



# TCI AMERICA

## SAFETY DATA SHEET

Revision number: 1  
Revision date: 07/06/2018

### 1. IDENTIFICATION

**Product name:** Sodium Cyanoborohydride [Reducing Agent]  
**Product code:** S0396

**Product use:** For laboratory research purposes.  
**Restrictions on use:** Not for drug or household use.

Company:  
TCI America  
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Portland, OR 97203 U.S.A.  
Telephone:  
+1-800-423-8616 / +1-503-283-1681  
Fax:  
+1-888-520-1075 / +1-503-283-1987  
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sales-US@TCIchemicals.com  
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**Emergency telephone number:**  
Chemical Emergencies:  
TCI America (8:00am - 5:00pm) PST  
+1-503-286-7624  
Transportation Emergencies:  
Chemtrec 24-Hour  
+1-800-424-9300 (U.S.A.)  
+1-703-527-3887 (International)  
**Responsible department:**  
TCI America  
Environmental Health Safety and Security  
+1- 503-286-7624

### 2. HAZARD(S) IDENTIFICATION

**OSHA Haz Com: CFR 1910.1200:** Acute Toxicity - Oral [Category 2]  
**WHMIS 2015:** Acute Toxicity - Dermal [Category 2]  
Acute Toxicity - Inhalation [Category 2]  
Eye Damage/Irritation [Category 1]  
Substances and Mixtures which, in Contact with Water, Emit Flammable Gases [Category 1]  
Aquatic Hazard (Acute) [Category 1]  
Aquatic Hazard (Long-Term) [Category 1]  
Skin Corrosion/Irritation [Category 1B]

**Signal word:** Danger!

**Hazard Statement(s):** In contact with water releases flammable gases which may ignite spontaneously  
Fatal if swallowed, in contact with skin or if inhaled  
Causes severe skin burns and eye damage  
Very toxic to aquatic life  
Very toxic to aquatic life with long lasting effects

**Pictogram(s) or Symbol(s):**



**Precautionary Statement(s):**

**[Prevention]**

Do not allow contact with water. Handle under inert gas. Protect from moisture. Do not breathe dust, fume, mist, vapors or spray. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Wear respiratory protection. Wear protective gloves, protective clothing, face protection.

**[Response]**

If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a poison center or doctor. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor. Brush off loose particles from skin. Immerse in cool water or wrap with wet bandages. In case of fire: Use dry chemical or dry sand to extinguish. Collect spillage.

**[Storage]**

Store in a dry place. Store in a closed container. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**[Disposal]**

Dispose of contents and container in accordance with local, regional, national regulations (e.g. US: 40 CFR Part 261, EU:91/156/EEC, JP: Waste Disposal and Cleaning Act, etc.).

Hazards not otherwise classified: May develop pressure  
[HNOC]

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Substance/mixture:</b>	Substance
<b>Components:</b>	Sodium Cyanoborohydride [Reducing Agent]
<b>Percent:</b>	>95.0%(T)
<b>CAS RN:</b>	25895-60-7
<b>Molecular Weight:</b>	62.84
<b>Chemical Formula:</b>	CH <sub>3</sub> BNNa
<b>Synonyms:</b>	Sodium Cyanotrihydridoborate

### 4. FIRST-AID MEASURES

#### Description of first aid measures

<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
<b>Skin contact:</b>	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.
<b>Eye contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
<b>Ingestion:</b>	Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.

#### Symptoms/effects:

<b>Acute:</b>	Pain. Redness.
<b>Delayed:</b>	No data available

#### Indication of any immediate medical attention:

Not available.

#### Notes to physician:

No data available

### 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media:</b>	Dry chemical, dry sand.
<b>Unsuitable extinguishing media:</b>	Water
<b>Hazardous combustion products:</b>	These products include: Carbon oxides Nitrogen oxides Borates Metallic oxides
<b>Other specific hazards:</b>	Closed containers may explode from heat of a fire.
<b>Advice for firefighters:</b>	Wear self-contained breathing apparatus if possible.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures:</b>	Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
<b>Environmental precautions:</b>	Be careful not to let it flow into rivers, etc., since adverse effects on the environment are concerned.
<b>Methods and materials for containment and cleaning up:</b>	Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
<b>Prevention of secondary hazards:</b>	Do not allow contact with water. Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment. Since there is a possibility of igniting behind when removal of a leakage thing is imperfect, it is careful enough.

**7. HANDLING AND STORAGE**

<b>Precautions for safe handling:</b>	Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a local exhaust if dust or aerosol will be generated. Avoid contact with skin, eyes and clothing. May develop pressure. Open carefully. Keep away from any possible contact with water, because of violent reaction and possible flash fire. Use well-dried equipment. Handle under inert gas. Don't leave used equipment or rag. This product may ignite if it is left stuck on combustibles such as paper, rags, etc.
<b>Conditions for safe storage, including any incompatibilities</b>	
<b>Storage conditions:</b>	Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store under inert gas. Protect from moisture. Store locked up. Store away from incompatible materials such as oxidizing agents. Moisture-sensitive
<b>Packaging material:</b>	Comply with laws.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

