1 Product and Company Identification:

- **Product name:** Nano-Strip
- **Manufacturer:**
  CYANTEK CORPORATION
  3055 Osgood Court
  Fremont, CA 94538
  (510) 651-3341
- **24 Hour Emergency Telephone Number:**
  CHEMTREC: (800) 424-9300 (North America): (703) 527-3887 (Int’l.)

2 Composition/Information on Ingredients:

- **Chemical formula:** $\text{H}_2\text{SO}_4 + \text{H}_2\text{SO}_5 + \text{H}_2\text{O}_2 + \text{H}_2\text{O}$
- **Hazardous components:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percent by wt.</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid</td>
<td>90%</td>
<td>7664-93-9</td>
</tr>
<tr>
<td>Peroxymonosulfuric Acid</td>
<td>5%</td>
<td>7722-86-3</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>&lt;1%</td>
<td>7722-84-1</td>
</tr>
<tr>
<td>Water</td>
<td>5%</td>
<td>7732-18-5</td>
</tr>
</tbody>
</table>

3 Hazards identification

- **Hazard description:** Corrosive
- **Extremely corrosive to eyes, skin and respiratory system.**
- **Classification system**
  The classification was made from the hazardous components’ MSDS’s.

4 First aid measures

- **Inhalation:** Supply fresh air; consult doctor in case of complaint.
- **Skin contact:** Flush affected areas with plenty of water, remove contaminated clothing, get medical attention if irritation persists.
- **Eye contact:** Rinse opened eye for several minutes under running water. Immediately consult a doctor.
- **Ingestion:** Give large amounts of water. Consult a doctor immediately.

5 Fire fighting measures

- **Suitable extinguishing agents:** CO2, or water spray. Fight larger
  fires with water spray. Use water spray to cool exposed containers.
- **Protective equipment:** Wear goggles, rubber gloves and boots, self contained breathing apparatus, and acid protective clothing.
### Accidental release measures

- **Personal precautions:** Wear goggles, rubber boots and gloves, and acid-protective clothing
- **Environmental precautions:** Do not allow substance to enter sewage system, surface or ground water.
- **Methods for cleaning up:** Contain the spill by diking/absorbing with liquid-binding material (sand, diatomite, acid binders, universal binders). Ensure adequate ventilation.

### Handling and storage

**Handling**
- **Information for safe handling:**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
  - No special measures required.

**Storage**
- Store between 50 and 77 Degrees F.
- Keep containers upright and tightly sealed.
- Store away from strong caustics, combustible, easily oxidizable materials, Ammonium Hydroxide, and Nitric Acid.
- Containers have vented caps.

### Exposure controls and personal protection

- **Engineering controls:**
  - No further data; see section 7.
- **Exposure limits (threshold limit values):**
  - Sulfuric Acid: 1 mg/m3 (TWA)
  - Peroxymonosulfuric Acid: 1 mg/m3 (TWA)
  - Hydrogen Peroxide: 1 ppm (TWA)
- **General protective and hygienic measures:**
  - Keep away from foodstuffs and beverages.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes and skin.
- **Breathing equipment:**
  - In case of brief exposure or low pollution use SO3 respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:** Acid resistant gloves.
- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Acid resistant protective work clothing.
9 Physical and chemical properties:

- **Physical state**: Liquid
- **Color**: Clear
- **Odor**: Faint acid odor
- **Boiling point**: Undetermined
- **Flash point**: Not applicable
- **Self ignition temperature**: Not applicable
- **Danger of explosion**: Product does not present an explosion hazard.
- **Vapor pressure at (20 °C)**: Not applicable
- **Density at (20 °C)**: 1.83 g/cm³
- **Solubility in water**: Fully soluble

10 Stability and reactivity

- **Thermal decomposition**: No decomposition
- **Dangerous reactions**: Reacts violently with caustics and water. Avoid contact with organic materials, metal salts, Ammonia, Nitric Acid, and reducing agents.
- **Dangerous products of decomposition**: Releases toxic gases (Sulfur Dioxide and Sulfur Trioxide) if heated to partial evaporation.
- **Avoid boiling of product

11 Toxicological information

- **Acute toxicity**: Unknown
- **Primary irritant effect on the skin and eye**: Extremely corrosive
- **Sensitization**: No sensitizing effects known.
- **Ingestion**: Causes burns of mouth and stomach. May be fatal if swallowed.
- **Overexposure**: Causes coughing, choking, dizziness and weakness.
- **Inhalation**: Causes severe burning of mucous membranes, possible laryngeal, tracheal, bronchial, and pulmonary edema, with possible shock, collapse.
- **IARC lists “strong inorganic acid mists” containing Sulfuric Acid as a category 1 carcinogen. This does not apply to Sulfuric Acid.

12 Ecological information:

- **General notes**: Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
### 13 Disposal considerations
- Do not allow product to reach sewage system.
- Dispose of product (including packagings) in accordance with applicable regulations.

### 14 Transportation information
- **Land (CFR 49), Maritime (IMDG), Air (ICAO)**
- **Class:** 8 (Corrosive Liquid), subsidiary risk 5.1 (Oxidizer)
- **UN Number:** 3093
- **Proper Shipping Name:** Corrosive liquids, oxidizing n.o.s. (Sulfuric Acid, Peroxymonosulfuric Acid)
- **Packing Group:** II

### 15 Regulations
- **CERCLA Hazardous Substances (with reportable quantity):** Sulfuric Acid (1000 #)
- **Extremely Hazardous Substances (with threshold quantity):** Sulfuric Acid (1000 #), Hydrogen Peroxide (1000 #)
- **Toxic Chemicals (Section 313):** Sulfuric Acid
- **TSCA Inventory:** All ingredients on TSCA inventory
- **Proposition 65 List:** None
- **Clean Water Act Hazardous Substance List (with reportable quantity):** Sulfuric Acid (1000 #)
- **Clean Air Act Synthetic Organic Chemical (CAA SOCMII):** None
- **Clean Air Act Accidental Release Prevention Substance, section 112 r (with threshold quantity):** None
- **PSM Highly Hazardous Chemical List (with threshold quantity):** None

### 16 Other information:
- Do not breathe fumes.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Wear suitable protective clothing.
- In case of accident seek medical advice immediately.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.