

Classified as hazardous according to criteria of EPA New Zealand

## Section 1 - Identification

|              |                                     |
|--------------|-------------------------------------|
| Product Name | <u>4-Methyl-3-nitrobenzonitrile</u> |
| CAS-No       | 939-79-7                            |
| Synonyms     | 3-Nitro-p-tolunitrile               |

|                         |   |
|-------------------------|---|
| Product Code            | AC43474FL   |
| Address                 | Thermo Fisher Scientific New Zealand Ltd<br>244 Bush Road, Albany,<br>Auckland, New Zealand |
| Emergency Tel.          | CHEMTREC®<br>09 980 6780 or +64 9 980 6780  |
| Telephone / Fax Numbers | Tel: 09 980 6700<br>Fax: 09 980 6788  |
| E-mail address          | NZinfo@thermofisher.com   |

Recommended Use Laboratory chemicals.

## Section 2 - Hazard(s) Identification

### Classification under Work Safe New Zealand

6.1C - Substances that are acutely toxic (Oral)  
 6.1C - Substances that are acutely toxic (Dermal)

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### GHS Classification

#### Physical hazards

Based on available data, the classification criteria are not met

#### Health hazards

Acute Oral Toxicity  
 Acute Dermal Toxicity  
 Acute Inhalation Toxicity - Dusts and Mists

Category 3  
 Category 3  
 Category 3

#### Environmental hazards

Based on available data, the classification criteria are not met

### Label Elements

**Signal Word****Danger****Hazard Statements**

H301 - Toxic if swallowed  
H311 - Toxic in contact with skin  
H331 - Toxic if inhaled

**Precautionary Statements**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P311 - Call a POISON CENTER or doctor/physician  
P330 - Rinse mouth  
P361 - Remove/Take off immediately all contaminated clothing  
P363 - Wash contaminated clothing before reuse  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

No information available

## Section 3 - Composition and Information on Ingredients

| Component                    | CAS-No   | Weight % |
|------------------------------|----------|----------|
| 4-Methyl-3-nitrobenzonitrile | 939-79-7 | >95      |

## Section 4 - First Aid Measures

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

**Ingestion**

Do NOT induce vomiting. Call a physician or poison control center immediately.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Eye Contact**

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**General Advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

|  |  |
|--|--|
| <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. |
| <b>First Aid Facilities</b>                | Eyewash, safety shower and washroom.   |
| <b>Most important symptoms and effects</b> | None reasonably foreseeable.   |
| <b>Notes to Physician</b>                  | Treat symptomatically.   |

## Section 5 - Fire Fighting Measures

### Suitable Extinguishing Media

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

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

No information available.

### Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Burning produces obnoxious and toxic fumes.

### Specific Hazards Arising from the Chemical

Burning produces obnoxious and toxic fumes.

### Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## Section 6 - Accidental Release Measures

### Emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

### Environmental Precautions

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

### Methods for Containment and Clean Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## Section 7 - Handling and Storage

### Precautions for Safe Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

### Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

## Section 8 - Exposure Controls and Personal Protection

**Exposure limits**

The product does not contain any hazardous materials with occupational exposure limits established.

**Biological limit values**

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

**Engineering Measures**

Use only under a chemical fume hood. 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**

Wear safety glasses with side shields (or goggles) (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

**Hand Protection**

Protective gloves

| Glove material                                    | Breakthrough time                    | Glove thickness | AUS/NZ Standard | Glove comments        |
|---|--------------------------------------|-----------------|-----------------|-----------------------|
| Nitrile rubber, Neoprene,<br>Natural rubber, PVC. | See manufacturers<br>recommendations | -               | AS/NZS 2161     | (minimum requirement) |

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 compatability, 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**

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices

**Recommended Filter type:  
Recommended half mask:-**

Particulates filter conforming to EN 143 (or AUS/NZ equivalent)  
Particle filtering: EN149:2001 (or AUS/NZ equivalent)  
When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls**

No information available.

## Section 9 - Physical and Chemical Properties

**Information on basic physical and chemical properties**

|                                 |                                 |  |
|---------------------------------|---------------------------------|--|
| <b>Appearance</b>               | Pale brown                      |  |
| <b>Physical State</b>           | Solid                           |  |
| <b>Odor</b>                     | No information available        |  |
| <b>Odor Threshold</b>           | No data available               |  |
| <b>pH</b>                       | No information available        |  |
| <b>Melting Point/Range</b>      | 106 - 108 °C / 222.8 - 226.4 °F |  |
| <b>Softening Point</b>          | No data available               |  |
| <b>Boiling Point/Range</b>      | 171 °C / 339.8 °F               | @12 Torr                                 |
| <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               |  |

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

**Other information**

|                   |   |
|-------------------|---|
| Molecular Formula | C <sub>8</sub> H <sub>6</sub> N <sub>2</sub> O <sub>2</sub> |
| Molecular Weight  | 162.15  |

