

SAFETY DATA SHEET

Alcohol, Absolute 99.7% (Denatured)

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Alcohol, Absolute 99.7% (Denatured)

Product Number : CA002-50

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sequent Industrial Supplies
29A, Jalan PJU 1A/51, Ara Damansara
47301 Petaling Jaya, Selangor Darul Ehsan

Telephone : 603-78876362

1.4 Emergency telephone number

Emergency Phone # : 603-78876362

2. HAZARDS IDENTIFICATION

2.1 GHS Classification

Classification according to CLASS regulations 2013

Flammable liquids (Category 2), H225

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

Carcinogenicity, Inhalation (Category 2), H351

Specific target organ toxicity - single exposure (Category 2), Central nervous system, Visual organs, H371

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

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Labelling according to CLASS regulations 2013



Pictogram

Signal Word Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer if inhaled.

H371 May cause damage to organs (Central nervous system, Visual organs).

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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.

P260 Do not breathe mist or vapors

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P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage

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

P405 Store locked up.

Disposal

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

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Component

Ethanol

Formula : C₂H₅OH

Molecular weight : 46.07 g/mol

CAS-No. 64-17-5

EC-No. 200-578-6

Index-No. 603-002-00-5

2-Propanol

Formula : C₃H₈O

Molecular weight : 60.10 g/mol

CAS-No. 67-63-0

EC-No. 200-661-7

Index-No. 603-117-00-0

For the full text of the H-Statements mentioned in this Section, see Section 16

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4. FIRST AID MEASURES

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Mixture with combustible ingredients.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

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7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Storage class

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Ingredients with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Ethanol	64-17-5	TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Upper Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans			
		TWA	1,000 ppm 1,900 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1,000 ppm 1,900 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m ³ is approximate.				
		TWA	1,000 ppm 1,900 mg/m ³	USA. NIOSH Recommended Exposure Limits
2-Propanol	67-63-0	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Not classifiable as a human carcinogen			
		STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Not classifiable as a human carcinogen			
		TWA	400 ppm 980 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	500 ppm 1,225 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	400 ppm 980 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m ³ is approximate				

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		TWA	400 ppm 980 mg/m ³	USA. NIOSH Recommended Exposure Limits
		ST	500 ppm 1,225 mg/m ³ USA	USA. NIOSH Recommended Exposure Limits

8.2 Exposure controls

Appropriate engineering controls

Change contaminated clothing. Wash hands after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved.

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 120 min

Material tested: Camatril
required

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

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Control of environmental exposure

Do not let product enter drains. Risk of explosion.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- Physical state liquid
- Color colorless
- Odor alcohol-like

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- d) Melting point/freezing point
Melting point/ range: -114 °C - lit.
 - e) Initial boiling point and boiling range 78.3 °C
 - f) Flammability (solid, gas) No data available
 - g) Upper/lower flammability or explosive limits
Upper explosion limit: 27.7 %(V)
Lower explosion limit: 3.1 %(V)
 - h) Flash point 13 °C - closed cup - closed cup
 - i) Auto ignition temperature 363 - 425 °C at 1,013 hPa
 - j) Decomposition temperature Distillable in an undecomposed state at normal pressure.
 - k) pH 7.0 at 10 g/l at 20 °C
 - l) Viscosity Viscosity, kinematic: No data available
Viscosity, dynamic: 1.2 mPa.s at 20 °C
 - m) Water solubility 1,000 g/l at 20 °C - completely miscible
 - n) Partition coefficient: n-octanol/water log Pow: -0.35 at 24 °C - Bioaccumulation is not expected.
 - o) Vapor pressure 57.26 hPa at 19.6 °C
 - p) Density 0.789 g/mL at 20 °C 0.789 g/mL at 25 °C - lit.
Relative density No data available
 - q) Relative vapor density No data available
 - r) Particle characteristics No data available
 - s) Explosive properties Not classified as explosive.
 - t) Oxidizing properties none
- 9.2 Other safety information**
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature)

10.3 Possibility of hazardous reactions

Risk of explosion/exothermic reaction with:

hydrogen peroxide
perchlorates
perchloric acid
Nitric acid
mercury(II) nitrate
permanganic acid
Nitriles
peroxi compounds
Strong oxidizing agents
nitrosyl compounds
Peroxides
sodium
Potassium
halogen oxides
calcium hypochlorite
nitrogen dioxide
metallic oxides
uranium hexafluoride
iodides
Chlorine
Alkali metals

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Alkaline earth metals
alkali oxides
Ethylene oxide
silver with Nitric acid
silver compounds with Ammonia
potassium permanganate with conc. sulfuric acid
Risk of ignition or formation of inflammable gases or vapours with:
halogen-halogen compounds
chromium(VI) oxide
chromyl chloride
Fluorine
hydrides
Oxides of phosphorus
platinum
Nitric acid with
potassium permanganate

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 10,470 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - 124.7 mg/l - vapor

(OECD Test Guideline 403)

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye irritation.

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Methanol

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

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Method: OECD Test Guideline 476

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Repeated dose toxicity - Rat - male - Oral - NOAEL (No observed adverse effect level) - 1,730 mg/kg - LOAEL (Lowest observed adverse effect level) - 3,200 mg/kg

RTECS: KQ6300000

irritant effects, respiratory paralysis, Dizziness, narcosis, inebriation, euphoria, Nausea, Vomiting

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) -
15,300 mg/l - 96 h
(US-EPA)

Toxicity to daphnia static test LC50 - Ceriodaphnia dubia (water flea) - 5,012 mg/l - 48 h
and other aquatic Remarks: (ECHA)
invertebrates

Toxicity to algae static test ErC50 - Chlorella vulgaris (Fresh water algae) - 275 mg/l - 72 h
(OECD Test Guideline 201)

Toxicity to bacteria static test IC50 - activated sludge - > 1,000 mg/l - 3 h
(OECD Test Guideline 209)

Toxicity to semi-static test NOEC - Danio rerio (zebra fish) - 250 mg/l - 120 h
fish(Chronic toxicity) Remarks: (ECHA)

Toxicity to daphnia semi-static test NOEC - Daphnia magna (Water flea) - 9.6 mg/l - 9 d
and other aquatic Remarks: (ECHA)
invertebrates(Chronic toxicity)

12.2 Persistence and degradability

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

Biochemical Oxygen 930 - 1,670 mg/g
Demand (BOD) Remarks: (Lit.)

Theoretical oxygen 2,100 mg/g
demand Remarks: (Lit.)

12.3 Bioaccumulative potential

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

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. According to Quality Environment Regulation (Scheduled Waste) 2005, waste need to be sent to designated premise for recycle, treatment or disposal. Please contact Kualiti Alam for waste classification and correct disposal method.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 1170 IMDG: 1170 IATA-DGR: 1170

14.2 UN proper shipping name

ADR/RID: ETHANOL

IMDG: ETHANOL

IATA-DGR: Ethanol

14.3 Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA-DGR: 3

14.4 Packaging group

ADR/RID: II IMDG: II IATA-DGR: II

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA-DGR: no

14.6 Special precautions for user

None

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.
No data available

16. OTHER INFORMATION

Hazard statement(s)

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer if inhaled.

H371 May cause damage to organs (Central nervous system, Visual organs).

H412 Harmful to aquatic life with long lasting effects.

USERS RESPONSIBILITY : This SDS provides environmental, health and safety information. This product is to be used in applications consistent with our product literature and container label. Individuals handling this product should be informed to the recommended safety precautions and have access to this SDS.