



# Safety Data Sheet

## Potassium Cyanide, Granular, ACS

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### 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product Name:** Potassium Cyanide, Granular, ACS

**Synonyms/Generic Names:** None

**Product Number:** CP-J1888D, CP-A1888D, CP-M1888D, 4275

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer:** ChemPure Brand Chemicals  
39103 Warren Road  
Westland, MI 48185

**For More Information Call:** 734-729-1805 (Monday-Friday 8:00-4:30)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

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### 2. HAZARDS IDENTIFICATION

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**OSHA Hazards:** Target organ effect, Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption

**Target Organs:** Blood, Central nervous system, Cardiovascular system, Thyroid

**Signal Word:** Danger

**Pictograms:**



**GHS Classification:**

|  |            |
|--|------------|
| Corrosive to metals                              | Category 1 |
| Acute toxicity, Oral                             | Category 2 |
| Acute toxicity, Inhalation                       | Category 2 |
| Acute toxicity, Dermal                           | Category 1 |
| Specific target organ toxicity-single exposure   | Category 1 |
| Specific target organ toxicity-repeated exposure | Category 1 |
| Acute aquatic toxicity                           | Category 1 |

**GHS Label Elements, including precautionary statements:**

**Hazard Statements:**

|                |   |
|----------------|---|
| H290           | May be corrosive to metals.                                     |
| H300+H310+H330 | Fatal if swallowed, in contact with skin or if inhaled.         |
| H370           | Causes damage to organs through prolonged or repeated exposure. |
| H372           | Causes damage to organs.  |
| H410           | Very toxic to aquatic life.                                     |

**Precautionary Statements:**

|           |   |
|-----------|---|
| P260      | Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.                          |
| P264      | Wash hands thoroughly after handling.   |
| P273      | Avoid release to the environment.   |
| P280      | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P284      | Wear respiratory protection.  |
| P302+P350 | IF ON SKIN: Gently wash with plenty of soap and water.                        |
| P310      | Immediately call a POISON CENTER or doctor/ physician.                        |

**Potential Health Effects**

|                   |  |
|-------------------|--|
| <b>Eyes</b>       | Causes eye irritation.   |
| <b>Inhalation</b> | May be fatal if inhaled. Causes respiratory tract irritation.  |
| <b>Skin</b>       | May be fatal if absorbed through skin. Causes skin irritation. |
| <b>Ingestion</b>  | May be fatal if swallowed.                                     |

**NFPA Ratings**

|                 |               |
|-----------------|---------------|
| Health          | 4             |
| Flammability    | 0             |
| Reactivity      | 0             |
| Specific hazard | Not Available |

**HMIS Ratings**

|            |   |
|------------|---|
| Health     | 4 |
| Fire       | 0 |
| Reactivity | 0 |
| Personal   | J |

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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| Component         | Weight % | CAS #    | EINECS# / ELINCS# | Formula | Molecular Weight |
|-------------------|----------|----------|-------------------|---------|------------------|
| Potassium Cyanide | >96      | 151-50-8 | 205-792-3         | KCN     | 65.12 g/mol      |

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### 4. FIRST-AID MEASURES

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|                   |  |
|-------------------|--|
| <b>Eyes</b>       | Rinse with plenty of water for at least 15 minutes and seek medical attention immediately.   |
| <b>Inhalation</b> | Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately. |
| <b>Skin</b>       | Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.            |
| <b>Ingestion</b>  | <b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.      |

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### 5. FIRE-FIGHTING MEASURES

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|  |  |
|--|--|
| <b>Suitable (and unsuitable) extinguishing media</b>                 | Product is not flammable. Use appropriate media for adjacent fire. Do not use water or carbon dioxide on chemical, use dry chemical or alcohol foam. |
| <b>Special protective equipment and precautions for firefighters</b> | Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.                                  |
| <b>Specific hazards arising from the chemical</b>                    | Emits toxic fumes (carbon oxides, nitrogen oxides, potassium oxides) under fire conditions. (See also Stability and Reactivity section).             |

## 6. ACCIDENTAL RELEASE MEASURES

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | See section 8 for recommendations on the use of personal protective equipment.  |
| <b>Environmental precautions</b>   | Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.   |
| <b>Methods and materials for containment and cleaning up</b>               | Pick up and arrange disposal without creating dust. Sweep up and place in suitable, closed containers for disposal. Do not flush with water. Dispose of all waste and cleanup materials in accordance with regulations. |

## 7. HANDLING AND STORAGE

### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.

### Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Light sensitive. Hygroscopic. Moisture sensitive. Keep away from incompatible materials (see section 10 for incompatibilities).

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Occupational exposure controls:

| Component         | Exposure Limits                 | Basis | Entity |
|-------------------|---------------------------------|-------|--------|
| Potassium Cyanide | 5 mg/m <sup>3</sup>             | CEIL  | ACGIH  |
|                   | 5 mg/m <sup>3</sup>             | PEL   | OSHA   |
|                   | 5 mg/m <sup>3</sup><br>4.78 ppm | CEIL  | NIOSH  |

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

### Personal Protection

|                   |   |
|-------------------|---|
| <b>Eyes</b>       | Wear chemical safety glasses or goggles.  |
| <b>Inhalation</b> | If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US). |
| <b>Skin</b>       | Wear nitrile or rubber gloves, apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.       |
| <b>Other</b>      | Not Available   |

### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|   |   |
|---|---|
| Appearance (physical state, color, etc.)    | White solid.  |
| Odor  | Almond-like.  |
| Odor threshold                              | Not Available   |
| pH  | 11.5 at 20 g/l at 20°C (68°F)   |
| Melting point/freezing point                | 634.5°C (1174.1°F)  |
| Initial boiling point and boiling range     | 1625°C (2957°F)   |
| Flash point                                 | Not Flammable   |
| Evaporation rate                            | Not Available   |
| Flammability (solid, gas)                   | Not Flammable   |
| Upper/lower flammability or explosive limit | Not Explosive   |
| Vapor pressure                              | Not Available   |
| Vapor density                               | Not Available   |
| Density                                     | 1.553 (Water = 1)   |
| Solubility (ies)                            | Soluble in water. Partially soluble in methanol. Slightly soluble in ethanol. |
| Partition coefficient: n-octanol/water      | log Pow: 0.44   |
| Auto-ignition temperature                   | Not Available   |
| Decomposition temperature                   | Not Available   |

## 10. STABILITY AND REACTIVITY

|   |   |
|---|---|
| <b>Chemical Stability</b>                 | Stable.   |
| <b>Possibility of Hazardous Reactions</b> | Will not occur.   |
| <b>Conditions to Avoid</b>                | Moisture.   |
| <b>Incompatible Materials</b>             | Acids, strong oxidizing agents, iodine, permanganates, e.g. potassium permanganate, peroxides, metallic salts, chloral hydrate, alkaloids, chlorates. |
| <b>Hazardous Decomposition Products</b>   | Carbon oxides, nitrogen oxides, potassium oxides, hydrogen cyanide.   |

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

|                    |  |
|--------------------|--|
| <b>Skin</b>        | Not Available  |
| <b>Eyes</b>        | Not Available  |
| <b>Respiratory</b> | Not Available  |
| <b>Ingestion</b>   | LDLO Oral - Human - 2.857 mg/kg<br>LD50 Oral - mouse - 8.5 mg/kg<br>LD50 Oral - rabbit - 5 mg/kg<br>LD50 Oral - rat - 6 mg/kg  |
| <b>Other</b>       | LD50 Subcutaneous - rat - 7.814 mg/kg<br>LD50 Intravenous - rat - 3.6 mg/kg<br>LD50 Intraperitoneal - rat - 4 mg/kg<br>LD50 Subcutaneous - mouse - 6.5 mg/kg<br>LD50 Intravenous - mouse - 2.6 mg/kg<br>LD50 Intravenous - cat - 2.2 mg/kg<br>LD50 Intraperitoneal - rabbit - 3.972 mg/kg<br>LD50 Subcutaneous - rabbit - 4 mg/kg<br>LD50 Intramuscular - rabbit - 3.256 mg/kg<br>LD50 Ocular - rabbit - 7.87 mg/kg<br>LD50 Intramuscular - Pigeon - 4 mg/kg |

### Carcinogenicity

|              |  |
|--------------|--|
| <b>IARC</b>  | No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| <b>ACGIH</b> | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.            |
| <b>NTP</b>   | No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.                 |
| <b>OSHA</b>  | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.             |

