

ALFAAL10988

## 1-Nonanethiol

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**产品说明:**  
**Product Description:** 1-壬硫醇  
**1-Nonanethiol**

**Cat No. :** L10988  
**CAS No** 1455-21-6  
**Molecular Formula** CH<sub>3</sub> (CH<sub>2</sub>)<sub>8</sub> SH

**Supplier** Avocado Research Chemicals Ltd.  
 (Part of Thermo Fisher Scientific)  
 Shore Road, Heysham  
 Lancashire, LA3 2XY,  
 United Kingdom  
 Office Tel: +44 (0) 1524 850506  
 Office Fax: +44 (0) 1524 850608

**Emergency Telephone Number** For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

**E-mail address** begel.sdsdesk@thermofisher.com

**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available

### SECTION 2. HAZARD IDENTIFICATION

**Physical State**  
Liquid

**Appearance**  
Colorless

**Odor**  
No information available

**Emergency Overview**  
Causes skin irritation. Causes serious eye irritation. Combustible liquid.

#### Classification of the substance or mixture

|                                   |            |
|-----------------------------------|------------|
| Flammable liquids.                | Category 4 |
| Skin Corrosion/Irritation         | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |

#### Label Elements



**Signal Word**

**Warning**

**Hazard Statements**

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H227 - Combustible liquid  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation

**Precautionary Statements****Prevention**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Response**

P332 + P313 - If skin irritation occurs: Get medical advice/attention  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
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  
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish  
P362 + P364 - Take off contaminated clothing and wash it before reuse

**Storage**

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

**Disposal**

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

**Physical and Chemical Hazards**

Combustible material.

**Health Hazards**

Causes skin irritation. Causes serious eye irritation.

**Environmental hazards**

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. Is not likely mobile in the environment due its low water solubility. Spillage unlikely to penetrate soil. The product is insoluble and floats on water. The product evaporates slowly.

This product does not contain any known or suspected endocrine disruptors.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Component     | CAS No    | Weight % |
|---------------|-----------|----------|
| 1-Nonanethiol | 1455-21-6 | <=100    |

**SECTION 4. FIRST AID MEASURES****General Advice**

If symptoms persist, call a physician.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**Ingestion**

Clean mouth with water and drink afterwards plenty of water.

**Most important symptoms and effects**

Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

**Self-Protection of the First Aider**

No special precautions required.

**Notes to Physician**

Treat symptomatically.

**SECTION 5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Water mist may be used to cool closed containers.

**Extinguishing media which must not be used for safety reasons**

No information available.

**Specific Hazards Arising from the Chemical**

Combustible material. Containers may explode when heated.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**

Should not be released into the environment. See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up**

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition.

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7. HANDLING AND STORAGE****Handling**

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition.

**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

**Specific Use(s)**

Use in laboratories

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control Parameters**

| Component     | ACGIH TLV | OSHA PEL | NIOSH                                              | The United Kingdom | European Union |
|---------------|-----------|----------|----------------------------------------------------|--------------------|----------------|
| 1-Nonanethiol |           |          | Ceiling: 0.5 ppm<br>Ceiling: 3.3 mg/m <sup>3</sup> | -                  |                |

**Legend**

NIOSH: NIOSH - National Institute for Occupational Safety and Health

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**Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours

**Exposure Controls****Engineering Measures**

None under normal use conditions. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. .

**Personal protective equipment**

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments        |
|----------------|-------------------|-----------------|-------------|-----------------------|
| Nitrile rubber | See manufacturers | -               | EN 374      | (minimum requirement) |
| Neoprene       | recommendations   |                 |             |                       |
| Natural rubber |                   |                 |             |                       |
| PVC            |                   |                 |             |                       |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection** Long sleeved clothing

**Respiratory Protection** No protective equipment is needed under normal use conditions.

**Large scale/emergency use** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** Particle filter

**Small scale/Laboratory use** Maintain adequate ventilation  
**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No information available.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** Colorless  
**Physical State** Liquid

