

BENZONITRILE

GHS Safety Data Sheet

Version No:2.0

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

BENZONITRILE

OTHER NAMES

C7-H5-N, C6-H5-CN, "benzene, cyano-", benzenenitrile, "benzoic acid nitrile", "phenyl cyanide", cyanobenzene

PROPER SHIPPING NAME

BENZONITRILE

PRODUCT USE

Used in the manufacture of benzoguanamine; intermediate for rubber chemicals; solvent for nitrile rubber, specialty lacquers, a range of resins and polymers and for many anhydrous metal salts.

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,

248, WORLI,

MUMBAI- 400030.INDIA.

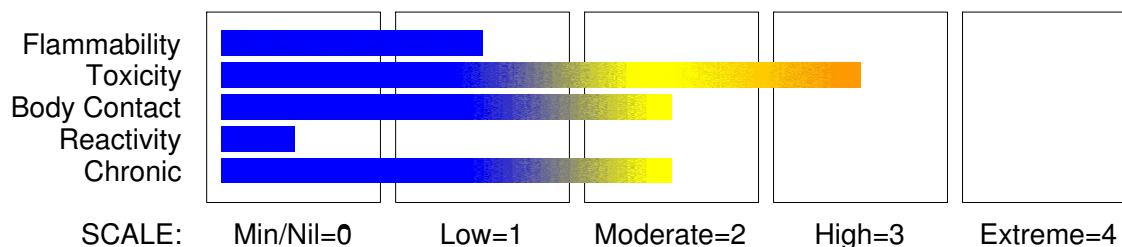
technical@sdfine.com

Telephone: 91- 22- 24959898

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HAZARD RATINGS



continued...

BENZONITRILE

Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity (Dermal) Category 4
Acute Toxicity (Inhalation) Category 3
Acute Toxicity (Oral) Category 4
Flammable Liquid Category 4
Skin Corrosion/Irritation Category 3



EMERGENCY OVERVIEW

HAZARD

DANGER
Determined by using GHS criteria:
H227 H331 H312 H302 H316
Combustible Liquid
Toxic if inhaled
Harmful in contact with skin
Harmful if swallowed
Causes mild skin irritation

PRECAUTIONARY STATEMENTS

Prevention

Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well ventilated area.
Wear protective gloves/clothing
Do not breathe dust/fume/gas/mist/vapours/spray.
Use explosion-proof electrical/ventilating/lighting/equipment
Keep away from flames and hot surfaces.
Avoid breathing dust/fume/gas/mist/vapours/spray.

Response

Immediately call a POISON CENTER or doctor/physician.
If skin irritation occurs, seek medical advice/attention.
Keep container tightly closed.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Wash contaminated clothing before reuse.
IF ON SKIN: Gently wash with plenty of soap and water.
In case of fire, use foam for extinction.
Specific treatment: refer to Label or MSDS.
Call a POISON CENTER or doctor/physician if you feel unwell.

BENZONITRILE

Section 2 - HAZARDS IDENTIFICATION

Storage

Store away from other materials
Store locked up.

Disposal

Dispose of contents and container in accordance with relevant legislation.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
benzonitrile	100-47-0	>98

Section 4 - FIRST AID MEASURES

SWALLOWED

IMPORTANT: ESTABLISH A FIRST AID PLAN BEFORE WORKING WITH CYANIDES. ANTIDOTES SHOULD BE AVAILABLE ON SITE.

- Prompt response in an emergency is vital.
- All workers are to be trained and refresher trained in procedures.
- Rescuers might need the protection of breathing apparatus where there is the potential of exposure to airborne cyanide.
- Use the buddy system and avoid becoming a casualty.

In all cases of cyanide exposure get medical help urgently after administering first aid.

For cyanide poisonings by any route:

- Contact Poisons Advisory Centre or a doctor.
- Seek immediate medical attention.
- Place casualty in coma position.
- Give oxygen when available.
- Consider external cardiac compression, mechanical resuscitation and use of antidote kit.

