SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Substance name</td>
<td>3-BUTENENITRILE</td>
</tr>
<tr>
<td>Product code</td>
<td>ENEB0575</td>
</tr>
<tr>
<td>Formula</td>
<td>C4H5N</td>
</tr>
<tr>
<td>Synonyms</td>
<td>ALLYL CYANIDE; VINYLACETONITRILE</td>
</tr>
<tr>
<td>Chemical family</td>
<td>ORGANONITRILE</td>
</tr>
</tbody>
</table>

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

1.2.1. Relevant identified uses

Use of the substance/mixture: Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

GELEST, INC.  
11 East Steel Road  
Morrisville, PA 19067  
USA  
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST  
info@gelest.com - www.gelest.com

GELEST INC.  
Fritz-Klatte-Strasse 8  
65933 Frankfurt  
Germany  
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM  
info@gelestd.de - www.gelestd.de

1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids, Category 3</td>
<td>H226</td>
</tr>
<tr>
<td>Acute toxicity (oral), Category 3</td>
<td>H301</td>
</tr>
<tr>
<td>Acute toxicity (dermal), Category 4</td>
<td>H312</td>
</tr>
<tr>
<td>Skin corrosion/irritation, Category 2</td>
<td>H315</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation, Category 2</td>
<td>H319</td>
</tr>
<tr>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</td>
<td>H335</td>
</tr>
</tbody>
</table>

Adverse physicochemical, human health and environmental effects

No additional information available
# 3-BUTENENITRILE
## Safety Data Sheet

### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

<table>
<thead>
<tr>
<th>Hazard pictograms (CLP)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="GHS02" /></td>
<td><img src="image" alt="GHS06" /></td>
</tr>
</tbody>
</table>

**Signal word (CLP):** Danger

**Hazard statements (CLP):**
- **H226** - Flammable liquid and vapour.
- **H301** - Toxic if swallowed.
- **H312** - Harmful in contact with skin.
- **H315** - Causes skin irritation.
- **H319** - Causes serious eye irritation.
- **H335** - May cause respiratory irritation.

**Precautionary statements (CLP):**
- **P280** - Wear protective gloves/protective clothing/eye protection/face protection.
- **P261** - Avoid breathing vapours.
- **P264** - Wash hands thoroughly after handling.
- **P210** - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- **P240** - Ground/bond container and receiving equipment.
- **P312** - Call a doctor if you feel unwell.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

<table>
<thead>
<tr>
<th>Substances</th>
<th>Substance type</th>
<th>Name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Butenenitrile</td>
<td>Multi-constituent</td>
<td>3-BUTENENITRILE</td>
<td>109-75-1</td>
<td>203-701-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name (CAS-No.)</th>
<th>Product identifier (EC-No.)</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Butenenitrile (CAS-No.) 109-75-1 (EC-No.) 203-701-1</td>
<td>95 - 100</td>
<td>Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- **First-aid measures general:** Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

- **First-aid measures after inhalation:** Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

- **First-aid measures after skin contact:** Wash with plenty of water/…. Get medical advice/attention.

- **First-aid measures after eye contact:** Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

- **First-aid measures after ingestion:** Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

- **Symptoms/effects after inhalation:** May cause respiratory irritation. Overexposure may cause: Cough. Headache. Nausea.
3-BUTENENITRILE
Safety Data Sheet

Symptoms/effects after skin contact: Causes skin irritation. Harmful in contact with skin.
Symptoms/effects after eye contact: Causes serious eye irritation.
Symptoms/effects after ingestion: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms: Nitriles may be partially metabolized to cyanide in the body. Symptoms of cyanide exposure include rapid respiration, gasping, headache, drop in blood pressure, vomiting, loss of consciousness and death.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.2. Special hazards arising from the substance or mixture
Fire hazard: Flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Advice for firefighters
Firefighting instructions: Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal. Use only non-sparking tools.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Provide good ventilation in process area to prevent formation of vapour. Containers must be properly grounded before beginning transfer. Take precautionary measures against static discharge. Use only non-sparking tools.
Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container tightly closed.
Storage area: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>3-Butenenitrile (109-75-1)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>ACGIH TWA (ppm)</td>
<td>10 ppm Gelest recommended TLV 8 Hr</td>
</tr>
<tr>
<td>Lithuania</td>
<td>NRV (mg/m³)</td>
<td>0.3 mg/m³</td>
</tr>
</tbody>
</table>

Print date: 10/04/2019
EN (English)
SDS ID: ENEB0575
8.2. Exposure controls

**Appropriate engineering controls:**

Provide local exhaust or general room ventilation.

