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## MATERIAL SAFETY DATA SHEET (MSDS)

### SODIUM COBALTI NITRITE AR

#### 1. Product Identification

**Synonyms:** Sodium hexanitrocobaltate (III); cobaltate (3-), hexakis (nitrito-n)-,trisodium, (OC-6-11)-; trisodium hexanitrocobaltate  
**CAS No.:** 13600-98-1

Product Coad: S0188700500

**Molecular Weight:** 403.94  
**Chemical Formula:** Na3Co(NO2)6

#### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Cobaltinitrite	13600-98-1	90 - 100%	Yes

#### 3. Hazards Identification

**Emergency Overview DANGER! OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN OR RESPIRATORY REACTION. CHRONIC EXPOSURE MAY AFFECT THYROID, LUNGS, HEART, AND KIDNEYS.**

**Inhalation:** Causes irritation to the respiratory tract, symptoms may include coughing, shortness of breath, and nausea. Respiratory hypersensitivity, asthma may appear. Inhalation of cobalt dust and fumes is associated with an increased incidence of lung disease.

**Ingestion:** Toxic. Causes abdominal pain, nausea, vomiting, flushing of the face and ears, mild hypotension, rash, and ringing in the ears. May have cumulative toxic action where elimination cannot keep pace with absorption. Large amounts depress erythrocyte production.

**Skin Contact:** Causes irritation to skin. Symptoms include redness, itching, and pain. May cause dermatitis. **Eye Contact:** Causes irritation, redness, and pain.

**Chronic Exposure:** Repeated oral administration may produce goiter and reduced thyroid activity. Prolonged or repeated skin exposure may cause dermatitis. Chronic exposure associated with kidney, heart and lung damage. Exposure to nitrates cause methemoglobinemia.

**Aggravation of Pre-existing Conditions:** Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance. Persons with stomach diseases and infants are much more sensitive to nitrate ion toxicity. Persons with allergies or sensitivity to cobalt may also be more susceptible to the effects of the substance.

#### 4. First Aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **Ingestion:** Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

**Skin Contact:** Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

#### 5. Fire Fighting Measures

**Fire:** Not combustible, but substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. **Explosion:** Contact with oxidizable substances may cause extremely violent combustion. Decomposition can be vigorous enough to burst containers. **Fire**

**Extinguishing Media:** Water spray, carbon dioxide, or dry powder. **Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

#### 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Keep combustibles (wood, paper, oil, etc.) away from spilled material. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

#### 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Avoid storage on wood floors. Separate from incompatibles, combustibles, organic or other readily oxidizable materials. Wash hands before eating and do not eat, drink, or smoke in workplace. 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

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**Airborne Exposure Limits:** For Cobalt Compound:-OSHA Permissible Exposure Limit (PEL):0.1 mg/m3 (TWA) Cobalt metal dust and fume as Co-ACGIH Threshold Limit Value (TLV):inorganic cobalt compounds: 0.02 mg/m3 (TWA) as Co.A3: Animal carcinogen. **Ventilation System:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. 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. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details. **Personal Respirators (NIOSH Approved):** If the exposure limit is exceeded and engineering controls are not feasible, a half-face high efficiency particulate respirator (NIOSH type N100 filter) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece high efficiency particulate respirator (NIOSH type N100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. **Skin Protection:** Wear protective gloves and clean body-covering clothing. **Eye Protection:** Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

#### 9. Physical and Chemical Properties

**Appearance:** Fine, yellow orange powder.

**Odor:** Odorless.

**Solubility:** Very soluble in water.

#### 10. Stability and Reactivity

**Stability:** Stable under ordinary conditions of use and storage. The aqueous solution rapidly degrades.

**Hazardous Decomposition Products:** Oxides of nitrogen and toxic metal fumes may form when heated to decomposition. **Hazardous**

**Polymerization:** This substance does not polymerize.

**Incompatibilities:** Substance may react violently with some organic compounds or reducing agents.

**Conditions to Avoid:** Incompatibles.

#### 11. Toxicological Information

**Toxicological Data:** Investigated as a reproductive effector.

**Carcinogenicity:** Cobalt and its compounds have been shown to cause cancer in laboratory animals.

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Sodium Cobaltinitrite (13600-98-1)	No	No	2B

#### 12. Ecological Information

**Environmental Fate:** No information found.

**Environmental Toxicity:** No information found.

#### 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

#### 14. Transport Information

**International (Water, I.M.O.)**

**Proper Shipping Name:** OXIDIZING SOLID, N.O.S. (SODIUM COBALTNITRIDE)

**Hazard Class:** 5.1 UN/NA: UN1479 Packing Group: II

#### 15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Sodium Cobaltinitrite (13600-98-1)	Exempt	Yes	No	Yes

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-----\Chemical Inventory Status - Part 2\-----

--Canada--

Ingredient	Korea	DSL	NDSL	Phil.
Sodium Cobaltinitrite (13600-98-1)	Yes	No	No	Yes

-----\Federal, State & International Regulations - Part 1\-----

-SARA 302- -----SARA 313-----

Ingredient	RQ	TPQ	List	Chemical Catg.
Sodium Cobaltinitrite (13600-98-1)	No	No	No	Cobalt compo

-----\Federal, State & International Regulations - Part 2\-----

-RCRA- -TSCA-

Ingredient	CERCLA	261.33	8(d)
Sodium Cobaltinitrite (13600-98-1)	1	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No

Reactivity: No (Pure / Solid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

**WHMIS:** This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

#### 16. Other Information

**NFPA Ratings:** Health: **2** Flammability: **0** Reactivity: **0** Other: **Oxidizer**

**Label Hazard Warning:** DANGER! OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN OR RESPIRATORY REACTION. CHRONIC EXPOSURE MAY AFFECT THYROID, LUNGS, HEART, AND KIDNEYS. **Label Precautions:** Keep from contact with clothing and other combustible materials. Store in a tightly closed container. Remove and wash contaminated clothing promptly. Do not store near combustible materials. Avoid breathing dust. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Avoid contact with eyes, skin and clothing. INTENDED FOR R & D USE ONLY. NOT ON THE TSCA INVENTORY. **Label First Aid:** If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention.

**Product Use:** Research and Development Use Only.

**MATERIAL SAFETY DATA SHEET (MSDS)**

**SODIUM COBALTI NITRITE AR**

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
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