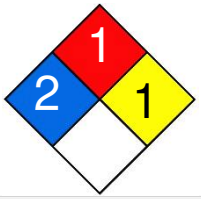


Revision 2

1. IDENTIFICATION

Product Name	**Ammonium Thiocyanate**
Other Names	**Ammonium isothiocyanate; Ammonium rhodanide; Ammonium sulfocyanate**
Uses	**Metal surface cleaning agent; Electroplating agent; Manufacture of plastics; Photographic processing; In textiles; Production of steel; Research and, Development; Manufacture of substances; Laboratory chemicals.**
Chemical Family	**No Data Available**
Chemical Formula	**NH_4SCN**
Chemical Name	**Thiocyanic acid, ammonium salt**
Product Description	**Mono-constituent substance (inorganic).**
Company	**Arman sina.co**
Contact Information	**info@armansina.com** **www.armansina.com**

2. HAZARD IDENTIFICATION

Hazard Categories

Irritant
Acute Toxicity

Hazard Statements

Acute Toxicity
Serious Eye Damage/Irritation

Harmful if swallowed, in contact with skin or if inhaled.

Harmful to aquatic life with long lasting effects.
Contact with acids liberates very toxic gas

Precautionary Statements

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Avoid breathing dusts or mists.

Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator.

IF ON SKIN: Wash with plenty of soap and water.

IF INHALED: Remove victim to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor if you feel unwell.

Rinse mouth.

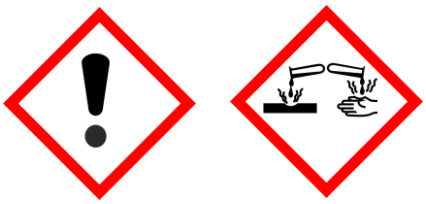
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice.

Take off contaminated clothing and wash it before reuse.

Dispose of contents/container in accordance with local / regional / national / international regulations.

Symbol



3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Ammonium thiocyanate	NH_4SCN	1762-95-4	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting unless directed to do so by medical personnel. For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. Never give anything by mouth to an unconscious person.

Eye IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Get medical attention immediately.

Skin IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. Call a Poison Centre or doctor/physician for advice.

Inhaled IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.

Advice to Doctor Get medical attention immediately. Show this safety data sheet (SDS) to the doctor in attendance.
*Most important symptoms and effects, both acute and delayed: Harmful if swallowed, in contact with skin and if inhaled. May cause symptoms similar to cyanide poisoning; May be metabolised to cyanide which inhibits cytochrome oxidase, thus impairing cellular respiration. Treat as cyanide poisoning.

Medical Conditions Aggravated by Exposure No information available.

5. FIRE FIGHTING MEASURES

General Measures If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Dike fire-control water for later disposal; do not scatter the material. Do not get water inside containers.

Flammability Conditions Non-combustible; Material itself does not burn.

Extinguishing Media If material is involved in a fire, use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction.
*Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Fire and Explosion Hazard Ambient fire may liberate hazardous vapours.

Hazardous Products of Combustion Fire or heat will produce irritating, corrosive and/or toxic gases, including ammonia, hydrogen sulfide, and hydrogen cyanide. Oxides of nitrogen may also form.

Special Fire Fighting Instructions Contain runoff from fire control or dilution water - Runoff may cause pollution.

Personal Protective Equipment Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing - It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Flash Point No Data Available

Lower Explosion Limit No Data Available

Upper Explosion Limit No Data Available

Auto Ignition Temperature No Data Available

Hazchem Code No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation - Ventilate enclosed spaces before entering. Do not touch or walk through spilled material. Avoid dust formation. Avoid breathing dusts or mists and contact with eyes, skin and clothing.
Clean Up Procedures	Sweep up and containerize for reclamation or disposal (see SECTION 13). *Vacuuming or wet sweeping may be used to avoid dust dispersal.
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Cover with plastic sheet to prevent spreading.
Decontamination	Clean contaminated surface thoroughly.
Environmental Precautionary Measures	Prevent entry into drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.