**Personal protective equipment:**

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

**Hand protection:**

Neoprene or nitrile rubber gloves

**Eye protection:**

Chemical goggles. Contact lenses should not be worn

**Skin and body protection:**

Wear suitable protective clothing

**Respiratory protection:**

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor - amine gas (brown cartridge) respirator.

### SECTION 9: Physical and chemical properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>67.09 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Amber</td>
</tr>
<tr>
<td>Odour</td>
<td>Distinct</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.405</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>~ 1</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>&lt; -87 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>116 - 119 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>24 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Flammable liquid and vapour.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>~ 30 mm Hg @ 13°C</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>2.3</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.834</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>100 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Slightly. Soluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**9.2. Other information**

No additional information available

### SECTION 10: Stability and reactivity

**10.1. Reactivity**

No additional information available

**10.2. Chemical stability**

Stable when stored in sealed containers.
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10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid

10.5. Incompatible materials

10.6. Hazardous decomposition products
Organic amine vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Toxic if swallowed. Harmful in contact with skin.

**3-BUTENENITRILE (109-75-1)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>115 mg/kg</td>
</tr>
<tr>
<td>ATE CLP (oral)</td>
<td>121.053 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE CLP (dermal)</td>
<td>1237.895 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

**3-Butenenitrile (109-75-1)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>115 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>1176 mg/kg</td>
</tr>
<tr>
<td>ATE CLP (oral)</td>
<td>115 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE CLP (dermal)</td>
<td>1176 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

**2-Butenenitrile (4786-20-3)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>501 mg/kg</td>
</tr>
<tr>
<td>LD50 oral mouse</td>
<td>396 mg/kg</td>
</tr>
<tr>
<td>LD50 oral guinea pig</td>
<td>272</td>
</tr>
<tr>
<td>ATE CLP (oral)</td>
<td>501 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT-single exposure: May cause respiratory irritation.
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified

Symptoms/effects after skin contact: Causes skin irritation. Harmful in contact with skin.
Symptoms/effects after eye contact: Causes serious eye irritation.
Symptoms/effects after ingestion: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

Chronic symptoms: Nitriles may be partially metabolized to cyanide in the body. Symptoms of cyanide exposure include rapid respiration, gasping, headache, drop in blood pressure, vomiting, loss of consciousness and death.
Reason for classification: Expert judgment

SECTION 12: Ecological information

12.1. Toxicity
Acute aquatic toxicity: Not classified
Chronic aquatic toxicity: Not classified

**3-Butenenitrile (109-75-1)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>171 - 195 mg/l [Exposure time: 96 h - Species: Pimephales promelas [flow-through]]</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available
3-BUTENENITRILE
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12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations: May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 2929
UN-No. (IMDG) : 2929
UN-No. (IATA) : 2929
UN-No. (ADN) : 2929
UN-No. (RID) : 2929

14.2. UN proper shipping name

Proper Shipping Name (ADR) : TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.
Proper Shipping Name (IMDG) : TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.
Proper Shipping Name (IATA) : Toxic liquid, flammable, organic, n.o.s.
Proper Shipping Name (ADN) : TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.
Proper Shipping Name (RID) : TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.

Transport document description (ADR) : UN 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (3-BUTENENITRILE), 6.1 (3), II, (D/E)
Transport document description (IMDG) : UN 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (3-BUTENENITRILE), 6.1 (3), II
Transport document description (IATA) : UN 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (3-BUTENENITRILE), 6.1, II
Transport document description (ADN) : UN 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (3-BUTENENITRILE), 6.1 (3), II
Transport document description (RID) : UN 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (3-BUTENENITRILE), 6.1 (3), II

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR) : 6.1 (3)
Danger labels (ADR) : 6.1, 3

IMDG
Transport hazard class(es) (IMDG) : 6.1 (3)
Danger labels (IMDG) : 6.1, 3

IATA
Transport hazard class(es) (IATA) : 6.1 (3)
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### 3.1. Hazard labels (IATA)
- **Hazard class(es):** 6.1, 3
- ![Hazard label icon](image)

### ADN
- **Transport hazard class(es):** 6.1 (3)
- **Danger labels:** 6.1, 3
- ![ADN hazard label icon](image)

### RID
- **Transport hazard class(es):** 6.1 (3)
- **Danger labels:** 6.1, 3
- ![RID hazard label icon](image)

### 14.4. Packing group
- **Packing group (ADR):** II
- **Packing group (IMDG):** II
- **Packing group (IATA):** II
- **Packing group (ADN):** II
- **Packing group (RID):** II

