

Material Safety Data Sheet

4-Chlorobenzyl cyanide, 98+%

ACC# 43599

Section 1 - Chemical Product and Company Identification

MSDS Name: 4-Chlorobenzyl cyanide, 98+%

Catalog Numbers: AC108810000, AC108810050, AC108811000, AC108812500, AC108815000

Synonyms: (4-Chlorophenyl)acetonitrile; PCCN; p-Chlorophenylacetonitrile.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
140-53-4	4-Chlorobenzyl cyanide	> 98	205-418-9

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless to yellow crystalline powder.

Danger! May be fatal if swallowed. Harmful if absorbed through skin or if inhaled. May cause eye and skin irritation. May cause respiratory tract irritation.

Target Organs: Central nervous system, lungs, eyes, skin.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. Harmful if absorbed through the skin. May be metabolized to cyanide which in turn acts by inhibiting cytochrome oxidase impairing cellular respiration. Most nitrile compounds are well absorbed through intact skin, and may cause delayed onset of symptoms following exposure by this route.

Ingestion: May cause irritation of the digestive tract. Poison by ingestion. 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. Inhalation may result in symptoms similar to cyanide poisoning which include tachypnea, hyperpnea (abnormally rapid or deep breathing), and dyspnea (labored breathing) followed rapidly by respiratory depression. Pulmonary edema may occur.

Chronic: May be metabolized to cyanide which in turn acts by inhibiting cytochrome oxidase impairing cellular respiration. Chronic exposure to cyanide solutions may lead to the development of a "cyanide" rash, characterized by itching, and by macular, papular, and vesicular eruptions, and may be accompanied by secondary infections. Exposure to small amounts of cyanide compounds over long periods of time is reported to cause loss of appetite, headache, weakness, nausea, dizziness, and symptoms of irritation of the upper respiratory tract and eyes.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

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. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.

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

Flash Point: 133 deg C (271.40 deg F)

Autoignition Temperature: > 500 deg C (> 932.00 deg F)

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

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

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Approach spill from upwind.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use only with adequate ventilation.

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

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
4-Chlorobenzyl cyanide	none listed	none listed	5 mg/m ³ TWA (listed under Cyanide anion).

OSHA Vacated PELs: 4-Chlorobenzyl cyanide: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

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: Crystalline powder

Appearance: colorless to yellow

Odor: None reported.

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 265 - 267 deg C @ 760 mm Hg

Freezing/Melting Point: 29 - 30 deg C

Decomposition Temperature: Not available.

Solubility: Insoluble.

Specific Gravity/Density: Not available.

Molecular Formula: C₈H₆CIN

Molecular Weight: 151.60

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation, temperatures above 40°C.

Incompatibilities with Other Materials: Strong oxidizing agents, strong reducing agents, strong acids, strong bases.

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

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 140-53-4: AL8250000

LD50/LC50:

CAS# 140-53-4:

Oral, rat: LD50 = 50 mg/kg;

Oral LD50 (rat): 50 mg/kg. LDLo (rabbit): 200 mg/kg.

Carcinogenicity:

CAS# 140-53-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.
Neurotoxicity: No information available.
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	NITRILES, TOXIC, SOLID, N.O.S.	TOXIC SOLID ORGANIC NOS (4-CHLOROBENZYL CYANIDE)
Hazard Class:	6.1	6.1
UN Number:	UN3439	UN2811
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 140-53-4 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 140-53-4: immediate, delayed.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. CAS# 140-53-4 is listed as a Priority Pollutant under the Clean Water Act. CAS# 140-53-4 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 140-53-4 can be found on the following state right to know lists: California, (listed as Cyanides, inorganic salts), New Jersey, (listed as Cyanide anion), Pennsylvania, (listed as Cyanide anion), Massachusetts, (listed as Cyanide anion).

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T

Risk Phrases:

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

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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

S 28B After contact with skin, wash immediately with plenty of water

and soap.

WGK (Water Danger/Protection)

CAS# 140-53-4: No information available.

Canada - DSL/NDSL

CAS# 140-53-4 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of D1A, D2B.

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.

Canadian Ingredient Disclosure List

CAS# 140-53-4 (listed as Cyanides, inorganic salts) is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information
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MSDS Creation Date: 12/10/1998

Revision #7 Date: 10/05/2004

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 Fisher 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 Fisher has been advised of the possibility of such damages.