Samchun Chemicals

Material Safety Data Sheet

Sodium cyanide

Section 1 – PRODUCT AND COMPANY IDENTIFICATION

1. Product Identifier — Sodium cyanide; White cyanide

2. Recommended Use & Uses advised against — Uses for Laboratory and R&D only

3. Information of Supplier

SAMCHUN PURE CHEMICAL CO.,LTD
ADDRESS; (Mogok-dong) 117, Sandan-ro 16Beon-gil, Pyeongtaek-si, Gyeonggi-do, Korea
Emergency Phone; 82-31-668-0700/3
Department; Safety & Environment dep.
Web site; http://www.samchun.com

Section 2 – HAZARDS and DANGER IDENTIFICATION

1.GHS Classification· Identification

Acute toxic(Oral)	Category2
Acute toxic(Skin)	Category1
Serious Eye Damage/Eye Irritation	Category2
Reproductive toxic	Category2
Specific Target Organ Toxicity (Repeated Exposure)	Category1
Acute Aquatic Toxicity	Category1
Chronic Aquatic Toxicity	Category1

2. Label and Mark including Precautionary Statement

◦**Label elements**



◦**Signal word** — Danger

◦**Hazard ·Danger statement**

H310 Fatal in contact with skin
H300 Fatal if swallowed
H319 Causes serious eye irritation
H361 Suspected of damaging fertility or the unborn child
H372 Causes damage to organs (Testis, kidney failure, adrenal, pancreas) through prolonged or repeated exposure
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

◦**Precautionary statement**

Precaution

P262 Do not get in eyes, on skin, or on clothing.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection
P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment

Measures P310 Immediately call a POISON CENTER or doctor/physician.
P321 Specific treatment (see Seciton 4. on this label).
P302+P352 IF ON SKIN: Wash with plenty of water
P361+P364 Take off immediately all contaminated clothing, Wash before reuse
P330 Rinse mouth.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 If eye irritation persists: Get medical advice/attention.
P308+P313 IF exposed: Call a POISON CENTER or doctor/physician
P314 Get medical advice/attention if you feel unwell.
P391 Collect spillage

Storage P405 Store locked up

Dispose P501 Dispose of contents/container under related law and regulations

3. Other Hazard-Risk which are not included in the classification criteria

NFPA index(0~4steps) : Health=3, Fire=0, Reaction=0

Section 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Name	Other Name	CAS No.	Content (%)
Sodium cyanide	White cyanide	143-33-9	100

Section 4 – FIRST AID MEASURES

1. Eye Contact Rinse with plenty of water for at least 15minutes and get medical attention immediately.

2. Skin Contact Take off contaminated cloths and shoes immediately, wash with plenty of water and soap for at least 15minutes.

3. Inhalation Move victim to fresh air. If breathing is difficult, give artificial respiration and get medical attention immediately.

4. Ingestion Do not induce vomiting. Get medical advice/attention immediately.

5. Immediate medical attention and Notes for physician Keep the medical personnel aware of the materials involved and take protective action.

Section 5 – FIRE-FIGHT MEASURES

1. Suitable extinguish media Powder extinguisher, water spray, foam extinguisher, carbon dioxide
Inappropriate extinguishing media: N/A

2. Special hazards arising from the substance Thermal decomposition products:
cyanide, nitrogen oxides, carbon oxides

3. Special protective equipment and Precautions for fire-fighters Move containers from fire area if you can do it without risk. When extinguishing a fire, be sure to wear personal protective equipment.
If it is not possible to extinguish the fire, withdraw immediately. Keep containers cool by spraying with water for a long time, even after the fire is out. Isolate hazardous areas and deny access to people.

Section 6 – ACCIDENTIAL RELEASE MEASURES

1.Personal precautions and Emergency procedures Do not touch spilled material. Avoid inhalation and skin contact. In case of confined space, wear air respirator and ventilate and remove all sources of ignition.

2. Environmental precautions Minimize leak/spill, collect and keep leak/spill in container

3. Methods and material for containment and cleaning up Remove residue with high-efficient cleaner

Section 7 – HANDING AND STORAGE

1. Precautions for safe Handling Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. All containers should be grounded.

2. Conditions for safe storage Keep container tightly closed in a dry, cool and well-ventilated place.
Keep away from incompatible materials. Keep away from acids.
Avoid storage in metal containers. Avoid storage in aluminum containers.

Section 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

1.Occupational exposure limit, biological exposure limit
National law of Safety management of
Occupational Health and Safety Act
TWA : 3mg/m3
STEL : 5mg/m3
5mg/m3 ACGIH Maximum allowable concentration (skin)

2. Appropriate Engineering controls Ensure compliance with applicable exposure limits and operate local exhaust ventilation when working.