### 14.5. Environmental hazards
- **Dangerous for the environment:** No
- **Marine pollutant:** No
- **Other information:** No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport
- **Classification code (ADR):** TF1
- **Special provisions (ADR):** 274
- **Limited quantities (ADR):** 100ml
- **Excepted quantities (ADR):** E4
- **Packing instructions (ADR):** P001, IBC02
- **Mixed packing provisions (ADR):** MP15
- **Portable tank and bulk container instructions (ADR):** T11
- **Portable tank and bulk container special provisions (ADR):** TP2, TP27
- **Tank code (ADR):** L4BH
- **Tank special provisions (ADR):** TU15, TE19
- **Vehicle for tank carriage:** FL
- **Transport category (ADR):** 2
- **Special provisions for carriage - Loading, unloading and handling (ADR):** CV13, CV28
- **Special provisions for carriage - Operation (ADR):** S2, S9, S19
- **Hazard identification number (Kemler No.):** 63
# 3-BUTENENITRILE
## Safety Data Sheet

<table>
<thead>
<tr>
<th>Orange plates</th>
<th>63 2929</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tunnel restriction code (ADR)</td>
<td>D/E</td>
</tr>
</tbody>
</table>

## Transport by sea
- Special provisions (IMDG) : 274
- Limited quantities (IMDG) : 100 ml
- Excepted quantities (IMDG) : E4
- Packing instructions (IMDG) : P001
- IBC packing instructions (IMDG) : IBC02
- Tank instructions (IMDG) : T11
- Tank special provisions (IMDG) : TP2, TP13, TP27
- EmS-No. (Fire) : F-E
- EmS-No. (Spillage) : S-D
- Stowage category (IMDG) : B
- Stowage and handling (IMDG) : SW2
- Properties and observations (IMDG) : Toxic if swallowed, by skin contact or by inhalation.

## Air transport
- PCA Excepted quantities (IATA) : E4
- PCA Limited quantities (IATA) : Y641
- PCA limited quantity max net quantity (IATA) : 1L
- PCA packing instructions (IATA) : 654
- PCA max net quantity (IATA) : 5L
- CAO packing instructions (IATA) : 662
- CAO max net quantity (IATA) : 60L
- Special provisions (IATA) : A4, A137
- ERG code (IATA) : 6F

## Inland waterway transport
- Classification code (ADN) : TF1
- Special provisions (ADN) : 274, 802
- Limited quantities (ADN) : 100 ml
- Excepted quantities (ADN) : E4
- Carriage permitted (ADN) : T
- Equipment required (ADN) : PP, EP, EX, TOX, A
- Ventilation (ADN) : VE01, VE02
- Number of blue cones/lights (ADN) : 2

## Rail transport
- Classification code (RID) : TF1
- Special provisions (RID) : 274
- Limited quantities (RID) : 100ml
- Excepted quantities (RID) : E4
- Packing instructions (RID) : P001, IBC02
- Mixed packing provisions (RID) : MP15
- Portable tank and bulk container instructions (RID) : T11
- Portable tank and bulk container special provisions (RID) : TP2, TP27
- Tank codes for RID tanks (RID) : L4BH
- Special provisions for RID tanks (RID) : TU15
- Transport category (RID) : 2
- Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28, CW31
- Colis express (express parcels) (RID) : CE5
- Hazard identification number (RID) : 63
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14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations
No REACH Annex XVII restrictions
3-BUTENENITRILE is not on the REACH Candidate List
3-BUTENENITRILE is not on the REACH Annex XIV List
3-BUTENENITRILE is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

% Volatiles : 100 %

15.1.2. National regulations

Germany

Netherlands
SZW-lijst van kankerverwekkende stoffen : 3-BUTENENITRILE is listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark
Class for fire hazard : Class II-1
Store unit : 5 liter
Classification remarks : R10 <H226;H301;H312;H315;H319;H335>; Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

Abbreviations and acronyms:
Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Acute Tox. 3 (Oral)</th>
<th>Acute toxicity (oral), Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Dermal)</td>
<td>Acute toxicity (dermal), Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids, Category 2</td>
</tr>
<tr>
<td>Flam. Liq. 3</td>
<td>Flammable liquids, Category 3</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
</tbody>
</table>
### 3-BUTENENITRILE
Safety Data Sheet

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour.</td>
</tr>
<tr>
<td>H226</td>
<td>Flammable liquid and vapour.</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II) - Custom

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