

## 1. Identification

|   |  |                       |
|---|--|-----------------------|
| <b>Product identifier</b>                                     | <b>COBALT THIOCYANATE, ANHYDROUS</b>   |                       |
| <b>Other means of identification</b>                          |  |                       |
| <b>Product code</b>   | 3624   |                       |
| <b>Recommended use</b>  | professional, scientific and technical activities: other professional, scientific and technical activities |                       |
| <b>Recommended restrictions</b>                               | None known.  |                       |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |  |                       |
| <b>Manufacturer</b>   |  |                       |
| <b>Company name</b>   | GFS Chemicals, Inc.  |                       |
| <b>Address</b>  | P.O. Box 245<br>Powell, OH 43065<br>United States  |                       |
| <b>Telephone</b>  | Phone  | 740-881-5501          |
|   | Toll Free  | 800-858-9682          |
|   | Fax  | 740-881-5989          |
| <b>Website</b>  | www.gfschemicals.com   |                       |
| <b>E-mail</b>   | service@gfschemicals.com   |                       |
| <b>Emergency phone number</b>                                 | Emergency Assistance   | Chemtrec 800-424-9300 |

## 2. Hazard(s) identification

|                              |  |            |
|------------------------------|--|------------|
| <b>Physical hazards</b>      | Not classified.  |            |
| <b>Health hazards</b>        | Acute toxicity, oral                                   | Category 4 |
|                              | Acute toxicity, dermal                                 | Category 4 |
|                              | Acute toxicity, inhalation                             | Category 4 |
| <b>Environmental hazards</b> | Hazardous to the aquatic environment, acute hazard     | Category 1 |
|                              | Hazardous to the aquatic environment, long-term hazard | Category 3 |
| <b>OSHA defined hazards</b>  | Not classified.  |            |

### Label elements



|  |   |
|--|---|
| <b>Signal word</b>                               | Warning   |
| <b>Hazard statement</b>                          | Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled. Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.  |
| <b>Precautionary statement</b>                   |   |
| <b>Prevention</b>                                | Avoid breathing dust/fume. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.   |
| <b>Response</b>                                  | If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. |
| <b>Storage</b>                                   | Store in a well-ventilated place. Keep container tightly closed. Store locked up.   |
| <b>Disposal</b>                                  | Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.  |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.   |
| <b>Supplemental information</b>                  | None.   |

### 3. Composition/information on ingredients

#### Substances

| Chemical name      | Common name and synonyms | CAS number | %   |
|--------------------|--------------------------|------------|-----|
| COBALT THIOCYANATE |                          | 3017-60-5  | 100 |

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

|   |   |
|---|---|
| <b>Inhalation</b>   | Move to fresh air. Oxygen or artificial respiration if needed.  |
| <b>Skin contact</b>   | Remove and isolate contaminated clothing and shoes. For minor skin contact, avoid spreading material on unaffected skin. Immediately flush skin with plenty of water. Get medical attention if irritation develops and persists. Wash clothing separately before reuse.   |
| <b>Eye contact</b>  | Rinse with water. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.   |
| <b>Ingestion</b>  | If ingestion of a large amount does occur, call a poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention if symptoms occur. |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Irritation of eyes. Upper respiratory tract irritation.   |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.  |
| <b>General information</b>  | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.   |

### 5. Fire-fighting measures

|  |  |
|--|--|
| <b>Suitable extinguishing media</b>                                  | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).   |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.   |
| <b>Specific hazards arising from the chemical</b>                    | During fire, gases hazardous to health may be formed.  |
| <b>Special protective equipment and precautions for firefighters</b> | Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. |
| <b>Fire fighting equipment/instructions</b>                          | Use water spray to cool unopened containers.   |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.   |
| <b>General fire hazards</b>  | No unusual fire or explosion hazards noted. May decompose in fire situation yielding toxic gas.  |

### 6. Accidental release measures

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
|--|---|

**Methods and materials for containment and cleaning up**

Refer to attached safety data sheets and/or instructions for use. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). This product is miscible in water. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Should not be released into the environment. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use. This material and its container must be disposed of as hazardous waste. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

**7. Handling and storage**

**Precautions for safe handling**

Provide appropriate exhaust ventilation at places where dust is formed. Minimize dust generation and accumulation. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. Wash contaminated clothing before reuse.

