

### MATERIAL SAFETY DATA SHEET (MSDS)

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

##### 1.1. Product identifier

Product form	: Substance
	:
EC Index-No.	: 608-012-00-3
EC-No.	: 202-855-7
CAS-No.	: 100-47-0
Product code	: 01875
Synonyms	: Phenyl cyanide

##### 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 : Laboratory chemicals, Manufacture of substances

###### 1.2.2. Uses advised against

No additional information available

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

SPAN LAB  
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401208 Mumbai - INDIA  
PH: +91 9820509929  
[info@spanlab.in](mailto:info@spanlab.in) [www.spanlab.in](http://www.spanlab.in)

#### SECTION 2: Hazards identification

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

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

Acute toxicity (dermal), H312  
Category 4  
Acute toxicity (oral), H302  
Category 4

Full text of hazard classes and H-statements : see section 16

###### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R21/22

Full text of R-phrases: see section 16

# BENZONITRILE FOR SYNTHESIS

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### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

-

Hazard statements (CLP) :

H302+H312 - Harmful if swallowed or in contact with skin

Precautionary statements (CLP) :

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : BENZONITRILE FOR SYNTHESIS

CAS-No. : 100-47-0

EC-No. : 202-855-7

EC Index-No. : 608-012-00-3

Full text of R- and 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 after inhalation : Assure fresh air breathing. Allow the victim to rest.

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

First-aid measures after eye contact : Rinse immediately with plenty of water. Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

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

Symptoms/effects after skin contact : Harmful in contact with skin.

Symptoms/effects after ingestion : Harmful if swallowed.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

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

No additional information available

### 5.3. Advice for firefighters

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment.

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

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe vapours.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Storage conditions : Store in a well-ventilated place. Keep container tightly closed.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

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### 8.2. Exposure controls

Hand protection	: Protective gloves
Eye protection	: Chemical goggles or safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: [In case of inadequate ventilation] wear respiratory protection.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Clear Colorless.
Odour	: almond odor.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: 0.1
Melting point	: -13 °C
Freezing point	: No data available
Boiling point	: 191 °C
Flash point	: 70 °C
Auto-ignition temperature	: 550 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 1 hPa at 20 °C
Relative vapour density at 20 °C	: 3.6
Relative density	: No data available
Density	: 1.01 g/cm <sup>3</sup>
Solubility	: Water: Slight (0.1-1%)
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

Direct sunlight.

#### 10.5. Incompatible materials

Strong acids. Strong bases. Oxidizing agent.

#### 10.6. Hazardous decomposition products

No additional information available

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Dermal: Harmful in contact with skin. Oral: Harmful if swallowed.

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin.

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

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### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 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

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

## SECTION 14: Transport information

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

### 14.1. UN number

UN-No. (ADR)	: 2224
UN-No. (IMDG)	: 2224
UN-No. (IATA)	: 2224
UN-No. (ADN)	: 2224
UN-No. (RID)	: 2224

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: BENZONITRILE
Proper Shipping Name (IMDG)	: BENZONITRILE
Proper Shipping Name (IATA)	: Benzonitrile
Proper Shipping Name (ADN)	: BENZONITRILE
Proper Shipping Name (RID)	: BENZONITRILE
Transport document description (ADR)	: UN 2224 BENZONITRILE, 6.1, II, (D/E)
Transport document description (IMDG)	: UN 2224 BENZONITRILE, 6.1, II
Transport document description (IATA)	: UN 2224 Benzonitrile, 6.1, II
Transport document description (ADN)	: UN 2224 BENZONITRILE, 6.1, II
Transport document description (RID)	: UN 2224 BENZONITRILE, 6.1, II

### 14.3. Transport hazard class(es)

#### ADR

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

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### IMDG

Transport hazard class(es) (IMDG) : 6.1

Danger labels (IMDG) : 6.1



### IATA

Transport hazard class(es) (IATA) : 6.1

Hazard labels (IATA) : 6.1



### ADN

Transport hazard class(es) (ADN) : 6.1

Danger labels (ADN) : 6.1



### RID

Transport hazard class(es) (RID) : 6.1

Danger labels (RID) : 6.1



## 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

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### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR)	: T1
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)	: T7
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4BH
Tank special provisions (ADR)	: TU15, TE19
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S9, S19
Hazard identification number (Kemler No.)	: 60
Orange plates	:



Tunnel restriction code (ADR)	: D/E
EAC code	: 3Z

#### - Transport by sea

Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-A
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW2
Segregation (IMDG)	: SG35
Properties and observations (IMDG)	: Colourless liquid with an odour similar to oil of bitter almonds. Reacts with acids, evolving hydrogen cyanide, a highly toxic and flammable gas. Toxic if swallowed, by skin contact or by inhalation.
MFAG-No	: 152

#### - 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
ERG code (IATA)	: 6L



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### - Inland waterway transport

Classification code (ADN)	: T1
Special provisions (ADN)	: 802
Limited quantities (ADN)	: 100 ml
Excepted quantities (ADN)	: E4
Equipment required (ADN)	: PP, EP, TOX, A
Ventilation (ADN)	: VE02
Number of blue cones/lights (ADN)	: 2

### - Rail transport

Classification code (RID)	: T1
Excepted quantities (RID)	: E4
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP15
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP2
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)	: 60

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 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

BENZONITRILE FOR SYNTHESIS is not on the REACH Candidate List

BENZONITRILE FOR SYNTHESIS is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

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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 III-1

Store unit : 50 liter

Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : 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

Full text of R-, H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
R21/22	Harmful in contact with skin and if swallowed
Xn	Harmful

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*