not available
WATER SOLUBILITY: 5.69 mg/L @ 25 °C (77 °F)
PARTITION COEFFICIENT: 4.38 @ 25 °C (77 °F)
VISCOSITY: 0.846 mPa.s at 20 °C (68 °F)
VAPOR DENSITY: 4.70 - (Air = 1.0)
EVAPORATION RATE: Data not available

MISCIBILITY: Data not available
FAT SOLUBILITY (VEGETABLE OIL): Data not available
CONDUCTIVITY: Data not available
AUTO-IGNITION TEMPERATURE: 245 °C (473 °F)
DECOMPOSITION TEMPERATURE: Data not available
VOC CONTENT: Data not available

9.3 Other Information

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable and non-reactive under normal conditions of use and storage.

10.2 Chemical Stability

May degrade in light. Avoid extended storage by using as soon as possible within designated shelf life.

10.4 Conditions to Avoid

Keep cool and avoid excessive heat, humidity, open flames, sparks or other sources of ignition. Avoid opening in poorly ventilated spaces.

10.5 Materials to Avoid

Avoid strong acids, bases, and oxidizing agents.

10.6 Hazardous Decomposition Products

No known hazardous materials produced in dangerous amounts upon decomposition. Thermal decomposition generates potentially irritating vapors.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity (Oral, Dermal, Inhalation Exposure):

LD50 Oral - Rat - male and female - > 2,000 mg/kg

LD50 Dermal - Rabbit - > 5,000 mg/kg

Effects of Immediate, Delayed or Chronic Effects from Short- and Long-Term Exposure: May cause immediate irritation to eyes, stomach, skin and/or lungs. Prolonged exposure may increase irritation. Data is not available regarding long-term effects of repeated exposures.

International Agency for Research on Cancer (IARC) Monograph: No Data Available

OSHA Carcinogen: No Data Available

NIOSH Carcinogen: No Data Available

National Toxicology Program (NTP) Report on Carcinogens (ROC): No Data Available

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Not established.

Not established.

12.2 Persistence and Degradability

Not established.

12.4 Mobility in Soil

Not established.

12.3 Bioaccumulative Potential

12.5 Other Adverse Effects

Not established. Avoid release into the environment.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with Federal, State, County, and local regulations. Avoid any spillage from entering waterways, drains or sewage as this product has unknown ecotoxicity.

Containers should be either reconditioned by certified firms or properly disposed of by approved firms. Disposal of containers should be in accordance with applicable laws and regulations. "Empty" drums should not be given to individuals. Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive material. Cutting or welding of empty containers may cause fire, explosion, or toxic fumes from residues. Do not pressurize or expose to open flame or heat. Keep containers closed and drum bungs in place.

14. TRANSPORT INFORMATION

GHS CATEGORY:

GHS02 – Flammables

GHS08 – Health Hazard

GHS07 – Irritant

GHS09 – Environment

15. REGULATORY INFORMATION

UNITED STATES OF AMERICA (USA): Approved for use in a regulation of the Food and Drug Administration (FDA) or regarded as safe by a reliable industry association.

CALIFORNIA PROPOSITION 65:

No Data Available

16. OTHER INFORMATION

- 16.1 VERSIONS OF THIS DOCUMENT DATED PREVIOUS TO THE REVISION DATE ON THIS DOCUMENT ARE NO LONGER VALID.
- 16.3 THE ABOVE INFORMATION WAS PREPARED FROM CURRENT AND REPUTABLE SOURCES. HOWEVER, THE DATA IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED, REGARDING ITS CORRECTNESS OR ACCURACY.
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ABSTRAX, SEPTEMBER 2022
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