**Conditions for safe storage, including any incompatibilities**

Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

| Material                           | Type | Value      |
|------------------------------------|------|------------|
| COBALT THIOCYANATE (CAS 3017-60-5) | TWA  | 0.02 mg/m3 |

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear dust goggles.

**Skin protection**

**Hand protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear respirator if there is dust formation.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

**Appearance**

**Physical state**

Solid.

**Form**

Powder.

**Color**

Yellow-brown.

**Odor**

Odorless.

|   |                |
|---|----------------|
| <b>Odor threshold</b>                               | Not available. |
| <b>pH</b>   | Not available. |
| <b>Melting point/freezing point</b>                 | Not available. |
| <b>Initial boiling point and boiling range</b>      | Not available. |
| <b>Flash point</b>                                  | Not available. |
| <b>Evaporation rate</b>                             | Not available. |
| <b>Flammability (solid, gas)</b>                    | Not available. |
| <b>Upper/lower flammability or explosive limits</b> |                |
| <b>Flammability limit - lower (%)</b>               | Not available. |
| <b>Flammability limit - upper (%)</b>               | Not available. |
| <b>Explosive limit - lower (%)</b>                  | Not available. |
| <b>Explosive limit - upper (%)</b>                  | Not available. |
| <b>Vapor pressure</b>                               | Not available. |
| <b>Vapor density</b>                                | Not available. |
| <b>Relative density</b>                             | Not available. |
| <b>Solubility(ies)</b>                              |                |
| <b>Solubility (water)</b>                           | Soluble        |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available. |
| <b>Auto-ignition temperature</b>                    | Not available. |
| <b>Decomposition temperature</b>                    | Not available. |
| <b>Viscosity</b>                                    | Not available. |
| <b>Other information</b>                            |                |
| <b>Molecular formula</b>                            | Co(SCN)2       |
| <b>Molecular weight</b>                             | 175.1 g/mol    |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport.                               |
| <b>Chemical stability</b>                 | No hazardous self-reactivity.   |
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization does not occur.  |
| <b>Conditions to avoid</b>                | Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). |
| <b>Incompatible materials</b>             | Strong acids. Oxidizing material.   |
| <b>Hazardous decomposition products</b>   | Cyanide.  |

## 11. Toxicological information

|   |   |
|---|---|
| <b>Information on likely routes of exposure</b>                                     |   |
| <b>Inhalation</b>   | Harmful if inhaled.   |
| <b>Skin contact</b>   | Harmful in contact with skin.   |
| <b>Eye contact</b>  | Dust in the eyes will cause irritation.   |
| <b>Ingestion</b>  | Harmful if swallowed.   |
| <b>Symptoms related to the physical, chemical and toxicological characteristics</b> | Irritation of eyes. Upper respiratory tract irritation.   |
| <b>Information on toxicological effects</b>   |   |
| <b>Acute toxicity</b>   | Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed. The toxicological properties of this material have not been fully investigated and its handling and use may be hazardous. |
| <b>Skin corrosion/irritation</b>  | Prolonged skin contact may cause temporary irritation.  |
| <b>Serious eye damage/eye irritation</b>  | Dust in the eyes will cause irritation.   |

## Respiratory or skin sensitization

**Respiratory sensitization** Not available.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** ACGIH animal carcinogen. IARC Group 2B Possibly Carcinogenic.

### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

#### US OSHA Hazard Categories (1)

Not regulated.

#### US OSHA Hazard Categories (10)

Not regulated.