Personal Precautionary Measures Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation - Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Avoid breathing dusts or mists and contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator (see SECTION 8). Avoid strong heating (decomposition). Keep away from sources of ignition - No smoking. Avoid contact with incompatible materials. Avoid release to the environment.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Protect against physical damage. Avoid exposure to moisture/moist air. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original container. *Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. *An exposure limit of 5 - 10 mg/m3 time weighted average (TWA) has been identified for Ammonium thiocyanate (CAS No. 1762-95-4) in different countries such as Ireland, Latvia, Russia and the United Kingdom.
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection in case of inadequate ventilation or under conditions where exposure to the substance is apparent. Recommended: Dust mask/particulate filter respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. - Hand protection: Wear protective gloves. Recommended: Nitrile rubber. - Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Wear

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline
Odour	Odourless
Colour	White
pH	4.5 - 6.0 (50 g/L water)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	149 ° C
Freezing Point	No Data Available
Solubility	Soluble in water
Specific Gravity	1.305
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material itself does not burn.
Reactions That Release Gases or Vapours	Fire or heat will produce irritating, corrosive and/or toxic gases, including ammonia, hydrogen sulfide, and hydrogen cyanide. Oxides of nitrogen may also form.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Contact with acids liberates very toxic gas. Decomposes on exposure to light.
Chemical Stability	Stable under ordinary conditions of use and storage.
Conditions to Avoid	Avoid generating dust. Avoid exposure to light, moisture, moist air. Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with oxidising agents, acids, nitrates, chlorates, various metals.
Hazardous Decomposition Products	Fire or heat will produce irritating, corrosive and/or toxic gases, including ammonia, hydrogen sulfide, and hydrogen cyanide. Oxides of nitrogen may also form.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information

Information on toxicological effects:
- Acute toxicity: Harmful if swallowed, in contact with skin and if inhaled. Contact with acids liberates very toxic gas (hydrogen sulfide, hydrogen cyanide).
- Skin corrosion/irritation: Not considered to be irritating to the skin.
- Eye damage/irritation: Causes serious eye irritation.
- Respiratory/skin sensitisation: Not expected to cause skin sensitisation.
- Germ cell mutagenicity: Not considered to be genotoxic (in vitro).
- Carcinogenicity: Low potential for carcinogenicity.
- Reproductive toxicity: No information available.
- STOT (single exposure): No information available.
- STOT (repeated exposure): Repeated dose exposure is not considered to cause serious damage to health.
- Aspiration toxicity: No information available.

Information on likely routes of exposure:
- Ingestion: May cause gastrointestinal tract irritation with nausea and vomiting; May affect behaviour/central nervous system (hallucinations, distorted perceptions, personality and mood changes, mania, disorientation, weakness, seizures); May affect metabolism. Has the potential to release very toxic gas (hydrogen sulfide, hydrogen cyanide) under acidic conditions.
- Eye contact: Causes serious eye irritation.
- Skin contact: Harmful in contact with skin.
- Inhalation: Harmful if inhaled. Inhalation exposure may cause irritation of the respiratory tract (mucous membranes).

Chronic effects: The thiocyanate ion affects iodine transport to the thyroid, resultant in possible thyroxine-mediated toxicity. However, these effects only occur at high doses and are reversible given iodine supplementation.

Acute

Ingestion

Acute toxicity (Oral):
- LD50, Rat: 750 mg/kg [RTECS].

Carcinogen Category

None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish (Oncorhynchus mykiss): 65 mg/L (96 h) static [OECD TG 203].
Persistence/Degradability	Readily biodegradable (80%, 28 d) [OECD TG 301D].
Mobility	No information available.
Environmental Fate	Harmful to aquatic life with long lasting effects - Avoid release to the environment.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name	Ammonium thiocyanate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

Proper Shipping Name	Ammonium thiocyanate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

Proper Shipping Name	Ammonium thiocyanate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

15. OTHER INFORMATION

Revision

2

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO2 Carbon Dioxide
COD Chemical Oxygen Demand
deg C (° C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (° F) Degrees Farenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH2O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50
(one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50%
half) of a group of test animals.
ltr or L Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component prese
mm Millimetre
mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight