

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identification**

**Product Description:** Di-tert-butyl azodicarboxylate  
**Cat No. :** 366920000; 366920050  
**CAS-No** 870-50-8  
**Molecular Formula** C10 H18 N2 O4

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

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

**1.3. Details of the supplier of the safety data sheet**

**Company** **UK entity/business name**  
 Fisher Scientific UK  
 Bishop Meadow Road, Loughborough,  
 Leicestershire LE11 5RG, United Kingdom

**EU entity/business name**  
 Acros Organics BVBA  
 Janssen Pharmaceuticaaan 3a  
 2440 Geel, Belgium

**E-mail address** [begele.sdsdesk@thermofisher.com](mailto:begele.sdsdesk@thermofisher.com)

**1.4. Emergency telephone number**

For information **US** call: 001-800-ACROS-01 / **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

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**CLP Classification - Regulation (EC) No 1272/2008**

**Physical hazards**

Flammable solids Category 2 (H228)

**Health hazards**

Skin Corrosion/irritation Category 2 (H315)  
 Serious Eye Damage/Eye Irritation Category 2 (H319)  
 Specific target organ toxicity - (single exposure) Category 3 (H335)

**Environmental hazards**

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Based on available data, the classification criteria are not met

## 2.2. Label elements



Signal Word

Warning

### Hazard Statements

- H228 - Flammable solid
- H319 - Causes serious eye irritation
- H315 - Causes skin irritation
- H335 - May cause respiratory irritation

### Precautionary Statements

- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P233 - Keep container tightly closed
- P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
- 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

## 2.3. Other hazards

No information available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

| Component                      | CAS-No   | EC-No.            | Weight % | CLP Classification - Regulation (EC) No 1272/2008                                      |
|--------------------------------|----------|-------------------|----------|--|
| Di-tert-butyl azodicarboxylate | 870-50-8 | EEC No. 212-796-9 | 98       | STOT SE 3 (H335)<br>Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319)<br>Flam. Sol. 2 (H228) |

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

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|   |   |
|---|---|
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.   |
| <b>Skin Contact</b>                       | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.                                     |
| <b>Ingestion</b>                          | Clean mouth with water. Get medical attention.  |
| <b>Inhalation</b>                         | Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention. |
| <b>Self-Protection of the First Aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.                    |

## 4.2. Most important symptoms and effects, both acute and delayed

No information available.

## 4.3. Indication of any immediate medical attention and special treatment needed

**Notes to Physician** Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### **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.

### 5.2. Special hazards arising from the substance or mixture

Flammable. Combustible material.

#### **Hazardous Combustion Products**

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

### 5.3. Advice 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

### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Ensure adequate ventilation.

### 6.2. Environmental precautions

See Section 12 for additional ecological information.

### 6.3. Methods and material for containment and cleaning up

Use spark-proof tools and explosion-proof equipment. Sweep up or vacuum up spillage and collect in suitable container for

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disposal. Do not let this chemical enter the environment.

## 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Avoid contact with skin and eyes. Do not breathe dust. Protect from light. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep under nitrogen.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. To maintain product quality, do not store in heat or direct sunlight. Keep refrigerated.

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

#### Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### 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.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

**Derived No Effect Level (DNEL)** No information available

| <u>Route of exposure</u>     | <b>Acute effects (local)</b> | <b>Acute effects (systemic)</b> | <b>Chronic effects (local)</b> | <b>Chronic effects (systemic)</b> |
|------------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Oral<br>Dermal<br>Inhalation |                              |                                 |                                |                                   |

**Predicted No Effect Concentration (PNEC)** No information available.

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## 8.2. Exposure controls

### Engineering Measures

Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### 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 recommendations | -               | EN 374      | (minimum requirement) |
| Neoprene       |                                   |                 |             |                       |
| Natural rubber |                                   |                 |             |                       |
| PVC            |                                   |                 |             |                       |

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

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.

#### 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

#### Small scale/Laboratory use

Maintain adequate ventilation

**Environmental exposure controls** No information available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

|                                 |                             |  |
|---------------------------------|-----------------------------|--|
| <b>Appearance</b>               | Yellow                      |  |
| <b>Physical State</b>           | Solid                       |  |
| <b>Odor</b>                     | Odorless                    |  |
| <b>Odor Threshold</b>           | No data available           |  |
| <b>pH</b>                       | No information available    |  |
| <b>Melting Point/Range</b>      | 90 - 92 °C / 194 - 197.6 °F |  |
| <b>Softening Point</b>          | No data available           |  |
| <b>Boiling Point/Range</b>      | No information available    |  |
| <b>Flash Point</b>              | No information available    | <b>Method -</b> No information available |
| <b>Evaporation Rate</b>         | Not applicable              | Solid                                    |
| <b>Flammability (solid,gas)</b> | No information available    |  |
| <b>Explosion Limits</b>         | No data available           |  |
| <b>Vapor Pressure</b>           | No data available           |  |
| <b>Vapor Density</b>            | Not applicable              | Solid                                    |

