

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name **ECP Limited**
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| | | |
|---|--------------------|--------------------|
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| | | | | | | |
|----------------|--------------|-------------|--------------------|------------------------|------------------|------------------------------|
| Product | Benzonitrile | | | | Code | 801800 |
| CAS# | HSNO# | UN # | DG Class/es | Packing group # | Tracking? | Handlers Certificate? |
| 100-47-0 | HSR004768 | 2224 | 6.1 | II | No | No |

Recommended use: Laboratory Investigations

2. Hazards identification

2.1 GHS Classification

- Flammable Liquids (Category D)
- Acute toxicity, Oral (Category D)
- Acute toxicity, Dermal (Category D)
- Skin irritation (Category B)
- Aquatic toxicity (Acute or Chronic) (Category D)

2.2 GHS Label elements, including precautionary statements



Pictogram Signal word **Warning**

Hazard statement(s)

- H227 Combustible liquid.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H316 Causes mild skin irritation.
- H402 Harmful to aquatic life.

Precautionary statement(s)

Prevention

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P330 Rinse mouth.
- P332 + P313 If skin irritation occurs: Get medical advice/attention.
- P363 Wash contaminated clothing before reuse.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage

- P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal

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

2.3 Other hazards

Vesicant.

3. Composition/information on ingredients

Substance/Mixture: Substance

3.1 Substances

Hazardous components

| Component | Classification | Concentration |
|--------------|--|---------------|
| Benzonitrile | | |
| | 3.1 D; 6.1 D; 6.3 B; 9.1 D; H227, H302, H312, H316, H402 | <=100% |

4. First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal. Keep in suitable, closed containers for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic. Handle and store under inert gas.

7.3 Specific end use(s)

No data available

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance

Form: liquid
Colour: colourless
b) Odour
No data available
c) Odour Threshold
No data available
d) pH
No data available
e) Melting point/freezing point
Melting point/range: -13 °C - lit.
f) Initial boiling point and boiling range
191 °C - lit. g) Flash point 70 °C - closed cup
h) Evaporation rate
No data available
i) Flammability (solid, gas)
No data available
j) Upper/lower flammability or explosive limits
Upper explosion limit: 7.2 %(V)
Lower explosion limit: 1.4 %(V)
k) Vapour pressure
1 hPa at 20 °C 133 hPa at 123.5 °C
l) Vapour density
3.56 - (Air = 1.0)
m) Relative density
1.000 g/cm³
n) Water solubility
ca.10 g/l
o) Partition coefficient: n-octanol/water
log Pow: 1.5 at 20 °C
p) Auto-ignition temperature
No data available
q) Decomposition temperature
No data available
r) Viscosity
No data available

10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Strong bases, strong oxidizing agents, strong reducing agents, acids, chlorates, nitrates, plastics.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x)

Other decomposition products - No data available

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 1,000 mg/kg

LC50 Inhalation - Rat - 4 h - 38.6 mg/l

LD50 Dermal - Rabbit - male and female - 1,400 mg/kg

Skin corrosion/irritation

Skin - Rabbit - Mild skin irritation - 24 h

Serious eye damage/eye irritation

Eyes - Rabbit - No eye irritation

Respiratory or skin sensitisation

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation

May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion

Harmful if swallowed.

Skin

Harmful if absorbed through skin. May cause skin irritation.

Eyes

May cause eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS: Not available

12. Ecological information

12.1 Toxicity

Toxicity to fish

LC50 - Oncorhynchus mykiss (rainbow trout) - 32 mg/l - 96 h

12.2 Persistence and degradability

Biodegradability

Aerobic - Exposure time 28 d Result: 100 % - Readily biodegradable.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Harmful to aquatic life.

13. Disposal considerations

13.1 Waste treatment methods

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport Information Table

| | | ADR/RID – European packaging certification | IMDG International Maritime Dangerous Goods Code | IATA – DGR International Air Travel Association – Dangerous Goods Regulations |
|-------------|---|---|---|--|
| 14.1 | UN Number | 2224 | 2224 | 2224 |
| 14.2 | UN Proper Shipping name | BENZONITRILE | BENZONITRILE | Benzonitrile |
| 14.3 | Transport Hazard Class | 6.1 | 6.1 | 6.1 |
| 14.4 | Packaging group | II | II | II |
| 14.5 | Environmental Hazards | No | No | No |
| 14.6 | Special precautions for user | No data available | | |

15. Regulatory information

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

National regulatory information

HSNO Approval Code: HSR004768

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

16. Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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