**Odor** No information available

**Odor Threshold** No data available

**pH** No information available

**Melting Point/Range** No data available

**Softening Point** No data available

**Boiling Point/Range** 219 - 220 °C / 426.2 - 428 °F

**Flash Point** 79 °C / 174.2 °F

**Method -** No information available

**Evaporation Rate** No data available

**Flammability (solid,gas)** Not applicable Liquid

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|                                                |                                        |             |
|------------------------------------------------|----------------------------------------|-------------|
| <b>Explosion Limits</b>                        | No data available                      |             |
| <b>Vapor Pressure</b>                          | No data available                      |             |
| <b>Vapor Density</b>                           | No data available                      | (Air = 1.0) |
| <b>Specific Gravity / Density</b>              | 0.842 g/cm3                            | @ 20 °C     |
| <b>Bulk Density</b>                            | Not applicable                         | Liquid      |
| <b>Water Solubility</b>                        | Immiscible                             |             |
| <b>Solubility in other solvents</b>            | No information available               |             |
| <b>Partition Coefficient (n-octanol/water)</b> |                                        |             |
| <b>Autoignition Temperature</b>                | No data available                      |             |
| <b>Decomposition Temperature</b>               | No data available                      |             |
| <b>Viscosity</b>                               | No data available                      |             |
| <b>Explosive Properties</b>                    | explosive air/vapour mixtures possible |             |
| <b>Oxidizing Properties</b>                    | No information available               |             |
| <b>Molecular Formula</b>                       | CH3 (CH2)8 SH                          |             |
| <b>Molecular Weight</b>                        | 160.32                                 |             |

## SECTION 10. STABILITY AND REACTIVITY

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| <b>Stability</b>                | Stable under normal conditions.                                   |
| <b>Hazardous Reactions</b>      | None under normal processing.                                     |
| <b>Hazardous Polymerization</b> | No information available.                                         |
| <b>Conditions to Avoid</b>      | Keep away from open flames, hot surfaces and sources of ignition. |
| <b>Materials to avoid</b>       | No information available.                                         |

**Hazardous Decomposition Products** None under normal use conditions.

## SECTION 11. TOXICOLOGICAL INFORMATION

## Product Information

|                                               |                                                           |
|-----------------------------------------------|-----------------------------------------------------------|
| <b>(a) acute toxicity;</b>                    |                                                           |
| <b>(b) skin corrosion/irritation;</b>         | Category 2                                                |
| <b>(c) serious eye damage/irritation;</b>     | Category 2                                                |
| <b>(d) respiratory or skin sensitization;</b> |                                                           |
| <b>Respiratory</b>                            | No data available                                         |
| <b>Skin</b>                                   | No data available                                         |
| <b>(e) germ cell mutagenicity;</b>            | No data available                                         |
| <b>(f) carcinogenicity;</b>                   | No data available                                         |
|                                               | There are no known carcinogenic chemicals in this product |
| <b>(g) reproductive toxicity;</b>             | No data available                                         |
| <b>(h) STOT-single exposure;</b>              | No data available                                         |

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

## SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

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Persistence and Degradability  
Persistence

Immiscible with water, May persist, based on information available.

Bioaccumulative Potential

May have some potential to bioaccumulate

Mobility in soil

Spillage unlikely to penetrate soil The product is insoluble and floats on water The product evaporates slowly Is not likely mobile in the environment due its low water solubility Spillage unlikely to penetrate soil

Endocrine Disruptor Information  
Persistent Organic Pollutant  
Ozone Depletion Potential

This product does not contain any known or suspected endocrine disruptors  
This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## SECTION 13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused  
Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## SECTION 14. TRANSPORT INFORMATION

Road and Rail Transport

Not Regulated

IMDG/IMO

Not regulated

IATA

Not regulated

Special Precautions for User

No special precautions required

## SECTION 15. REGULATORY INFORMATION

## 1-Nonanethiol

## International Inventories

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

| Component     | The Inventory of Hazardous Chemicals (2015 Edition) | List of dangerous goods GB 12268 - 2012 | TCSI | IECSC | EINECS    | TSCA | DSL | PICCS | ENCS | ISHL | AICS | KECL |
|---------------|-----------------------------------------------------|-----------------------------------------|------|-------|-----------|------|-----|-------|------|------|------|------|
| 1-Nonanethiol | -                                                   | -                                       | X    | -     | 215-936-7 | X    | -   | -     | X    | X    | -    | -    |

## National Regulations

## SECTION 16. OTHER INFORMATION

**Prepared By** Health, Safety and Environmental Department  
**Revision Date** 19-Sep-2025  
**Revision Summary** Not applicable.

## Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**PNEC** - Predicted No Effect Concentration

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

## Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

## Disclaimer

**1-Nonanethiol**

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**End of Safety Data Sheet**