

## SAFETY DATA SHEET

Creation Date 21-Sep-2009

Revision Date 19-Jan-2018

Revision Number 3

### 1. Identification

**Product Name** Potassium cyanate

**Cat No. :** AC201110000; AC201110010; AC201110050; AC201111000;  
AC201115000

**CAS-No** 590-28-3  
**Synonyms** Cyanic acid, potassium salt; Potassium isocyanate

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

#### **Emergency Telephone Number**

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity

Category 4

#### Label Elements

##### **Signal Word**

Warning

##### **Hazard Statements**

Harmful if swallowed



##### **Precautionary Statements**

Prevention

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component         | CAS-No   | Weight % |
|-------------------|----------|----------|
| Potassium cyanate | 590-28-3 | >95      |

### 4. First-aid measures

|  |  |
|--|--|
| <b>Eye Contact</b>                         | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.  |
| <b>Skin Contact</b>                        | Remove and wash contaminated clothing before re-use. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.   |
| <b>Inhalation</b>                          | Move to fresh air. Consult a physician. If breathing is irregular or stopped, administer artificial respiration. 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. |
| <b>Ingestion</b>                           | Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do not induce vomiting.   |
| <b>Most important symptoms and effects</b> | No information available.  |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

### 5. Fire-fighting measures

|   |                          |
|---|--------------------------|
| <b>Unsuitable Extinguishing Media</b>   | No information available |
| <b>Flash Point</b>                      | No information available |
| <b>Method -</b>                         | No information available |
| <b>Autoignition Temperature</b>         | No information available |
| <b>Explosion Limits</b>                 |                          |
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | No information available |

**Specific Hazards Arising from the Chemical**

Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**

Nitrogen oxides (NOx) Hydrogen cyanide (hydrocyanic acid)

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**Health  
2Flammability  
1Instability  
0Physical hazards  
N/A**6. Accidental release measures****Personal Precautions**

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

**Environmental Precautions**

Should not be released into the environment. See Section 12 for additional ecological information. Do not flush into surface water or sanitary sewer system.

**Methods for Containment and Clean Up**

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

**7. Handling and storage****Handling**

Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place.

**8. Exposure controls / personal protection****Exposure Guidelines**

| Component         | ACGIH TLV | OSHA PEL                           | NIOSH IDLH                 | Mexico OEL (TWA)         |
|-------------------|-----------|------------------------------------|----------------------------|--------------------------|
| Potassium cyanate |           | (Vacated) TWA: 5 mg/m <sup>3</sup> | IDLH: 25 mg/m <sup>3</sup> | TWA: 5 mg/m <sup>3</sup> |

**Legend****OSHA** - Occupational Safety and Health Administration**NIOSH IDLH**: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health**Engineering Measures**

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment****Eye/face Protection**

Tightly fitting safety goggles.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

No protective equipment is needed under normal use conditions.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

|                                  |                          |
|----------------------------------|--------------------------|
| Physical State                   | Solid                    |
| Appearance                       | White                    |
| Odor                             | Odorless                 |
| Odor Threshold                   | No information available |
| pH                               | approx 10-50 g/l aq.sol  |
| Melting Point/Range              | 315 °C / 599 °F          |
| Boiling Point/Range              | No information available |
| Flash Point                      | No information available |
| Evaporation Rate                 | Not applicable           |
| Flammability (solid,gas)         | No information available |
| Flammability or explosive limits |                          |
| Upper                            | No data available        |
| Lower                            | No data available        |

|  |                          |
|--|--------------------------|
| Vapor Pressure                         | No information available |
| Vapor Density                          | Not applicable           |
| Specific Gravity                       | No information available |
| Solubility                             | Soluble in water         |
| Partition coefficient; n-octanol/water | No data available        |
| Autoignition Temperature               | No information available |
| Decomposition Temperature              | 700 °C                   |
| Viscosity                              | Not applicable           |
| Molecular Formula                      | C K N O                  |
| Molecular Weight                       | 81.12                    |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactive Hazard</b>                  | None known, based on information available                              |
| <b>Stability</b>                        | Stable under normal conditions.   |
| <b>Conditions to Avoid</b>              | Incompatible products. Excess heat. Avoid dust formation.               |
| <b>Incompatible Materials</b>           | Strong oxidizing agents   |
| <b>Hazardous Decomposition Products</b> | Nitrogen oxides (NO <sub>x</sub> ), Hydrogen cyanide (hydrocyanic acid) |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.                                |
| <b>Hazardous Reactions</b>              | None under normal processing.   |

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

| Component         | LD50 Oral                | LD50 Dermal | LC50 Inhalation |
|-------------------|--------------------------|-------------|-----------------|
| Potassium cyanate | LD50 = 567 mg/kg ( Rat ) | Not listed  | Not listed      |

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                        |  |
|------------------------|--|
| <b>Irritation</b>      | No information available   |
| <b>Sensitization</b>   | No information available   |
| <b>Carcinogenicity</b> | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component         | CAS-No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------|----------|------------|------------|------------|------------|------------|
| Potassium cyanate | 590-28-3 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

This product contains a chemical which is listed as a marine pollutant according to DOT



### Ecotoxicity

Do not empty into drains. Contains a substance which is: Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment.

| Component         | Freshwater Algae | Freshwater Fish                              | Microtox   | Water Flea                              |
|-------------------|------------------|--|------------|---|
| Potassium cyanate | Not listed       | Onchorhynchus mykiss:<br>LC50: 24.3 mg/L/96h | Not listed | EC50: = 18 mg/L, 48h<br>(Daphnia magna) |

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT** Not regulated  
**TDG** Not regulated  
**IATA** Not regulated  
**IMDG/IMO** Not regulated

## 15. Regulatory information

### International Inventories

| Component         | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|-------------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Potassium cyanate | X    | X   | -    | 209-676-3 | -      |     | X     | X    | X    | X     | X    |

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated

polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

TSCA 12(b) Not applicable

#### SARA 313

| Component         | CAS-No   | Weight % | SARA 313 - Threshold Values % |
|-------------------|----------|----------|-------------------------------|
| Potassium cyanate | 590-28-3 | >95      | 1.0                           |

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

| Component         | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|-------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Potassium cyanate | -                          | -                           | X                      | X                         |

Clean Air Act Not applicable

| Component         | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|-------------------|-----------|-------------------------|-------------------------|
| Potassium cyanate | X         |                         | -                       |

OSHA Occupational Safety and Health Administration  
Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

### U.S. State Right-to-Know Regulations

| Component         | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------------|---------------|------------|--------------|----------|--------------|
| Potassium cyanate | -             | X          | X            | X        | X            |

### U.S. Department of Transportation

Reportable Quantity (RQ): N  
DOT Marine Pollutant Y  
DOT Severe Marine Pollutant N

### U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

### Other International Regulations

Mexico - Grade No information available

## 16. Other information

Prepared By Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

|                         |   |
|-------------------------|---|
| <b>Creation Date</b>    | 21-Sep-2009   |
| <b>Revision Date</b>    | 19-Jan-2018   |
| <b>Print Date</b>       | 19-Jan-2018   |
| <b>Revision Summary</b> | This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). |

**Disclaimer**

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

**End of SDS**