

Revision Date: 2013-01-11
Reason for Revision: Section 14 Updated

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 4012-00 ISA for Lead or Sulfate
Application: Lead or Sulfate ISA Solution
Company Information (USA): Hanna Instruments, Inc.
584 Park East Dr, Woonsocket, Rhode Island, USA 02895
Technical Service Contact Information: 1-800-426-6287 (8:30AM - 5:00PM ET)
+1-401-766-4260 (8:30AM - 5:00PM ET)
USA Emergency Contact Information: 1-800-424-9300 (Chemtrec 24Hr. Emergency)
International Emergency Contact Information: +1-703-527-3887 (Chemtrec 24Hr. Emergency)
E-mail Address: tech@hannainst.com

SECTION 2: HAZARD IDENTIFICATION

Explosive when mixed with combustible material. Harmful if swallowed.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component: Sodium Perchlorate Monohydrate
EC-No.: 231-511-9
CAS-No.: 7791-07-3
Hazard: O, Xn
Phrases: R: 9-22
Content: > 50% - < 80%

SECTION 4: FIRST AID MEASURES

After Inhalation: Remove to fresh air. Call a physician if breathing becomes difficult.
After Skin Contact: Wash affected area with plenty of water. Remove contaminated clothing.
After Eye Contact: Rinse out with plenty of water with the eyelid held wide open. If pain persists, summon medical advice.
After Swallowing: Immediately make victim drink plenty of water. Call in physician.
General Information: Not available

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:
Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam.
Special Risks:
Non-combustible. Fire-promoting. Keep away from combustible materials. Development of hazardous combustion gases or vapours possible in the event of fire. The following may develop in event of fire: Hydrochloric Acid.
Special Protective Equipment:
Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.
Additional Information:
Contain escaping vapors with water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid substance contact.

Environmental Precautions:

Do not allow to enter sewerage system.

Additional Notes:

Take up with liquid-absorbent material. Forward for disposal. Clean up affected area.

SECTION 7: HANDLING AND STORAGE

Handling:

No further requirements.

Storage:

Keep container closed and protected from direct sunlight. Store separately or together with other oxidising substances only and away from sources of ignition and heat. Because of their oxidation potential these products can raise the burning rate of combustible substances substantially or ignite combustible substances on contact with them.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering:

Maintain general industrial hygiene practice.

Personal Protective Equipment:

As appropriate to quantity handled.

Respiratory Protection:

Required when vapors/aerosols are generated.

Protective Gloves:

Rubber or plastic

Eye Protection:

Goggles or face mask

Industrial Hygiene:

Change contaminated clothing. Wash hands after working with substance.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Colorless liquid	Odor:	Odorless	Density at 20°C:	1.37 g/cm ³
Melting Point:	NA	Boiling Point:	ND	Solubility:	Soluble
pH at 20°C:	6	Explosion Limit:	NA	Flash Point:	NA
Thermal Decomp.:	NA				

SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

Heating

Hazardous Polymerization:

Will not occur.

Further Information:

Risk of explosion during distillation.

Hazardous Decomposition Products:

In the event of fire: See section 5.

Substances to be Avoided:

Risk of ignition or formation of inflammable gases or vapors with: light metals in powder form, ammonium compounds, combustible substances, organic substances, metals in powder form, alcohols (warmth/heat), fluorine, halogenated hydrocarbons, combustible substances, semimetallic oxides, polyvinyl chloride, reducing agents, acids, sulfur / heat Violent reactions possible with: cyanides / heat

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

Quantitative data on the toxicity of this product is not available.

Potential Health Effects:

- Inhalation:** After inhalation of dust: Irritation symptoms in the respiratory tract. dyspnoea.
- Skin Contact:** Slight irritations.
- Eye Contact:** Slight irritations.
- Ingestion:** Possible symptoms: muscular weakness.
- Further Data:** Hazardous properties cannot be excluded. The product should be handled with the usual care when dealing with chemicals.

Component Toxicity

Acute Toxicity:

Not Available

Chronic Toxicity:

Not Available

Additional Data:

APPLICABLE TO PARTIAL COMPONENT:
 The following applies to Sodium perchlorate – as the pure substance
 Acute toxicity
 LD50 (oral, rat): 2100 mg/kg (anhydrous substance) (RTECS).

SECTION 12: ECOLOGICAL INFORMATION

Quantitative data on the ecotoxicity of this product is not available.

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Sodium perchlorate – as the pure substance

Ecotoxic effects:

Quantitative data on the ecological effect of this product are not available.

Further ecologic data:

The following applies to perchlorates in general:

Biological effects:

Fish: *Leuciscus idus* LC50: 1850 mg/L/48 h.

Daphnia: *Daphnia magna* EC50: 1077 mg/L/24 h.

Algae: *Scenedesmus quadricauda* IC50: 360 mg/L/7 d.

Bacteria: *Microcystis aeruginosa* EC50: 79 mg/L/8 d

Further Data: Do not allow to enter waters, waste water, or soil!

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice. Handle contaminated packaging in the same way as the substance itself.

SECTION 14: TRANSPORTATION INFORMATION

	<u>Land (ADR/RID):</u>	<u>Sea (IMDG):</u>	<u>Air (ICAO/IATA):</u>
UN No.:	3211	3211	3211
Proper Shipping Name:	Perchlorates, inorganic, aqueous solution, n.o.s.	Perchlorates, inorganic, aqueous solution, n.o.s.	Perchlorates, inorganic, aqueous solution, n.o.s.
Class (Sub Risk):	5.1	5.1	5.1
Packing Group:	II	II	II

SECTION 15: REGULATORY INFORMATION**Labeling according to EC Directives:****Symbol:** O: Oxidizing
Xn: Harmful**R-phrases:** 9-22: Explosive when mixed with combustible material. Harmful if swallowed.**S-phrases:** 13-22-27: Keep away from food, drink and animal feeding stuffs. Take off immediately all contaminated clothing.**Contains:** Sodium perchlorate**SECTION 16: OTHER INFORMATION****Text of R-phrases under Section 3**9: Explosive when mixed with combustible material.
22: Harmful if swallowed.**Revision Information****Revision Date:** 2013-01-11**Supersedes edition of:** 2012-06-07**Reason for revision:** Section 14 Updated**Legend**NA: Not Applicable
ND: Not Determined

THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF THE PROPERTIES OF THE PRODUCT.