**Potassium Cyanide**

**CAS No.: 151-50-8**

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>White hygroscopic crystals with an almond-like odor.</td>
<td>OSHA PEL: NE</td>
</tr>
<tr>
<td>Vapor pressure at 20 °C: negligible</td>
<td>ACGIH TLV: NE</td>
</tr>
<tr>
<td>Melting point: 635 °C</td>
<td></td>
</tr>
</tbody>
</table>

**Hazardous Characteristics**

<table>
<thead>
<tr>
<th>Overall Flammability</th>
<th>Destructive Absorbed Sensitivity to Skin/eye through Skin?</th>
<th>Self-reactive?</th>
<th>Incompatible with:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>0</td>
<td>Yes</td>
<td>Acids, weak oxidizing agents, as well as</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>stronger oxidizing agents.*</td>
</tr>
</tbody>
</table>

0: None (or very low); 1: Slight; 2: Moderate; 3: High; 4: Severe.

*Reactivity Hazards

Potassium cyanide is readily oxidized, even by weak oxidizing agents, and usually with explosive consequences, especially so with stronger oxidizing agents. In acidic environments potassium cyanide hydrolyzes to form HCN, a severely toxic, flammable, colorless gas with an almond-like odor. Aqueous solutions of potassium cyanide are strongly alkaline and are corrosive to metals such as aluminum and zinc. See Bretherick’s Handbook of Reactive Chemical Hazards for details and for other incompatibilities.

Cited as known to be or reasonably anticipated to be carcinogenic in NTP-9? No

Reproductive Hazards of the Workplace

Cited as known to be or reasonably identified as a reproductive toxin in Frazier and Hage, anticipated to be carcinogenic in NTP-9? No

Typical symptoms of acute exposures:

Is absorbed through the skin where it causes redness and irritation. If absorbed, inhaled, or ingested can cause death; non-fatal exposures cause impaired mental function that can be permanent as well as other immediate symptoms such as labored breathing if inhaled, and sore throat and stomach ache if ingested. In the eyes causes pain and blurred vision.

Principal target organ(s) or system(s):

Potassium cyanide inhibits cellular respiration.

**Storage Requirements**

Store with other poisons in a cool, dry, well-ventilated and locked location.

**Additional Remarks**

Before using, handling, or storing potassium cyanide, make sure that the specific and requisite means for first aid treatment described in the MSDS are on hand and readily available, and that co-workers are competent to administer them. Potassium cyanide is hygroscopic; HCN, the source of the almond-like odor of potassium cyanide, arises from the hydrolysis of the potassium cyanide.

**Notes**

ReadMe

This Chemical Laboratory Information Profile is not a Material Safety Data Sheet. It is a brief summary for teachers and their students that describes some of the hazards of this chemical as it is typically used in laboratories. On the basis of your knowledge of these hazards and before using or handling this chemical, you need to select the precautions and first-aid procedures to be followed. For that information as well as for other useful information, refer to Material Safety Data Sheets, container labels, and references in the scientific literature that pertain to this chemical.

Reproductive Toxins

Some substances that in fact are reproductive toxins are not yet recognized as such. For the best readily available and up-to-date information, refer to “DART/ETIC”. See the TOXNET home page at http://www.sis.nlm.nih.gov and click on “Toxicology search”. Note that some of the data in DART/ETIC have not been peer-reviewed. See also Linda M. Frazier and Marvin L. Hage, Reproductive Hazards of the Workplace; Wiley, 1998; and T. H. Shepard, Catalog of Teratogenic Agents, 9th ed.; Johns Hopkins University Press, 1998.

Abbreviations

ACGIH TLV—American Conference of Governmental Industrial Hygienists–Threshold Limit Value. C—Ceiling. CAS—Chemical Abstracts Service. mg/m³—milligrams per cubic meter. NA—Not applicable. NE—Not established. NI—No information. NTP-9—National Toxicology Program, Ninth Annual Report on Carcinogens. OSHA PEL—Occupational Safety and Health Administration–Permissible Exposure Limit. ppm—parts per million. STEL/C—Short-term exposure limit and ceiling.

Prepared by: Jay A. Young

Date of preparation: April 19, 2003