



Material Safety Data Sheet
normal-Butyronitrile

MSDS# 38973

Section 1 - Chemical Product and Company Identification

MSDS Name: normal-Butyronitrile

Catalog Numbers: AC108140000, AC108140010, AC108140025, AC108141000, AC108145000, AC219760000

Synonyms: n-Butanenitrile; 1-Cyanopropane; Propyl cyanide.

Company Identification:

Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

Company Identification: (USA)

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call:

800-ACROS-01

For information in Europe, call:

+32 14 57 52 11

Emergency Number, Europe:

+32 14 57 52 99

Emergency Number US:

201-796-7100

CHEMTREC Phone Number, US:

800-424-9300

CHEMTREC Phone Number, Europe:

703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#: 109-74-0
Chemical Name: Butyronitrile
%: 98
EINECS#: 203-700-6

Hazard Symbols:

T F



Risk Phrases:

11 23/24/25

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Flammable liquid and vapor. May cause respiratory tract irritation. Causes eye and skin irritation. Harmful if swallowed, inhaled, or absorbed through the skin. May be fatal if mist inhaled. Target Organs: Respiratory system, eyes, nervous system, skin.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. Harmful if absorbed through the skin. Most nitrile compounds are well absorbed through intact skin, and may cause delayed onset of symptoms following exposure by this route.

Ingestion: Harmful if swallowed. May cause irritation of the digestive tract. Metabolism may release cyanide, which may result in headache, dizziness, weakness, collapse, unconsciousness and possible death.

Inhalation: Harmful if inhaled. May cause respiratory tract irritation.

Chronic: May be metabolized to cyanide which in turn acts by inhibiting cytochrome oxidase impairing cellular respiration.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: 501 deg C (933.80 deg F)

Flash Point: 16 deg C (60.80 deg F)

Explosion Limits: Lower: 1.6 vol %

Explosion Limits: Upper: Not available

NFPA Rating: health: 3; flammability: 3; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Provide ventilation. Use only non-sparking tools and equipment.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Do not breathe vapor or mist.

Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from acids.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Butyronitrile	none listed	8 ppm TWA; 22 mg/m3 TWA	none listed

OSHA Vacated PELs: Butyronitrile: None listed

Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Exposure Limits

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: clear, colorless

Odor: almond-like

pH: Not available

Vapor Pressure: 19.5 mm Hg @ 25 deg C

Vapor Density: 2.4 (air=1)

Evaporation Rate: Not available

Viscosity: 0.57 mPa s @ 20 deg C

Boiling Point: 115-117 deg C

Freezing/Melting Point: -112 deg C (-169.60°F)

Decomposition Temperature: Not available

Solubility in water: 33 g/l (25°C)

Specific Gravity/Density: .790 g/ml

Molecular Formula: C₄H₇N

Molecular Weight: 69.11

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Ignition sources, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Hydrogen cyanide, nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 109-74-0: ET8750000

RTECS:

CAS# 109-74-0: Draize test, rabbit, eye: 500 mg/24H Mild;

Inhalation, mouse: LC50 = 249 ppm/1H;

LD50/LC50: Oral, mouse: LD50 = 27689 ug/kg;

Oral, rat: LD50 = 50 mg/kg;

Skin, rabbit: LD50 = 500 uL/kg;

Other: Inh rat LC50 > 1200 ppm/1H. (Acros); Inh rat LC50 > 300 mg/L/4H. (Acros)

Carcinogenicity: Butyronitrile - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: No information available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: BUTYRONITRILE

Hazard Class: 3
UN Number: UN2411
Packing Group: II
Canada TDG
Shipping Name: BUTYRONITRILE
Hazard Class: 3.61
UN Number: UN2411
Packing Group: II

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T F

Risk Phrases:

R 11 Highly flammable.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

Safety Phrases:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 109-74-0: Not available

Canada

CAS# 109-74-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: B2, D1B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 109-74-0 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 109-74-0 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 9/23/1998

Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information 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.