<b>Appropriate engineering controls:</b>	Follow safe industrial engineering/laboratory practices when handling any chemical. Install a closed system or local exhaust. Also install safety shower and eye bath.
<b>Personal protective equipment</b>	
<b>Respiratory protection:</b>	Dust respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.
<b>Hand protection:</b>	Impervious gloves.
<b>Eye protection:</b>	Safety goggles. A face-shield, if the situation requires.
<b>Skin and body protection:</b>	Impervious protective clothing. Protective boots, if the situation requires.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state (20°C):</b>	Solid		
<b>Form:</b>	Crystal - Powder		
<b>Colour:</b>	White - Very pale yellow		
<b>Odour:</b>	Odorless		
<b>Odor threshold:</b>	No data available		
<b>Odour threshold:</b>	No data available		
<b>Melting point/freezing point:</b>	No data available	<b>pH:</b>	No data available
<b>Boiling point/range:</b>	No data available	<b>Vapour pressure:</b>	No data available.
<b>Decomposition temperature:</b>	No data available	<b>Vapour density:</b>	No data available
<b>Relative density:</b>	No data available	<b>Dynamic Viscosity:</b>	No data available
<b>Kinematic viscosity:</b>	No data available		
<b>Log Pow:</b>	No data available	<b>Evaporation rate(Butyl Acetate=1):</b>	No data available
<b>Flash point:</b>	No data available	<b>Autoignition temperature:</b>	175°C (347°F)
<b>Flammability(solid, gas):</b>	No data available	<b>Flammability or explosive limits:</b>	
		<b>Lower:</b>	No data available
		<b>Upper:</b>	No data available
<b>Solubility(ies):</b>			
<b>[Water]</b>	Very soluble (Decomposes) (212g/100g, 29°C)		
<b>[Other solvents]</b>			
<b>Very soluble:</b>	Methanol		
<b>Soluble:</b>	Dimethylformamide(DMF), Tetrahydrofuran(THF)		
<b>Slightly soluble:</b>	Ethanol, Isopropylamine		
<b>Insoluble:</b>	Ether, Benzene, Hexane		

**10. STABILITY AND REACTIVITY**

<b>Reactivity:</b>	No data available
<b>Chemical stability:</b>	Stable under proper conditions.
<b>Possibility of hazardous reactions:</b>	May spontaneously ignite or release flammable gases when in contact with water.
<b>Conditions to avoid:</b>	Moisture
<b>Incompatible materials:</b>	Oxidizing agents, Acids, Water
<b>Hazardous decomposition products:</b>	Carbon monoxide, carbon dioxide etc

**11. TOXICOLOGICAL INFORMATION**

**Acute Toxicity:**  
No data available

**Skin corrosion/irritation:**  
No data available

**Serious eye damage/irritation:**  
No data available

**Respiratory or skin sensitization:**  
No data available

**Germ cell mutagenicity:**  
No data available

**Carcinogenicity:**  
No data available

**IARC:** No data available

**NTP:** No data available

**OSHA:** No data available

**Reproductive toxicity:**  
No data available

**Target organ(s):** No data available

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

**Fish:** No data available  
**Crustacea:** No data available  
**Algae:** No data available

**Persistence / degradability:** No data available

**Bioaccumulative potential(BCF):** No data available

**Mobility in soil**

**Log Pow:** No data available  
**Soil adsorption (Koc):** No data available  
**Henry's Law (PaM<sup>3</sup>/mol):** No data available

**13. DISPOSAL CONSIDERATIONS**

**Disposal of product:** Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil.

**Disposal of container:** Dispose of as unused product. Do not re-use empty containers.

**Other considerations:** Observe all federal, state and local regulations when disposing of the substance.

**14. TRANSPORT INFORMATION****DOT (US)**

<b>UN number:</b> UN3134	<b>Proper Shipping Name:</b> Water-reactive solid, toxic, n.o.s	<b>Class or Division:</b> 4.3 Dangerous when wet material (water reactive)	<b>Subrisk(s):</b> 6.1 Toxic material.	<b>Packing Group:</b> II
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**IATA**

<b>UN number:</b> UN3134	<b>Proper Shipping Name:</b> Water-reactive solid, toxic, n.o.s	<b>Class or Division:</b> 4.3 Dangerous when wet material (water reactive)	<b>Subrisk(s):</b> 6.1 Toxic material.	<b>Packing Group:</b> II
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**IMDG**

<b>UN number:</b> UN 3134	<b>Proper Shipping Name:</b> Water-reactive solid, toxic, n.o.s	<b>Class or Division:</b> 4.3 Dangerous when wet material (water reactive)	<b>Subrisk(s):</b> 6.1 Toxic material.	<b>Packing Group:</b> II
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**EmS number:** F-G, S-N

**15. REGULATORY INFORMATION****Toxic Substance Control Act (TSCA 8b.):**

This product is ON the EPA Toxic Substances Control Act (TSCA) inventory.

**US Federal Regulations****CERCLA Hazardous substance and Reportable Quantity:**

<b>SARA 313:</b>	Not Listed
<b>SARA 302:</b>	Not Listed

**State Regulations****State Right-to-Know**

<b>Massachusetts</b>	Not Listed
<b>New Jersey</b>	Not Listed
<b>Pennsylvania</b>	Not Listed

**California Proposition 65:** Not Listed

**Other Information****NFPA Rating:**

<b>Health:</b>	4
<b>Flammability:</b>	3
<b>Instability:</b>	3

**HMIS Classification:**

<b>Health:</b>	3
<b>Flammability:</b>	3
<b>Physical:</b>	3

**International Inventories**

<b>Canada: NDSL</b>	On NDSL
<b>EC-No:</b>	247-317-2

**16. OTHER INFORMATION**

**Revision date:** 07/06/2018

**Revision number:** 1

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.