#### US OSHA Hazard Categories (2)

Not regulated.

#### US OSHA Hazard Categories (3)

Not regulated.

#### US OSHA Hazard Categories (4)

Not regulated.

#### US OSHA Hazard Categories (5)

Not regulated.

#### US OSHA Hazard Categories (6)

Not regulated.

#### US OSHA Hazard Categories (7)

Not regulated.

#### US OSHA Hazard Categories (8)

Not regulated.

#### US OSHA Hazard Categories (9)

Not regulated.

### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not available.

**Chronic effects** Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

**Persistence and degradability** None known.

**Bioaccumulative potential** No data available.

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

|                                     |  |
|-------------------------------------|--|
| <b>UN number</b>                    | UN3077   |
| <b>UN proper shipping name</b>      | Environmentally hazardous substances, solid, n.o.s. (COBALT THIOCYANATE) |
| <b>Transport hazard class(es)</b>   |  |
| <b>Class</b>                        | 9  |
| <b>Subsidiary risk</b>              | -  |
| <b>Label(s)</b>                     | 9  |
| <b>Packing group</b>                | III  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling.  |
| <b>Special provisions</b>           | 8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33                          |
| <b>Packaging exceptions</b>         | 155  |
| <b>Packaging non bulk</b>           | 213  |
| <b>Packaging bulk</b>               | 240  |

### IATA

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN3077  |
| <b>UN proper shipping name</b>      | Environmentally hazardous substance, solid, n.o.s. (COBALT THIOCYANATE) |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 9   |
| <b>Subsidiary risk</b>              | -   |
| <b>Packing group</b>                | III   |
| <b>Environmental hazards</b>        | No.   |
| <b>ERG Code</b>                     | 9L  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |
| <b>Other information</b>            |   |
| <b>Passenger and cargo aircraft</b> | Allowed with restrictions.  |
| <b>Cargo aircraft only</b>          | Allowed with restrictions.  |

### IMDG

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN3077  |
| <b>UN proper shipping name</b>      | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COBALT THIOCYANATE) |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 9   |
| <b>Subsidiary risk</b>              | -   |
| <b>Packing group</b>                | III   |
| <b>Environmental hazards</b>        |   |
| <b>Marine pollutant</b>             | No.   |
| <b>EmS</b>                          | F-A, S-F  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

### DOT; IATA; IMDG



**General information** DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

### **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

COBALT THIOCYANATE (CAS 3017-60-5) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**US OSHA Hazard Categories (1)**

Not regulated.

**US OSHA Hazard Categories (2)**

Not regulated.

**US OSHA Hazard Categories (3)**

Not regulated.

**US OSHA Hazard Categories (4)**

Not regulated.

**US OSHA Hazard Categories (5)**

Not regulated.

**US OSHA Hazard Categories (6)**

Not regulated.

**US OSHA Hazard Categories (7)**

Not regulated.

**US OSHA Hazard Categories (8)**

Not regulated.

**US OSHA Hazard Categories (9)**

Not regulated.

**US OSHA Hazard Categories (10)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

| Chemical name      | CAS number | % by wt. |
|--------------------|------------|----------|
| COBALT THIOCYANATE | 3017-60-5  | 100      |

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

COBALT THIOCYANATE (CAS 3017-60-5)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations**

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

COBALT THIOCYANATE (CAS 3017-60-5)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

## International Inventories

| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia                   | Australian Inventory of Chemical Substances (AICS)                     | Yes                    |
| Canada                      | Domestic Substances List (DSL)   | No                     |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | Yes                    |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | No                     |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                    |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                 | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | No                     |
| Korea                       | Existing Chemicals List (ECL)  | No                     |
| New Zealand                 | New Zealand Inventory  | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | No                     |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** July-31-2015

**Revision date** February-15-2016

**Version #** 02

**Disclaimer** GFS Chemicals, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available