If breathing stops mouth-to-mouth resuscitation (also called expired air resuscitation - EAR) may be given only as a last resort. Should such resort prove necessary, first wash the casualty's mouth and lips. A first aid attendant giving EAR must not inhale the expired air of the casualty.

US Practice as employed by DuPont:-

FIRST AID Swallowed/ Inhaled /Skin Contact

- If no symptoms, no treatment is necessary; decontaminate patient.
- If conscious but with symptoms present (nausea, shortness of breath, dizziness) give oxygen.
- If consciousness is impaired (slurred speech, drowsiness) give oxygen and amyl nitrite.
- If unconscious but breathing, give oxygen and amyl nitrite by means of a respirator. To give amyl nitrite, break an ampoule in a cloth and insert into lip of mask for 15 seconds, then take away for 15 seconds. Repeat 5-6 times.

First Aid Supplies for cyanide poisoning should be conveniently placed throughout cyanide areas and should be IMMEDIATELY accessible at all times. They should be routinely inspected (typically daily) by people who would use them in an emergency. The total numbers of any item listed below should be adequate to handle the largest number of exposure cases that can reasonably be anticipated, taking into account that some supplies may be wasted, destroyed or inaccessible during an emergency.

Oxygen Resuscitators - The Flynn Series III Model from O-Two Systems has been found satisfactory, being lightweight, rugged and easy to use.

BENZONITRILE

Section 4 - FIRST AID MEASURES

Amyl Nitrite Ampoules - One box of one dozen ampoules per station is usually satisfactory. Stations should be located throughout the cyanide area.

CAUTION: Amyl nitrite is not stable and must be replaced every 1 to 2 years. Store in the original dated box away from heat. (can be stored with the resuscitator).

Avoid storage on vehicles where cabin temperatures can reach 60 deg. C. Storage in high temperature climates may require replacement before the expiry date on the box. Also avoid excessive cold storage which may limit the vapour pressure and reduce its evaporating property. Kits and amyl nitrite should be accessible, but secured against tampering or theft (an increase in the use of nitrite "poppers", as aphrodisiacs, introduces substance abuse concerns).

A set of cyanide first aid instructions should be located at each amyl nitrite storage location. Workers should be fully trained since in real emergency situations there will be insufficient time to "read the book".

Notes on the use of amyl nitrite:-

- AN is highly volatile and flammable - do not smoke or use around a source of ignition.
- If treating patient in a windy or draughty area provide some shelter or protection (shirt, wall, drum, cupped hand etc.) to prevent amyl nitrite vapour from being blown away. Keep ampoule upwind from the nose, the objective is to get amyl nitrite into the patient's lungs.
- Rescuers should avoid AN inhalation to avoid becoming dizzy and losing competence.
- Lay the patient down. Since AN dilates blood vessels and lowers blood pressure, lying down will help keep the patient conscious.
- DO NOT overuse - excessive use might put the patient into shock.
- Vasodilatory effects of amyl nitrate may promote fatal cardiac arrhythmias (particularly if the patient is not really poisoned by cyanide).
- the role of amyl nitrate as a competitive inducer of methaemoglobin in the blood stream is highly variable and, alone, may produce levels of methaemoglobin as low as 5% only. Experience at DuPont plants has not shown any serious after-effects from treatment with amyl nitrite.

DO NOT delay.

EYE

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:

- Quickly but gently, wipe material off skin with a dry, clean cloth.
- Immediately remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

INHALED

For cyanide poisonings by any route:

- Contact Poisons Advisory Centre or a doctor.
- Seek immediate medical attention.

- Place casualty in coma position.
- Give oxygen when available.
- Consider external cardiac compression, mechanical resuscitation and use of antidote kit.

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Section 4 - FIRST AID MEASURES

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Fight fire from a safe distance, with adequate cover.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

FIRE/EXPLOSION HAZARD

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.
- Mists containing combustible materials may be explosive.

Emits toxic fumes of cyanides if involved in fire.

