

# Material Safety Data Sheet

## Sodium cyanoborohydride, 95+%

ACC# 17430

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Sodium cyanoborohydride, 95+%

**Catalog Numbers:** AC168550000, AC168550100, AC168550500, AC16855, AC9556139, AC9584945, AC9584951, AC9740786, AC9955030, AC1685510, NC9061931, NC9311444, NC9332985, XXAC16855-10G, XXAC16855-10GM, XXAC16855-1K, XXAC16855-2K, XXAC16855-2KG, XXAC16855200

**Synonyms:** Sodium cyanotrihydroborate

**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100

**Emergency Number:** 201-796-7100

**For CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
25895-60-7	Sodium cyanoborohydride	>95.0	247-317-2

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white solid.

**Danger!** Toxic if swallowed, inhaled or absorbed through the skin. Causes eye and skin irritation and burns. Water-reactive. Flammable solid. Causes severe digestive tract irritation with possible burns. Causes severe respiratory tract irritation with possible burns.

**Target Organs:** No data found.

#### Potential Health Effects

**Eye:** Causes eye irritation and burns. May cause chemical conjunctivitis.

**Skin:** May be absorbed through the skin. May be metabolized to cyanide which in turn acts by inhibiting cytochrome oxidase impairing cellular respiration. Causes skin irritation and burns.

**Ingestion:** May be fatal if swallowed. Poison by ingestion. Causes gastrointestinal tract burns. Ingestion may result in symptoms similar to cyanide poisoning which is characterized by asphyxiation.

**Inhalation:** May cause respiratory tract irritation. May be metabolized to cyanide which in turns act by inhibiting cytochrome oxidase impairing cellular respiration.

**Chronic:** No information found.

### Section 4 - First Aid Measures

**Eyes:** Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

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

**Ingestion:** Do not induce vomiting. 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. Treat patient as for inhalation.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask. If inhaled, do NOT induce vomiting, and seek medical aid immediately. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**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. Water Reactive. Material will react with water and may release a flammable and/or toxic gas. Flammable solid. Containers may explode when heated. Substance will react with water (some violently) releasing flammable, toxic, or corrosive gases and runoff.

**Extinguishing Media:** Use dry chemical to fight fire. Contact professional fire-fighters immediately. DO NOT USE WATER OR FOAM.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 1; Instability: 2; Special Hazard: -W-

## 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 generating dusty conditions. Remove all sources of ignition. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and 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 ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage:** Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep under a nitrogen blanket. Store in a cool, dry, well-ventilated area away from incompatible substances. Water free area.

## 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
Sodium cyanoborohydride	none listed	none listed	none listed

**OSHA Vacated PELs:** Sodium cyanoborohydride: 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:** Solid

**Appearance:** white

**Odor:** Not available.

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** >242 deg C dec

**Decomposition Temperature:** Not available.

**Solubility:** Reacts.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** CH<sub>3</sub>BNNa

**Molecular Weight:** 62.84

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable.

**Conditions to Avoid:** High temperatures, incompatible materials, ignition sources, dust generation, contact with water.

**Incompatibilities with Other Materials:** Oxidizing agents, acids, water.

**Hazardous Decomposition Products:** Hydrogen cyanide, nitrogen oxides, carbon monoxide, carbon dioxide, oxides of boron, borane, hydrogen gas.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 25895-60-7 unlisted.

**LD50/LC50:**

Not available.

**Carcinogenicity:**

CAS# 25895-60-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No data available.  
**Teratogenicity:** No data available.  
**Reproductive Effects:** No data available.  
**Mutagenicity:** No data available.  
**Neurotoxicity:** No data 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
<b>Shipping Name:</b>	WATER-REACTIVE SOLID, TOXIC, N.O.S.	WATER-REACTIVE SOLID NOS (SODIUM CYANOBOROHYDRIDE)
<b>Hazard Class:</b>	4.3	4.3
<b>UN Number:</b>	UN3134	UN2813
<b>Packing Group:</b>	II	I

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 25895-60-7 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.

#### 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.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

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

#### STATE

CAS# 25895-60-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

### 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 F

#### Risk Phrases:

R 10 Flammable.

R 15 Contact with water liberates extremely flammable gases.

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

R 32 Contact with acids liberates very toxic gas.

R 34 Causes burns.

#### Safety Phrases:

- S 25 Avoid contact with eyes.
- 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 7/8 Keep container tightly closed and dry.
- S 28A After contact with skin, wash immediately with plenty of water

**WGK (Water Danger/Protection)**

CAS# 25895-60-7: 2

**Canada - DSL/NDSL**

CAS# 25895-60-7 is listed on Canada's NDSL List.

**Canada - WHMIS**

This product has a WHMIS classification of B6, D1B, E.

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**

**Section 16 - Additional Information**

**MSDS Creation Date:** 8/10/1998

**Revision #3 Date:** 10/03/2005

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