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|   |                          |       |
|---|--------------------------|-------|
| Specific Gravity / Density              | No data available        |       |
| Bulk Density                            | No data available        |       |
| Water Solubility                        | Insoluble                |       |
| Solubility in other solvents            | No information available |       |
| Partition Coefficient (n-octanol/water) |                          |       |
| Autoignition Temperature                |                          |       |
| Decomposition Temperature               | No data available        |       |
| Viscosity                               | Not applicable           | Solid |
| Explosive Properties                    | No information available |       |
| Oxidizing Properties                    | No information available |       |

## 9.2. Other information

|                   |               |
|-------------------|---------------|
| Molecular Formula | C10 H18 N2 O4 |
| Molecular Weight  | 230.26        |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

Volatile at high temperatures, Light sensitive.

### 10.3. Possibility of hazardous reactions

Hazardous Polymerization No information available.  
Hazardous Reactions No information available.

### 10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat. Keep away from open flames, hot surfaces and sources of ignition. Exposure to light. Incompatible products.

### 10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Alcohols.

### 10.6. Hazardous decomposition products

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

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

Product Information No acute toxicity information is available for this product

#### (a) acute toxicity;

|            |                   |
|------------|-------------------|
| Oral       | No data available |
| Dermal     | No data available |
| Inhalation | No data available |

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

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**(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;** Category 3

**(i) STOT-repeated exposure;** No data available  
**Target Organs** No information available.

**(j) aspiration hazard;** Not applicable  
Solid

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

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

## SECTION 12: ECOLOGICAL INFORMATION

**12.1. Toxicity**

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

**12.2. Persistence and degradability**

**Persistence** Insoluble in water.

**12.3. Bioaccumulative potential** May have some potential to bioaccumulate

**12.4. Mobility in soil**

Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water solubility.

**12.5. Results of PBT and vPvB assessment**

No data available for assessment.

**12.6. Other adverse effects**

|  |   |
|--|---|
| <b>Endocrine Disruptor Information</b> | This product does not contain any known or suspected endocrine disruptors |
| <b>Persistent Organic Pollutant</b>    | This product does not contain any known or suspected substance            |
| <b>Ozone Depletion Potential</b>       | This product does not contain any known or suspected substance            |

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

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|  |  |
|--|--|
| <b>Waste from Residues / Unused Products</b> | 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.   |
| <b>Contaminated Packaging</b>                | Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition. |
| <b>European Waste Catalogue (EWC)</b>        | According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.   |
| <b>Other Information</b>                     | Waste codes should be assigned by the user based on the application for which the product was used. Do not dispose of waste into sewer. Can be incinerated, when in compliance with local regulations.                                   |

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

|   |        |
|---|--------|
| <b>14.1. UN number</b>                  | UN1325 |
| <b>14.2. UN proper shipping name</b>    |        |
| <b>14.3. Transport hazard class(es)</b> | 4.1    |
| <b>14.4. Packing group</b>              | III    |

### ADR

|   |        |
|---|--------|
| <b>14.1. UN number</b>                  | UN1325 |
| <b>14.2. UN proper shipping name</b>    |        |
| <b>14.3. Transport hazard class(es)</b> | 4.1    |
| <b>14.4. Packing group</b>              | III    |

### IATA

|   |        |
|---|--------|
| <b>14.1. UN number</b>                  | UN1325 |
| <b>14.2. UN proper shipping name</b>    |        |
| <b>14.3. Transport hazard class(es)</b> | 4.1    |
| <b>14.4. Packing group</b>              | III    |

|  |                                 |
|--|---------------------------------|
| <b>14.5. Environmental hazards</b>   | No hazards identified           |
| <b>14.6. Special precautions for user</b>  | No special precautions required |
| <b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable, packaged goods  |

## SECTION 15: REGULATORY INFORMATION

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

International Inventories X = listed.

| Component                      | EINECS    | ELINCS | NLP | TSCA | DSL | NDSL | PICCS | ENCS | IECSC | AICS | KECL |
|--------------------------------|-----------|--------|-----|------|-----|------|-------|------|-------|------|------|
| Di-tert-butyl azodicarboxylate | 212-796-9 | -      | -   | -    | -   | -    | -     | -    | -     | -    | -    |

### National Regulations



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Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H228 - Flammable solid  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation

### 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

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

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

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

**BCF** - Bioconcentration factor

**Key literature references and sources for data**

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

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

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

**ATE** - Acute Toxicity Estimate

**VOC** - Volatile Organic Compounds

### **Training Advice**

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

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

**Revision Date** 26-Feb-2019

**Revision Summary** Not applicable.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

### **Disclaimer**

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

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**End of Safety Data Sheet**