Personal Protective Equipment

Breathing apparatus.

Gas tight chemical resistant suit.

Limit exposure duration to 1 BA set 30 mins.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable labelled container for waste disposal.

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Section 6 - ACCIDENTAL RELEASE MEASURES

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

benzonitrile 300 mg/m³

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

benzonitrile 60 mg/m³

other than mild, transient adverse effects without perceiving a clearly defined odour is:

benzonitrile 7.5 mg/m³

The threshold concentration below which most people will experience no appreciable risk of health effects:

benzonitrile 2.5 mg/m³

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+: May be stored together

O: May be stored together with specific preventions

X: Must not be stored together

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

continued...

BENZONITRILE

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SUITABLE CONTAINER

- Metal can or drum
 - Packaging as recommended by manufacturer.
 - Check all containers are clearly labelled and free from leaks.
- Small quantities in glass bottles

STORAGE INCOMPATIBILITY

Contact with acids produces toxic fumes.
Segregate from acids, hot water and steam.
Avoid mixing with acids or acid materials as highly toxic hydrogen cyanide gas may be evolved.

STORAGE REQUIREMENTS

Observe manufacturer's storing and handling recommendations.
Store in a cool, dry place.
Store in a well-ventilated area.
Store away from sources of heat or ignition / naked lights.
Store away from oxidising materials.
Keep storage area free of debris, waste and combustibles.
Outside or detached storage is preferred.
Keep containers securely sealed.
Store away from foodstuff containers.
Check regularly for spills and leaks

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m ³)	Revised IDLH Value (ppm)
benzonitrile	25	

BENZONITRILE

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

MATERIAL DATA

No exposure limits set by NOHSC or ACGIH.
OEL STEL (Russia): 1 mg/m³

PERSONAL PROTECTION



EYE

- Safety glasses.
- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

Butyl rubber gloves and • Barrier cream.
Impervious gloves.
Rubber boots.

OTHER

- Overalls.
- Barrier cream
- Eyewash unit.

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the computer-generated selection: benzonitrile

Protective Material CPI *.

BUTYL	A
PVA	A
VITON	C

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

continued...

BENZONITRILE

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

RESPIRATOR

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half- face Respirator	Full- Face Respirator
1000	10	A- AUS P	-
1000	50	-	A- AUS P
5000	50	Airline *	-
5000	100	-	A- 2 P
10000	100	-	A- 3 P
	100+		Airline**

* - Continuous Flow

** - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances.

Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25- 0.5 m/s (50- 100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5- 1 m/s (100- 200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1- 2.5 m/s (200- 500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion)	2.5- 10 m/s (500- 2000 f/min.)

continued...

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Within each range the appropriate value depends on:

Lower end of the range

1: Room air currents minimal or favourable to capture

2: Contaminants of low toxicity or of nuisance value only.

3: Intermittent, low production.

4: Large hood or large air mass in motion

Upper end of the range

1: Disturbing room air currents

2: Contaminants of high toxicity

3: High production, heavy use

4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Clear liquid with odour of almonds; does not mix well with water.

PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Sinks in water.

Contact with acids liberates very toxic gas.

Molecular Weight: 103.13

Melting Range (°C): - 13

Solubility in water (g/L): Partly miscible

pH (1% solution): Not applicable

Volatile Component (%vol): Not available

Relative Vapour Density (air=1): >1

Lower Explosive Limit (%): Not available

Autoignition Temp (°C): Not available

State: Liquid

Boiling Range (°C): 191

Specific Gravity (water=1): 1.010

pH (as supplied): Not applicable

Vapour Pressure (kPa): Not available

Evaporation Rate: Not available

Flash Point (°C): 71.67

Upper Explosive Limit (%): Not available

Decomposition Temp (°C): Not available

log Kow (Prager 1995): 1.56

log Kow (Sangster 1997): 1.56

log Kow : 1.56

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

Many nitriles produce similar symptoms to those produced by hydrogen cyanide but the onset of these symptoms is related to the ease with which cyanide is metabolically released from the substance. Frequently they produce primary eye and skin irritation and are absorbed rapidly and completely through intact skin. The toxicity of individual nitriles is sufficiently different to discourage use of the term "organic nitriles".

