

SAFETY DATA SHEET



Sodium Cyanide

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

GHS Product Information

Product Name: Sodium Cyanide
Business Unit: PhibroChem
Other means of identification: Not available

Safety data sheet number: 2140-200 -US-E

Recommended use of the chemical and restrictions on use

Recommended use: No information available.

Uses advised against: No information available

Details of the supplier of the safety data sheet

Supplier:	Manufacturer:
Phibrochem	CyPlus GmbH
Glenpointe Centre East, 3rd FL	Rodenbacher Chaussee 4
300 Frank W. Burr Blvd., Ste 21	63457 Hanau-Wolfgang
Teaneck, NJ 07666-6712	Germany
Tel: (201) 329-7300	Telefon +49 6181 59-6939
Toll free: (888) 475-7355	Fax +49 6181 59-4329
Fax: (201) 329-7070	

SDS Contact (email of responsible person): phibroehs@pahc.com

24 Hour Emergency Phone Number: Chemtrec 1-800-424-9300 (CCN17224)

International: International Number: +1 703-527-3887

Emergency Telephone: Chemtrec 1-800-424-9300

(CCN17224)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 1
Acute toxicity - Dermal	Category 1
Acute toxicity - Inhalation (Dusts/Mists)	Category 1
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Specific target organ toxicity (repeated exposure)	Category 1
Corrosive to metals	Category 1

Label elements**Emergency Overview****Danger****Hazard statements**

Fatal if swallowed
 Fatal in contact with skin
 Fatal if inhaled
 Causes skin irritation
 Causes serious eye irritation
 Causes damage to organs through prolonged or repeated exposure
 May be corrosive to metals

**Appearance** Granules**Physical state** Solid**Odor** No information available**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not get in eyes, on skin, or on clothing
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wear respiratory protection
 Keep only in original container

Precautionary Statements - Response

Specific treatment
 Specific measures (see .? on this label)
 Specific treatment is urgent (see .? on this label)
 Specific treatment
 Get medical advice/attention if you feel unwell
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF ON SKIN: Gently wash with plenty of soap and water
 Immediately call a POISON CENTER or doctor/physician
 Remove/Take off immediately all contaminated clothing
 Wash contaminated clothing before reuse
 If skin irritation occurs: Get medical advice/attention
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a POISON CENTER or doctor/physician
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth
 Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed
 Store in corrosive resistant container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/ container to an approved landfill

Hazards not otherwise classified (HNOC)**Interactions with Other Chemicals** Use of alcoholic beverages may enhance toxic effects**Other hazards**

- Very toxic to aquatic life with long lasting effects
- Very toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS**Pure substance/mixture** Substance

Chemical Name	CAS No.	Weight-%	Trade Secret
Sodium cyanide	143-33-9	60 - 100	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**First aid measures**

- General advice:** Immediate medical attention is required.
- Eye contact:** Keep eye wide open while rinsing. Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area.
- Inhalation:** Remove to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Skin Contact:** Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
- Ingestion:** Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.
- Self-protection of the first aider:** Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed**Symptoms:** No information available.**Indication of any immediate medical attention and special treatment needed**

Note to physicians: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Extinguishing media**

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical: The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Explosion data

Sensitivity to Mechanical Impact: None.

Sensitivity to Static Discharge: None.

Protective equipment and precautions for firefighters: Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

For emergency responders: Use personal protection recommended in Section 8. Use personal protective equipment as required.

Environmental Precautions: Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment: Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up: Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Dam up. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible materials: Incompatible with strong acids and bases. Incompatible with oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Component	CAS No.	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium cyanide 143-33-9 (60 - 100)	143-33-9	S* Ceiling: 5 mg/m ³ CN	TWA: 5 mg/m ³ CN (vacated) TWA: 5 mg/m ³ S* as CN	IDLH: 25 mg/m ³ CN Ceiling: 4.7 ppm CN 10 min Ceiling: 5 mg/m ³ CN 10 min

NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information: Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls: Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

General Hygiene Considerations: When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

Eye/face protection: Tight sealing safety goggles. Face protection shield.

Skin and body protection: No special technical protective measures are necessary.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Odor	No information available
Appearance	Granules	Odor threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	10-12	
Melting Point / Freezing Point	= 1173.2 °F	
Boiling point / boiling range	= 2957 °F	
Flash point		
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	1.52	
Water solubility	Soluble in water	
Solubility in other solvents		
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	

Oxidizing properties No information available

Other Information

Softening point No information available
Molecular weight No information available
VOC Content (%) No information available
Density No information available
Bulk density No information available
Percent Volatile No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Exposure to air or moisture over prolonged periods.

Incompatible materials

Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information: No data available

Inhalation: No data available.

Eye contact: No data available.

Skin Contact: No data available.

Ingestion: No data available.

