

ALFAAB24019

## N,N-Diethylacetoacetamide

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

|   |  |
|---|--|
| <b>产品说明:</b><br><b>Product Description:</b> | <b>N,N-二乙基乙酰酮乙酰胺</b><br><b>N,N-Diethylacetoacetamide</b>   |
| <b>Cat No. :</b>                            | <b>B24019</b>  |
| <b>Synonyms</b>                             | DEAA; 3-Oxobutyric acid diethylamide; Acetoacetic acid diethylamide  |
| <b>CAS No</b>                               | 2235-46-3  |
| <b>Molecular Formula</b>                    | C8 H15 N O2  |
| <b>Supplier</b>                             | Avocado Research Chemicals Ltd.<br>(Part of Thermo Fisher Scientific)<br>Shore Road, Heysham<br>Lancashire, LA3 2XY,<br>United Kingdom<br>Office Tel: +44 (0) 1524 850506<br>Office Fax: +44 (0) 1524 850608   |
| <b>Emergency Telephone Number</b>           | For information <b>US</b> call: 001-800-227-6701 / <b>Europe</b> call: +32 14 57 52 11<br>Emergency Number <b>US</b> :001-201-796-7100 / <b>Europe</b> : +32 14 57 52 99<br><b>CHEMTREC</b> Tel. No. <b>US</b> :001-800-424-9300 / <b>Europe</b> :001-703-527-3887 |
| <b>E-mail address</b>                       | begel.sdsdesk@thermofisher.com   |
| <b>Recommended Use</b>                      | Laboratory chemicals.  |
| <b>Uses advised against</b>                 | No Information available   |

### SECTION 2. HAZARD IDENTIFICATION

|   |                                  |                         |
|---|----------------------------------|-------------------------|
| <b>Physical State</b><br>Liquid                           | <b>Appearance</b><br>Dark yellow | <b>Odor</b><br>Odorless |
| <b>Emergency Overview</b><br>May be harmful if swallowed. |                                  |                         |

#### Classification of the substance or mixture

|                     |            |
|---------------------|------------|
| Acute Oral Toxicity | Category 5 |
|---------------------|------------|

#### Label Elements

None required

#### **Hazard Statements**

H303 - May be harmful if swallowed

#### **Precautionary Statements**

##### **Prevention**

P270 - Do not eat, drink or smoke when using this product

##### **Response**

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

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**Storage**

P403 - Store in a well-ventilated place

**Disposal**

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

**Physical and Chemical Hazards**

None identified.

**Health Hazards**

May be harmful if swallowed.

**Environmental hazards**

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. Will likely be mobile in the environment due to its volatility. The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

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

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

| Component                 | CAS No    | Weight % |
|---------------------------|-----------|----------|
| N,N-Diethylacetoacetamide | 2235-46-3 | 97       |

**SECTION 4. FIRST AID MEASURES****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 soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention.

**Inhalation**

Remove from exposure, lie down. Remove to fresh air. Get medical attention.

**Ingestion**

Clean mouth with water. Get medical attention.

**Most important symptoms and effects**

No information available.

**Self-Protection of the First Aider**

No special precautions required.

**Notes to Physician**

Treat symptomatically.

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

Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Chemical foam.

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

No information available.

**Specific Hazards Arising from the Chemical**

Flammable.

**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.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**

Ensure adequate ventilation.

**Environmental Precautions**

See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Do not let this chemical enter the environment.

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7. HANDLING AND STORAGE

**Handling**

Avoid contact with skin and eyes. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

**Storage**

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

**Specific Use(s)**

Use in laboratories

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters****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 MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

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

None under normal use conditions.

**Personal protective equipment**

**Eye Protection** Wear safety glasses with side shields (or goggles) (European standard - EN 166)

**Hand Protection** Protective gloves

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

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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.

|                                   |  |
|-----------------------------------|--|
| <b>Skin and body protection</b>   | Wear appropriate protective gloves and clothing to prevent skin exposure   |
| <b>Respiratory Protection</b>     | No protective equipment is needed under normal use conditions.   |
| <b>Large scale/emergency use</b>  | Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced<br><b>Recommended Filter type:</b> Particle filter |
| <b>Small scale/Laboratory use</b> | Maintain adequate ventilation<br><b>Recommended half mask:-</b> 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

|  |                          |  |
|--|--------------------------|--|
| <b>Appearance</b>                              | Dark yellow              |  |
| <b>Physical State</b>                          | Liquid                   |  |
| <b>Odor</b>                                    | Odorless                 |  |
| <b>Odor Threshold</b>                          | No data available        |  |
| <b>pH</b>                                      | 5-7                      | 10 g/l water (20°C)                      |
| <b>Melting Point/Range</b>                     | -73 °C / -99.4 °F        |  |
| <b>Softening Point</b>                         | No data available        |  |
| <b>Boiling Point/Range</b>                     | 76 °C / 168.8 °F         | @ 0.1 MBAR                               |
| <b>Flash Point</b>                             | 94 °C / 201.2 °F         | <b>Method -</b> No information available |
| <b>Evaporation Rate</b>                        | No data available        |  |
| <b>Flammability (solid,gas)</b>                | Not applicable           | Liquid                                   |
| <b>Explosion Limits</b>                        | <b>Lower</b> 1           |  |
| <b>Vapor Pressure</b>                          | No data available        |  |
| <b>Vapor Density</b>                           | 5.42                     | (Air = 1.0)                              |
| <b>Specific Gravity / Density</b>              | 0.993                    |  |
| <b>Bulk Density</b>                            | Not applicable           | Liquid                                   |
| <b>Water Solubility</b>                        | freely soluble in water  |  |
| <b>Solubility in other solvents</b>            | No information available |  |
| <b>Partition Coefficient (n-octanol/water)</b> |                          |  |
| <b>Autoignition Temperature</b>                | 220 °C / 428 °F          |  |
| <b>Decomposition Temperature</b>               | No data available        |  |
| <b>Viscosity</b>                               | 6 mPa.s at 20 °C         |  |
| <b>Explosive Properties</b>                    | No information available |  |
| <b>Oxidizing Properties</b>                    | No information available |  |
| <b>Molecular Formula</b>                       | C8 H15 N O2              |  |
| <b>Molecular Weight</b>                        | 157.2                    |  |