Aromatic nitriles, unlike aliphatic nitriles, do not appear to liberate cyanide in vivo.

EYE

Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

SKIN

Skin contact with the material may be harmful; systemic effects may result following absorption.

Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.

Toxic effects may result from skin absorption.

Bare unprotected skin should not be exposed to this material.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

BENZONITRILE

Section 11 - TOXICOLOGICAL INFORMATION

INHALED

The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation, of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

CHRONIC HEALTH EFFECTS

The material is considered to be harmful by all exposure routes.

Principal routes of exposure are usually by skin contact/absorption and inhalation of vapour.

Chronic exposure to cyanides and certain nitriles may result in interference to iodine uptake by thyroid gland and its consequent enlargement. This occurs following metabolic conversion of the cyanide moiety to thiocyanate. Thyroid insufficiency may also occur as a result of metabolic conversion of cyanides to the corresponding thiocyanate. Exposure to small amounts of cyanide compounds over long periods are reported to cause loss of appetite, headache, weakness, nausea, dizziness, abdominal pain, changes in taste and smell, muscle cramps, weight loss, flushing of the face, persistent runny nose and irritation of the upper respiratory tract and eyes. These symptoms are not specific to cyanide exposure and therefore the existence of a chronic cyanide toxicity remains speculative. Repeated minor contact with cyanides produces a characteristic rash with itching, papules (small, superficial raised spots on the skin) and possible sensitisation. Concerns have been expressed that low-level, long term exposures may result in damage to the nerves of the eye.

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

TOXICITY AND IRRITATION

TOXICITY

Dermal (rat) LD50: 1200 mg/kg

Oral (mouse) LD50: 971 mg/kg

Inhalation (mouse) LC50: 6000 mg/m³

Oral (rabbit) LD50: 1250 mg/kg

IRRITATION

Skin (rabbit): 500 mg/24h - Mild

Section 12 - ECOLOGICAL INFORMATION

Fish LC50 (96hr.) (mg/l): 78- 400

log Kow (Prager 1995): 1.56

log Kow (Sangster 1997): 1.56

log Pow (Verschuereen 1983): 1.56

log Kow : 1.56

Toxicity Fish: LC(96)78-400mg/L

Toxicity invertebrate: cell mult. inhib.11-119mg/L

Effects on algae and plankton: cell mult. inhib.3.4-75mg/L

Degradation Biological: sig

Section 13 - DISPOSAL CONSIDERATIONS

Consult State Land Waste Management Authority for disposal.

Incinerate residue at an approved site.

Recycle containers if possible, or dispose of in an authorised landfill.

BENZONITRILE

Section 14 - TRANSPORTATION INFORMATION



Labels Required: TOXIC
HAZCHEM: 3X

UNDG:

Dangerous Goods Class: 6.1
UN Number: 2224
Shipping Name: BENZONITRILE

Subrisk: None
Packing Group: II

Air Transport IATA:

ICAO/IATA Class: 6.1
UN/ID Number: 2224
ERG Code: 6L
Shipping name: BENZONITRILE

ICAO/IATA Subrisk: None
Packing Group: II

Maritime Transport IMDG:

IMDG Class: 6.1
UN Number: 2224
EMS Number: F- A, S- A
Shipping name: BENZONITRILE

IMDG Subrisk: None
Packing Group: II

Section 15 - REGULATORY INFORMATION

REGULATIONS

benzonitrile (CAS: 100-47-0) is found on the following regulatory lists;
OECD Representative List of High Production Volume (HPV) Chemicals

Section 16 - OTHER INFORMATION

The above information is believed to be accurate and represent the best information private study, research, review or criticism, as permitted under the Copyright of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue Date: 30-Mar-2018