3. Personal protective equipment

◦**Respiratory protection** Wear respiratory protection above first class dust mask according to Chemical Control Law when handling.
Respiratory protection should be certified by the Health and Safety Authority.
It is concerned about the harmfulness of the human body depending on the working environment, it should wear respirator, air-purifying respirator

◦**Eye-protection** Wear safety glasses when handling as they may cause human health hazards due to chemicals. Install eye wash facilities and emergency eyewash stations near chemical handling sites

◦**Hand protection** Wear safety gloves when handling the chemical substances in accordance with the Chemical Substances Control Act

◦**Skin and body proticion** Wear chemical protective clothing 3 or 4 (full body) according to the Chemical Substance Control Law when handling.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

1.Physical state and color	Solid(White)	**2.Odor**	Unique odor
3.threshold	N/A	**4. pH**	11~12(20g/l aq. sol)
5.Melting/Freezing point	562℃	**6.Boiling point/range**	1497℃
7. Flashing point	Non-flammable	**8. Evaporation speed**	N/A
9. Flammability(solid,gas)	N/A	**10. Flash or Explosion limit upper / lower**	N/A
11. Vapor pressure	1mmHg@817℃	**12. Solubility**	580g/l(20℃)
13. Vapor density	N/A	**14.Gravity**	1.595(20℃)
15. n-octanol-water Partition coefficient	N/A	**16. Self ignition temp(℃)**	Non-flammable
17. Cracking temp(℃)	N/A	**18. Viscosity**	4cP(30℃, 26% sol)
19. Molecular Weight	49.0		

Section 10 – STABILITY AND REACTIVITY

1.Chemical stability and Possibility of Hazardous Reactions Stable under normal temp. and pressure
Not polymerize
Very toxic gas is generated when contact with acid.

2. Conditions to Avoid Avoid contact with incompatible materials.
Avoid heat, flames, sparks and other sources of ignition.
Containers may rupture or explode if exposed to heat.

3. Incompatible Materials Acids, oxidants, combustible materials, peroxides, halogens, metals, water

4. Hazardous Decomposition Products Thermal decomposition products: carbon oxides, cyanides, nitrogen oxides

Section 11 – TOXICOLOGICAL INFORMAION

1. Information on the likely routes of exposure.

N/A

2. Health hazard information

◦**Acute toxic**	Oral : LD50 5.73mg/kg Rat Skin : LD50 14.6mg/kg Inhalation : N/A
◦**Serious skin corrosive / irritation**	May cause skin irritation
◦**Serious eye damage / irritation**	Cyanide has weak conjunctival edema, photophobia, Conjunctival hyperemia with tingling sensation
◦**Respiratory sensitization**	N/A
◦**Skin sensitization**	N/A
◦ **Carcinogenicity**	N/A
◦ **Germ cell Mutagenicity**	N/A
◦ **Reproductive toxic**	test results: causing fetal malformations
◦**Specific target organ toxicity (single exposure)**	N/A
◦**Specific target organ toxicity (repeated exposure)**	It causes headache, debility, taste and olfactory modulation in humans, dizziness, pharyngeal irritation, vomiting, difficulty breathing, chest tightness It causes sperm motility decreased in experimental animals, epididymal weight, kidney failure, adrenal enlargement, pancreatic necrosis and fibrosis, testicular germ cell degeneration, etc.
◦**Aspiration hazard**	N/A

Section 12 – ECOLOGICAL INFORMATION

1.Acquatic and Terrestrial eco toxicity	Fish toxicity : LC50 0.102mg/l 96hr Invertebrate toxicity : EC50 0.426mg/l 96hr Sea algae : N/A
2.Persistence and degradability	Persistence : N/A Degradability : N/A
3.Bioaccumulative potential	Concentrations : N/A Bioaccumulative : N/A
4.Mobility in soil	N/A
5.Other adverse effects	Very toxic to aquatic organisms Very toxic to aquatic organisms due to long-term effects.

Section 13 – Disposable considerations

1.Waste methods	Dispose in accordance with local regulations.
2.Waste warning	Dispose prohibited substances and waste separately from others.

Section 14 – TRANSPORT INFORMATION

1. UN No.	1689
2.Proper shipping Name	Sodium cyanide, solid
3.Hazard class	6.1
4.Packing group	I
5.Marine pollutnat	Described
6.Particular safety Measures for transportation	Fire emergency : F-A Emergency measures RELEASE : S-A

Section 15 – REGULATARY INFORMATION

1.Occupation safety and health acts	Standard material of exposure Test material of working environment (Test period; 6months) Hazardous material of administration objective Special diagnosis material of health (Diagnosis period; 12months)
2. Chemical Substances Control Act	Toxicity Safety material for Accident
3. National law of Safety management of hazardous material	Non-described
4.National law of management of Wastes	Designated Waste, Toxic Waste
5.Other domestic and foreign law	US Government Information (CERCLA regulation): 4.53599 kg 10 lb US Management Information (EPCRA 302 regulation): 45.3599 kg 100 lb US Management Information (EPCRA 304 regulation): 4.53599 kg 10 lb US Management Information (EPCRA 313 Regulation): Applicable

Section 16 – OTHER INFORMATION

1. Material source	A chemical information MSDS Safety and Health Agency National Institute of Environmental Research Chemical Information Systems Korea Industrial Technology National Fire Hazardous Materials Information System
1. The 1st edition	2002.07.30
2. Revision and The final revision	7 / 2019.01.03

. Other references

* **The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.**