ChemPure* Brand Chemicals

Safety Data Sheet

Sodium Cyanide, Granular ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Sodium Cyanide, Granular ACS

Synonyms/Generic Names: Cyanide of Sodium; Prussiate of Soda; Hydrocyanic Acid, Sodium Salt

Product Number: CP-G2342D

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: ChemPure Brand Chemicals
39103 Warren Road
Westland, MI 48185

For More Information Call: 734-729-1805 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Target organ effect, Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption

Target Organs: Central nervous system, Blood, Lungs, Cardiovascular system, Thyroid

Signal Words: Danger

Pictograms:

GHS Classification:

Acute toxicity, Oral	Category 2
Acute toxicity, Inhalation	Category 2
Acute toxicity, Dermal	Category 1
Acute aquatic toxicity	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H300+P310	Fatal if swallowed or in contact with skin.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.

Precautionary Statements:

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.
P302+P350	IF ON SKIN: Gently wash with plenty of soap and water.
P310	Immediately call a POISON CENTER or doctor/physician.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	May be fatal if inhaled. Causes respiratory tract irritation.
Skin	May be fatal if absorbed through skin. Causes skin irritation.
Ingestion	May be fatal if swallowed.

NFPA Ratings

Health	4
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	4
Fire	0
Reactivity	0
Personal	K

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Sodium Cyanide	100	143-33-9	205-599-4	NaCN	49.01 g/mol

4. FIRST-AID MEASURES

Eyes	In case of eye contact, rinse with plenty of water and seek medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIREFIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Use water or dry chemical on fires near cyanides. Minimize cyanide runoff. DO NOT use carbon dioxide (will produce hydrogen cyanide).
Special protective equipment and precautions for firefighters	Wear full protective clothing and NIOSH/MSHA-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Use water spray to keep fire-exposed containers cool.
Specific hazards arising from the chemical	May emit extremely toxic hydrogen cyanide fumes under fire conditions. Avoid cyanide solution run-off that may occur if water contacts material. Contained cyanide solution can be detoxified with sodium hypochlorite solution. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to a federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Cleanup personnel need personal protection from inhalation and skin/eye contact. Evacuate and ventilate the area. Pick up and arrange disposal without creating dust. Sweep up and keep in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities
Store in cool, dry, well ventilated area in tightly-closed, plainly-labeled containers. Protect against light. Never allow product to get in contact with water during storage. Store in corrosion-proof area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Sodium cyanide	5 mg/m^3	TWA	OSHA
	5 mg/m^3	TLV	ACGIH
	5 mg/m^3 4.7 ppm	REL	NIOSH

TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels

Personal Protection

Eyes	Wear chemical safety glasses with a face shield for splash protection.
Inhalation	Provide local exhaust, preferably mechanical. Use an approved respirator.
Skin	Wear neoprene or rubber gloves and complete suit protecting against chemical.
Other	Not Available

Other Recommendations
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	White powder with chunks.
Odor	Faint almond odor
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	563°C (1945°F)
Initial boiling point and boiling range	1496°C (2725°F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	1 mmHg @ 817°C
Vapor density	1.7
Relative density	Not Available
Solubility (ies)	41 g in 100 mL water at 21°C
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Acids, moisture, strong oxidizers
Incompatible Materials	Acids, water, alkali. Reacts violently with strong oxidizing agents, alkaloids, iodine, metallic salts, chloral hydrate.
Hazardous Decomposition Products	Highly toxic hydrogen cyanide.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	LD50 Dermal – rabbit – 10.4 mg/kg
Eyes	Not Available
Respiratory	Dyspnea
Ingestion	LD50 Oral – rat – 6.44 mg/kg

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Eyes	Causes eye irritation.
Inhalation	May be fatal if inhaled. Causes respiratory tract irritation. Very destructive to tissue of the mucous membranes and upper respiratory tract. Cough, shortness of breath, headache, and nausea.
Skin	May be fatal if absorbed through skin. Causes skin irritation.
Ingestion	May be fatal if swallowed.

Chronic Toxicity	Not Available
Teratogenicity	Developmental toxicity – hamster – implant Effects on embryo or fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific developmental abnormalities: musculoskeletal system, cardiovascular system.
Mutagenicity	Not Available
Embryotoxicity	Reproductive toxicity – rat – Oral Paternal effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal effects: Testes, epididymis, sperm duct. Reproductive toxicity – Hamster – Implant Effects of fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Specific developmental abnormalities: Central nervous system.
Specific Target Organ Toxicity	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	LC50 – Oncorhynchus mykiss (rainbow trout) – 0.05 mg/l – 96 hours
Aquatic Invertebrate	LC50 – Daphnia magna (water flea) – 0.09 mg/l – 96 hours
Terrestrial	EC50 – Nitzschia closterium – 0.051 mg/l – 72 hours

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1689, Sodium cyanide, solid, 6.1, pg I
TDG	UN1689, SODIUM CYANIDE, SOLID, 6.1, pg I
IMDG	UN1689, SODIUM CYANIDE, SOLID, 6.1, pg I
Marine Pollutant	Yes
IATA/ICAO	UN1689, Sodium cyanide, solid, 6.1, pg I

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Listed: Sodium Cyanide
SARA 304	Listed: Sodium Cyanide
SARA 311	Listed: Sodium Cyanide
SARA 312	Listed: Sodium Cyanide
SARA 313	Not Listed
WHMIS Canada	Class D-1A: Material causing immediate and serious toxic effects (VERY TOXIC) Class E: Corrosive solid.

16. OTHER INFORMATION

Revision	Date
Revision 1	7-29-2013