1 Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier
  · Trade name: Phenyl Thiourea Paper, Phenylthiocarbamide, PTC Paper
· 1.2 Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.
· Application of the substance / the mixture Laboratory chemicals
· 1.3 Details of the supplier of the Safety Data Sheet
  · Manufacturer/Supplier:
  Precision Laboratories
  415 S. Airpark Road
  Cottonwood, AZ 86326
  Phone: (928) 649-9833
  · 1.4 Emergency telephone number:
  ChemTel Inc.
  (800)255-3924, +1 (813)248-0585

2 Hazards identification

· 2.1 Classification of the substance or mixture
  · Classification according to Regulation (EC) No 1272/2008
    The product is not classified as hazardous according to GHS regulations.
    The product is not classified as hazardous according to the CLP regulation.
  · Classification according to Directive 67/548/EEC or Directive 1999/45/EC Not applicable.
  · Information concerning particular hazards for human and environment: Not applicable.
· 2.2 Label elements
  · Labelling according to Regulation (EC) No 1272/2008 Not Regulated
  · Hazard pictograms Not Regulated
  · Signal word Not Regulated
  · Hazard-determining components of labelling: None.
  · Hazard statements Not Regulated
  · Hazard description:
  · WHMIS-symbols: Not hazardous under WHMIS.
  · NFPA ratings (scale 0 - 4)
    Health = 0
    Fire = 1
    Reactivity = 0
  · HMIS-ratings (scale 0 - 4)
    HEALTH Health = 0
    FIRE Fire = 1
    REACTIVITY Reactivity = 0

(Contd. on page 2)
3 Composition/information on ingredients

3.2 Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.
- Dangerous components:
  None in reportable quantities.

<table>
<thead>
<tr>
<th>CAS: 9004-34-6</th>
<th>Cellulose</th>
<th>substance with a Community workplace exposure limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 232-674-9</td>
<td>50-100%</td>
<td></td>
</tr>
<tr>
<td>CAS: 103-85-5</td>
<td>phenyl-2-thiourea</td>
<td>1+ R28</td>
</tr>
<tr>
<td>EINECS: 203-151-2</td>
<td>&lt; 0,1%</td>
<td></td>
</tr>
</tbody>
</table>

- Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

4.1 Description of first aid measures
- General information: Adverse health effects are not reasonably expected from normal use of product.
- After inhalation:
  Unlikely route of exposure.  
  Supply fresh air; consult doctor in case of complaints.
- After skin contact:
  Immediately wash with water and soap and rinse thoroughly.  
  If skin irritation continues, consult a doctor.
- After eye contact:
  Unlikely route of exposure.  
  Remove contact lenses if worn.  
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
  Do not induce vomiting; call for medical help immediately.  
  Product is indicatied for oral usage. In cases of overingestions or pediatric ingestions, DO NOT INDUCE VOMITING. Contact a physician and hospital.

4.2 Most important symptoms and effects, both acute and delayed
- Adverse health effects are not reasonably expected from normal use of product.
- Hazards: No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
- Indications for management of overdosage or paediatric ingestion only.  
  Monitor circulation.

(Contd. on page 3)
Trade name: Phenyl Thiourea Paper, Phenylthiocarbamide, PTC Paper

Medical supervision for at least 48 hours.

5 Firefighting measures

5.1 Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- For safety reasons unsuitable extinguishing agents: None.

5.2 Special hazards arising from the substance or mixture
- Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters
- Protective equipment:
  - Wear self-contained respiratory protective device.
  - Wear fully protective suit.
- Additional information: No further relevant information available.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- Not required.

6.2 Environmental precautions: No special measures required.

6.3 Methods and material for containment and cleaning up:
- Pick up mechanically.
- Dispose contaminated material as waste according to item 13.

6.4 Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and storage

7.1 Precautions for safe handling
- Store in cool, dry place in tightly closed receptacles.
- Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles:
    - Protect from humidity and water.
    - Avoid storage near extreme heat, ignition sources or open flame.
  - Information about storage in one common storage facility: Store away from oxidizing agents.
  - Further information about storage conditions: No special requirements.

7.3 Specific end use(s)
- No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace:
  Not required.

<table>
<thead>
<tr>
<th>9004-34-6 Cellulose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEL (USA)</strong></td>
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<td></td>
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<tr>
<td><strong>REL (USA)</strong></td>
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<td></td>
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<tr>
<td><strong>TLV (USA)</strong></td>
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<tr>
<td><strong>EL (Canada)</strong></td>
</tr>
<tr>
<td><strong>EV (Canada)</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

- DNELs: No further relevant information available.
- PNECs: No further relevant information available.
- Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:
    The usual precautionary measures are to be adhered to when handling chemicals.
    Keep away from foodstuffs, beverages and feed.
  - Respiratory protection: Not required under normal conditions of use.
  - Protection of hands: Gloves not required under normal conditions of use.
  - Eye protection:
    - Safety glasses

- Body protection:
  Not required under normal conditions of use.
  Protection may be required for spills.