### Signs & Symptoms of Exposure

|                    |   |
|--------------------|---|
| <b>Skin</b>        | Causes skin irritation and possible burns especially if the skin is wet or moist.   |
| <b>Eyes</b>        | Causes eye irritation and possible eye burns.   |
| <b>Respiratory</b> | Causes respiratory tract and mucous membrane irritation.  |
| <b>Ingestion</b>   | Causes severe gastrointestinal tract irritation with nausea, vomiting and possible burns. May cause tissue anoxia. May affect behavior/central nervous system, metabolism, cardiovascular system, respiratory system, blood, respiration. |

|   |  |
|---|--|
| <b>Chronic Toxicity</b>                                 | Causes damage to the following organs: blood, liver. May cause damage to the following organs: cardiovascular system, upper respiratory tract, Urinary system, central nervous system (CNS). |
| <b>Teratogenicity</b>                                   | Not Available  |
| <b>Mutagenicity</b>                                     | Mutagenic for mammalian somatic cells.   |
| <b>Embryotoxicity</b>                                   | Not Available  |
| <b>Specific Target Organ Toxicity-single exposure</b>   | Ingestion - Causes damage to organs. - Heart, Testes   |
| <b>Specific Target Organ Toxicity-repeated exposure</b> | Causes damage to organs through prolonged or repeated exposure.  |
| <b>Reproductive Toxicity</b>                            | May cause adverse reproductive effects (female fertility and fetotoxicity).  |
| <b>Respiratory/Skin Sensitization</b>                   | Not Available  |

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

|                             |   |
|-----------------------------|---|
| <b>Aquatic Vertebrate</b>   | LC50 - Oncorhynchus mykiss (rainbow trout) - 0.052 mg/l - 96.0 h<br>LC50 - Lepomis macrochirus - 0.45 mg/l - 96.0 h |
| <b>Aquatic Invertebrate</b> | EC50 - Daphnia magna (Water flea) - 2 mg/l - 48 h<br>EC50 - Daphnia magna (Water flea) - 0.53 mg/l - 24 h           |
| <b>Terrestrial</b>          | IC50 - Scenedesmus quadricauda (Green algae) - 0.03 mg/l - 192 h  |
| <b>Other</b>                | Bacteria - 0.6 - 2.3 mg/l - 0.5 h   |

|                                      |  |
|--------------------------------------|--|
| <b>Persistence and Degradability</b> | Not Available  |
| <b>Bioaccumulative Potential</b>     | Oncorhynchus mykiss (rainbow trout) - 16 Weeks<br>Bioconcentration factor (BCF): 170           |
| <b>Mobility in Soil</b>              | Not Available  |
| <b>PBT and vPvB Assessment</b>       | Not Available  |
| <b>Other Adverse Effects</b>         | Chemical Oxygen Demand (COD) < 1 mg/g<br>Very toxic to aquatic life with long lasting effects. |

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## 13. DISPOSAL CONSIDERATIONS

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|                       |   |
|-----------------------|---|
| <b>Waste Residues</b> | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container or residue. |
|-----------------------|---|

|                           |  |
|---------------------------|--|
| <b>Product Containers</b> | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container. |
|---------------------------|--|

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

## 14. TRANSPORTATION INFORMATION

|                  |   |
|------------------|---|
| US DOT           | UN1680, Potassium cyanide, solid, 6.1, pg I |
| TDG              | UN1680, POTASSIUM CYANIDE, SOLID, 6.1, pg I |
| IMDG             | UN1680, POTASSIUM CYANIDE, SOLID, 6.1, pg I |
| Marine Pollutant | Yes   |
| IATA/ICAO        | UN1680, Potassium cyanide, solid, 6.1, pg I |

## 15. REGULATORY INFORMATION

|                           |   |
|---------------------------|---|
| TSCA Inventory Status     | All ingredients are listed on the TSCA inventory.   |
| DSCL (EEC)                | All ingredients are listed on the DSCL inventory.   |
| California Proposition 65 | Not Listed  |
| SARA 302                  | Listed: Potassium cyanide   |
| SARA 304                  | Listed: Potassium cyanide   |
| SARA 311                  | Acute Health Hazard, Chronic Health Hazard  |
| SARA 312                  | Acute Health Hazard, Chronic Health Hazard  |
| SARA 313                  | Listed: Potassium cyanide   |
| WHMIS Canada              | Class D-1A: Poisonous and infectious material- Immediate and serious effects- Very toxic<br>Class E: Corrosive material |

## 16. OTHER INFORMATION

| Revision   | Date       |
|------------|------------|
| Revision 1 | 08-07-2012 |
| Revision 2 | 11/14/2013 |
|            |            |

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