## Section 10 - Stability and Reactivity

|                                  |  |
|----------------------------------|--|
| Reactivity                       | None known, based on information available   |
| Stability                        | Stable under normal conditions.  |
| Conditions to Avoid              | Incompatible products, Excess heat, Avoid dust formation.  |
| Incompatible Materials           | Strong oxidizing agents, Strong acids.   |
| Hazardous Decomposition Products | Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Nitrogen oxides (NO <sub>x</sub> ). Burning produces obnoxious and toxic fumes. |
| Hazardous Polymerization         | Hazardous polymerization does not occur.   |

## Section 11 - Toxicological Information

**Information on Toxicological Effects****Product Information**

|  |   |
|--|---|
| (a) acute toxicity;                    |   |
| Oral                                   | Category 3  |
| Dermal                                 | Category 3  |
| Inhalation                             | Category 3  |
| (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;      | Not applicable<br>Solid   |

Symptoms / effects, both acute and delayed No information available

## Section 12 - Ecological Information

|                                 |   |
|---------------------------------|---|
| Ecotoxicity effects             | Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants. |
| Persistence and Degradability   | No information available  |
| Bioaccumulative Potential       | No information available  |
| Mobility                        | No information available.   |
| 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 | Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations. |
| Contaminated Packaging              | Dispose of this container to hazardous or special waste collection point.  |
| Other Information                   | Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations. 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

### IMDG/IMO

|                      |                                |
|----------------------|--------------------------------|
| UN-No                | UN3439                         |
| Proper Shipping Name | NITRILES, SOLID, TOXIC, N.O.S. |
| Hazard Class         | 6.1                            |
| Packing Group        | III                            |

### NZS 5433:2012

|                             |                                |
|-----------------------------|--------------------------------|
| <b>UN-No</b>                | UN3439                         |
| <b>Proper Shipping Name</b> | NITRILES, TOXIC, SOLID, N.O.S. |
| <b>Hazard Class</b>         | 6.1                            |
| <b>Packing Group</b>        | III                            |

**IATA**

|                             |                                |
|-----------------------------|--------------------------------|
| <b>UN-No</b>                | UN3439                         |
| <b>Proper Shipping Name</b> | NITRILES, SOLID, TOXIC, N.O.S. |
| <b>Hazard Class</b>         | 6.1                            |
| <b>Packing Group</b>        | III                            |

|                               |                                 |
|-------------------------------|---------------------------------|
| <b>Environmental hazards</b>  | No hazards identified           |
| <b>Special Precautions</b>    | No special precautions required |
| <b>Additional information</b> | None known                      |

## Section 15 - Regulatory Information

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

|                                  |            |
|----------------------------------|------------|
| <b>International Inventories</b> | X = listed |
|----------------------------------|------------|

**Prohibition or notification/licensing requirements** Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

## Section 16 - Other Information

**This safety data sheet complies with the requirements of WorkSafe New Zealand Regulations**

### Legend

|  |  |
|--|--|
| <b>AICS</b> - Australian Inventory of Chemical Substances  | <b>NZIoC</b> - New Zealand Inventory of Chemicals  |
| <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>ENCS</b> - Japanese Existing and New Chemical Substances  |
| <b>IECSC</b> - Chinese Inventory of Existing Chemical Substances                                     | <b>KECL</b> - Korean Existing and Evaluated Chemical Substances  |
| <b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances                            | <b>CAS</b> - Chemical Abstracts Service  |
| <b>TWA</b> - Time Weighted Average   | <b>ACGIH</b> - American Conference of Governmental Industrial Hygienists   |
| <b>IARC</b> - International Agency for Research on Cancer  | Predicted No Effect Concentration (PNEC)   |
| <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>MARPOL</b> - International Convention for the Prevention of Pollution from Ships                  |  |
| <b>NZS 5433:2012</b> - Transport of Dangerous Goods on Land  | <b>OECD</b> - Organisation for Economic Co-operation and Development   |
| <b>LD50</b> - Lethal Dose 50%  | <b>LC50</b> - Lethal Concentration 50%   |
| <b>EC50</b> - Effective Concentration 50%  | <b>ATE</b> - Acute Toxicity Estimate   |
| <b>WEL</b> - Workplace Exposure Limit  | <b>RPE</b> - Respiratory Protective Equipment  |
| <b>DNEL</b> - Derived No Effect Level  | <b>NOEC</b> - No Observed Effect Concentration   |
| <b>POW</b> - Partition coefficient Octanol:Water   | <b>BCF</b> - Bioconcentration factor   |
| <b>vPvB</b> - very Persistent, very Bioaccumulative  | <b>PBT</b> - Persistent, Bioaccumulative, Toxic  |
| <b>VOC</b> (volatile organic compound)   |  |

### **Key literature references and sources for data**

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

### **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.

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**Revision Summary** Initial Release

#### 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

## End of Safety Data Sheet