Component Information

Chemical Name	CAS No.	Oral LD50	Dermal LD50	Inhalation LC50
Sodium cyanide	143-33-9	= 5.733 mg/kg (Rat)	= 14.602 mg/kg (Rabbit)	= 0.16 mg/L (Rat) 1 h

Information on toxicological effects

Symptoms: No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: No information available.

Germ cell mutagenicity: No information available.

Carcinogenicity: No information available.

Reproductive toxicity: No information available.

STOT - single exposure:	No information available.
STOT - repeated exposure:	No information available.
Chronic toxicity:	Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects. May cause adverse effects on the bone marrow and blood-forming system.
Target Organ Effects:	blood, Central nervous system, Central Vascular System (CVS), Eyes, Respiratory system, Skin, Thyroid.
Aspiration hazard:	No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	6 mg/kg
ATEmix (dermal)	5 mg/kg
ATEmix (inhalation-dust/mist)	0 mg/l

12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a marine pollutant according to DOT.

Ecotoxicity

Very toxic to aquatic life with long lasting effects

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	CAS No.	Algae/aquatic plants	Fish	Crustacea
Sodium cyanide	143-33-9	-	0.0391 - 0.0548: 96 h Oncorhynchus mykiss mg/L LC50 static 0.0558 - 0.0586: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.066 - 0.0852: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.0712 - 0.0936: 96 h Pimephales promelas mg/L LC50 flow-through 0.15: 96 h Lepomis macrochirus mg/L LC50 static 0.17: 96 h Pimephales promelas mg/L LC50 static	-

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

Other adverse effects: No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes: Refer to all federal, state and local regulations prior to disposal of container and unused contents by reuse, recycle or disposal. Disposal should be in accordance with applicable regional, national and local laws and regulations. Avoid runoff to waterways and sewers. Recover or recycle if possible. Send to a licensed recycler, reclaimer or incinerator.

Disposal methods: Do not reuse container.

14. TRANSPORT INFORMATION

Note: Store in a closed container. Keep container upright.

DOT

UN/ID no	UN1689
Proper shipping name	SODIUM CYANIDE, SOLID, Marine Pollutant
Hazard Class	6.1
Packing Group	I
Reportable Quantity (RQ)	(Sodium cyanide: RQ (kg)= 4.54)
Special Provisions	B69, B77, IB7, N74, N75, T6, TP33
Marine pollutant	This product contains a chemical which is listed as a marine pollutant according to DOT.
Description	UN1689, SODIUM CYANIDE, SOLID, 6.1, I, Marine Pollutant

IATA

UN/ID no	UN1689
Proper shipping name	Sodium cyanide, solid
Hazard Class	6.1
Packing Group	I
ERG Code	6L
Description	UN1689, Sodium cyanide, solid, 6.1, I

IMDG

UN/ID no	UN1689
Proper shipping name	SODIUM CYANIDE, SOLID, Marine Pollutant
Hazard Class	6.1
Packing Group	I
EmS-No	F-A, S-A
Marine pollutant	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO
Description	UN1689, SODIUM CYANIDE, SOLID, 6.1, I, Marine Pollutant

TDG

UN/ID no	UN1689
Proper shipping name	SODIUM CYANIDE, SOLID
Hazard Class	6.1
Packing Group	I
Marine pollutant	This product contains a chemical which is listed as a marine pollutant according to TDG.
Description	UN1689, SODIUM CYANIDE, SOLID, 6.1, I

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Complies
NDSL	Complies
EINECS/ELINCS:	Complies
ENCS:	Complies
IECSC:	Complies
KECL:	Complies
PICCS:	Complies
AICS:	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No.	SARA 313 - Threshold Values %
Sodium cyanide	143-33-9	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CAS No.	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium cyanide	143-33-9	10 lb	X	X	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	CAS No.	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium cyanide	143-33-9	10 lb	10 lb	RQ 10 lb final RQ RQ 4.54 kg final RQ

FIFRA

Not applicable

US State Regulations



WARNING! This product contains a chemical known in the State of California to cause cancer. This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Chemical Name	California Proposition 65
Sodium cyanide - 143-33-9	Male Reproductive

U.S. State Right-to-Know Regulations

Chemical Name	CAS No.	New Jersey	Massachusetts	Pennsylvania
Sodium cyanide	143-33-9	X	X	X

16. OTHER INFORMATION

NFPA	Health hazards 3	Flammability 0	Instability 0	Physical & Chemical Properties 0
HMIS	Health hazards *3	Flammability 0	Physical hazards 0	Personal protection X

Document Review

Revision Number: 17

Revision Note: No information available

Key or legend to abbreviations and acronyms used in the safety data sheet:

Bioconcentration factor (BCF)
International Air Transport Association (IATA)
Globally Harmonized System (GHS)
International Maritime Dangerous Goods (IMDG)

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End of Safety Data Sheet