- Limitation and supervision of exposure into the environment: No special requirements.
- Risk management measures: No special requirements.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties
- General Information
  - Appearance:
    - Form: Liquid on inert carrier material
    - Colour: White
  - Odour: Odourless
  - Odour threshold: Not determined.
  - pH-value at 20 °C: 5-7,5
Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Trade name: Phenyl Thiourea Paper, Phenylthiocarbamide, PTC Paper

(Contd. of page 4)

- Change in condition
  - Melting point/Melting range: Not Determined.
  - Boiling point/Boiling range: Undetermined.
- Flash point: Not applicable.
- Auto/Self-ignition temperature: >451°F / 232 °C
- Decomposition temperature: Not determined.
- Self-igniting: Not determined.
- Danger of explosion: Product does not present an explosion hazard.
- Explosion limits:
  - Lower: Not determined.
  - Upper: Not determined.
- Vapour pressure: Not applicable.
- Density at 20 °C: 0,38 g/cm³
- Relative density: Not determined.
- Vapour density: Not applicable.
- Evaporation rate: Not applicable.
- Solubility in / Miscibility with water: Soluble.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.
- 9.2 Other information: No further relevant information available.

10 Stability and reactivity

10.1 Reactivity
10.2 Chemical stability
10.3 Possibility of hazardous reactions
Reacts with strong alkali.
Reacts with strong oxidizing agents.
10.4 Conditions to avoid
Keep ignition sources away - Do not smoke.
Store away from oxidizing agents.
Moisture.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

(Contd. on page 6)
11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Primary irritant effect:
- on the skin: Slight irritant effect on skin and mucous membranes.
- on the eye: Slight irritant effect on eyes.

Sensitization: No sensitizing effects known.

Additional toxicological information:
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us. The substance is not subject to classification according to the latest version of the EU lists.

12 Ecological information

12.1 Toxicity

Aquatic toxicity: The product contains materials that are harmful to the environment.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Additional ecological information:
- General notes: The product contains materials that are harmful to the environment.
- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

13 Disposal considerations

13.1 Waste treatment methods

Recommendation
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.
### 14 Transport information

- **14.1 UN-Number**
  - DOT, ADR, ADN, IMDG, IATA: Not Regulated
- **14.2 UN proper shipping name**
  - DOT, ADR, ADN, IMDG, IATA: Not Regulated
- **14.3 Transport hazard class(es)**
  - DOT, ADR, ADN, IMDG, IATA: Not Regulated
- **14.4 Packing group**
  - DOT, ADR, IMDG, IATA: Not Regulated
- **14.5 Environmental hazards:**
  - Marine pollutant: No
- **14.6 Special precautions for user**
  - Not applicable.
- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.
- **UN "Model Regulation":**
  - -

### 15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **United States (USA)**
    - **SARA**
      - **Section 355 (extremely hazardous substances):**
        - None of the ingredients is listed.
      - **Section 313 (Specific toxic chemical listings):**
        - None of the ingredients is listed.
      - **TSCA (Toxic Substances Control Act):**
        - All ingredients are listed.
  - **Proposition 65 (California):**
    - **Chemicals known to cause cancer:**
      - None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for females:**
      - None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for males:**
      - None of the ingredients is listed.
    - **Chemicals known to cause developmental toxicity:**
      - None of the ingredients is listed.
  - **Carcinogenic Categories**
    - None of the ingredients is listed.
  - **EPA (Environmental Protection Agency)**
    - None of the ingredients is listed.
38.0.33

· IARC (International Agency for Research on Cancer)
  None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)
  None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)
  None of the ingredients is listed.

· Canada
  · Canadian Domestic Substances List (DSL)
    Not all ingredients listed.
  
  · Canadian Ingredient Disclosure list (limit 0.1%)
    None of the ingredients is listed.
  
  · Canadian Ingredient Disclosure list (limit 1%)
    None of the ingredients is listed.

· Other regulations, limitations and prohibitive regulations

· Substances of very high concern (SVHC) according to REACH, Article 57
  None of the ingredients is listed.

16 Other information

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.

· Relevant phrases
  R28 Very toxic if swallowed.

· Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  ACGIH: American Conference of Governmental Industrial Hygienists
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  WHMIS: Workplace Hazardous Materials Information System (Canada)
  DNEL: Derived No-Effect Level (REACH)
  PNEC: Predicted No-Effect Concentration (REACH)

· Sources
  SDS Prepared by:
  ChemTel Inc.
  1305 North Florida Avenue
  Tampa, Florida USA 33602-2902
  Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

(Contd. on page 9)
<table>
<thead>
<tr>
<th>Trade name: Phenyl Thiourea Paper, Phenylthiocarbamide, PTC Paper</th>
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<tr>
<td>Website: <a href="http://www.chemtelinc.com">www.chemtelinc.com</a></td>
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