## SECTION 10. STABILITY AND REACTIVITY

**Stability** Stable under normal conditions.

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**Hazardous Reactions** No information available.  
**Hazardous Polymerization** No information available.  
**Conditions to Avoid** Heat, flames and sparks. Incompatible products.  
**Materials to avoid** Strong oxidizing agents. Metals.

**Hazardous Decomposition Products** Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11. TOXICOLOGICAL INFORMATION

**Product Information** No acute toxicity information is available for this product

**(a) acute toxicity;**

| Component                 | LD50 Oral                 | LD50 Dermal               | LC50 Inhalation |
|---------------------------|---------------------------|---------------------------|-----------------|
| N,N-Diethylacetoacetamide | LD50 = 4760 µL/kg ( Rat ) | LD50 > 2000 mg/kg ( Rat ) |                 |

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** No data available

**(d) respiratory or skin sensitization;**

**Respiratory** No data available  
**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;** No data available

There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** No data available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Symptoms / effects, both acute and delayed** No information available

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity effects** Do not empty into drains.

**N,N-Diethylacetoacetamide****Persistence and Degradability****Persistence**

Persistence is unlikely, based on information available.

**Bioaccumulative Potential**

Bioaccumulation is unlikely

**Mobility in soil**

The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air.

**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

**Persistent Organic Pollutant**

This product does not contain any known or suspected substance

**Ozone Depletion Potential**

This product does not contain any known or suspected substance

**SECTION 13. DISPOSAL CONSIDERATIONS****Waste from Residues/Unused Products**

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

**Contaminated Packaging**

Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.

**Other Information**

Waste codes should be assigned by the user based on the application for which the product was used.

**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****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     |
|---------------------------|---|---|------|-------|-----------|------|-----|-------|------|------|------|----------|
| N,N-Diethylacetoacetamide | -   | -                                       | X    | X     | 218-792-3 | X    | -   | X     | X    | X    | X    | KE-10503 |

**National Regulations**

**N,N-Diethylacetoacetamide****SECTION 16. OTHER INFORMATION**

**Prepared By** Health, Safety and Environmental Department  
**Revision Date** 29-Apr-2024  
**Revision Summary** New emergency telephone response service provider.

**Training Advice**

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

**Legend**

|  |   |
|--|---|
| <b>CAS</b> - Chemical Abstracts Service  | <b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory                   |
| <b>EINECS/ELINCS</b> - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances | <b>DSL/NDL</b> - Canadian Domestic Substances List/Non-Domestic Substances List                   |
| <b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances  | <b>ENCS</b> - Japanese Existing and New Chemical Substances                                       |
| <b>IECSC</b> - Chinese Inventory of Existing Chemical Substances   | <b>AICS</b> - Australian Inventory of Chemical Substances   |
| <b>KECL</b> - Korean Existing and Evaluated Chemical Substances  | <b>NZIoC</b> - New Zealand Inventory of Chemicals   |
| <b>WEL</b> - Workplace Exposure Limit  | <b>TWA</b> - Time Weighted Average  |
| <b>ACGIH</b> - American Conference of Governmental Industrial Hygienists   | <b>IARC</b> - International Agency for Research on Cancer   |
| <b>DNEL</b> - Derived No Effect Level  | <b>PNEC</b> - Predicted No Effect Concentration   |
| <b>RPE</b> - Respiratory Protective Equipment  | <b>LD50</b> - Lethal Dose 50%   |
| <b>LC50</b> - Lethal Concentration 50%   | <b>EC50</b> - Effective Concentration 50%   |
| <b>NOEC</b> - No Observed Effect Concentration   | <b>POW</b> - Partition coefficient Octanol:Water  |
| <b>PBT</b> - Persistent, Bioaccumulative, Toxic  | <b>vPvB</b> - very Persistent, very Bioaccumulative   |
| <b>ICAO/IATA</b> - International Civil Aviation Organization/International Air Transport Association                         | <b>IMO/IMDG</b> - International Maritime Organization/International Maritime Dangerous Goods Code |
| <b>ADR</b> - European Agreement Concerning the International Carriage of Dangerous Goods by Road                             | <b>MARPOL</b> - International Convention for the Prevention of Pollution from Ships               |
| <b>OECD</b> - Organisation for Economic Co-operation and Development   | <b>ATE</b> - Acute Toxicity Estimate  |
| <b>BCF</b> - Bioconcentration factor   | <b>VOC</b> - (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**

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**End of Safety Data Sheet**