### Material Safety Data Sheet (MSDS)  
**Linear Fluorescent T8 Lamps**

#### INFORMATION AND APPLICABILITY

Technical Consumer Products believes that under the Occupational Safety and Health Administration (OSHA) Hazards Communications Standard, a lamp (light bulb) is exempted as an "article", and that as such, does not require an MSDS.

The original OSHA Standard defined an article as something that:

1. Is formed to a specific shape and design
2. Has end use functions dependent upon its shape and design
3. Does not release or otherwise result in an exposure to a hazardous chemical under normal conditions of use.

In February 1994, OSHA amended the Hazard Communication Standard and modified part 3 of the above to read:

1. Does not release more than very small quantities of a hazardous chemical under normal conditions of use.
2. State and local regulations also contain similar exemptions for such articles.

Materials contained in the lamp are not released during normal use and operation. The following information is provided as a courtesy to our customers.

#### PRODUCT AND COMPANY INFORMATION

Description: TCP 25W T8 Linear Fluorescent  |  Manufacturer: Technical Consumer Products Inc. · Shanghai, Jensen LTD. · 325 Campus Drive · Aurora, Ohio 44202 · 1-800-324-1496

#### COMPOSITION/INFORMATION ON INGREDIENTS

**THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSURE TO LAMPS THAT ARE INTACT.**

If the lamp is broken, the following materials may be released:

- **Carbonic Acid**, Polymer with 4,4’-(1-methylethylidene) bis (2,6-dibromophenol) and 4,4’(1-methylethylidene) bis [phenol]
- **Fiber Glass**
- **Titanium Dioxide**

#### FLUORESCENT PHOSPHOR AND CATHODES MAY CONTAIN:

- Fluoride (as F)
- Manganese (as dust)
- Tin (as dust)
- Yttrium (as dust)
- Barium (as dust)
- Titanium (as dust)
- Strontium (as dust)
- Magnesium (as dust)
- Calcium (as dust)
- Antimony (as dust)
- Zinc (as dust)
- Cerium (as dust)
- Europium (as dust)
- Lanthanum (as dust)
- Terbium (as dust)
- Aluminum (as dust)

#### PHYSICAL PROPERTIES

Not applicable to intact lamp.

#### FIRE & EXPLOSIVE HAZARDS

**Flammability:** Non-combustible.

**Fire Extinguishing Materials:** Use extinguishing agents suitable for surrounding fire.

**Unusual Fire and Explosion Hazards:** When exposed to high temperature, toxic fumes may be released from broken lamps.

Special Firefighting Procedure: Use a self-contained breathing apparatus to prevent inhalation of dust and/or fumes that may be generated from broken lamps during firefighting activities.
### Health Concerns

**There are no known health hazards from exposure to lamps that are intact.**

No adverse effects are expected from occasional exposure to broken lamps. As a matter of good practice, avoid prolonged or frequent exposure to broken lamps unless there is adequate ventilation. The major hazard from broken lamps is the possibility of sustaining glass cuts.

NIOSH/OSHA Occupational Health Guidelines for Chemical Hazards and/or NIOSH Pocket Guide to Chemical Hazards lists the following effects of overexposure to the chemicals/materials tabulated below when they are ingested, inhaled, or contacted with skin or eye:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Effects of Overexposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass</td>
<td>Irritation of the eyes and respiratory tract. Swallowing glass dust may cause a salty or soapy taste, vomiting, abdominal pain, diarrhea, shortness of breath, difficulty in speaking, thirst, weakness of the pulse, disturbed color vision, muscular weakness, convulsions, loss of consciousness, and death. Kidney injury and bleeding from the stomach may occur. Repeated exposure to glass dust may cause excessive calcification of the bone and calcification of ligaments of the ribs, pelvis, and spinal column. Stiffness and limitation of motion may result. Repeated or prolonged exposure of the skin to glass dust may cause a skin rash.</td>
</tr>
<tr>
<td>Mercury</td>
<td>Increases the risk of developing Parkinson’s disease.</td>
</tr>
<tr>
<td>Lead</td>
<td>Increases the risk of developing Parkinson’s disease.</td>
</tr>
<tr>
<td>Aluminum Oxide</td>
<td>Can irritate the eyes, skin, and respiratory system.</td>
</tr>
<tr>
<td>Fluoride</td>
<td>Increases the risk of developing Parkinson’s disease.</td>
</tr>
<tr>
<td>Barium</td>
<td>Increases the risk of developing Parkinson’s disease.</td>
</tr>
<tr>
<td>Tungsten</td>
<td>Increases the risk of developing Parkinson’s disease.</td>
</tr>
<tr>
<td>Antimony</td>
<td>Increases the risk of developing Parkinson’s disease.</td>
</tr>
<tr>
<td>Phosphor</td>
<td>Increases the risk of developing Parkinson’s disease.</td>
</tr>
</tbody>
</table>

**Respiratory Protection**: Use appropriate NIOSH approved respirator if airborne dust concentrations exceed the pertinent PEL or TLV limits. All appropriate requirements set forth in 29 CFR 1910.134 should be met.

**Protective Clothing**: OSHA specified cut and puncture resistant gloves are recommended for dealing with broken lamps.

**Eye Protection**: OSHA specified safety glasses, goggles or face shield are recommended if lamps are being broken.

**Hygienic Practices**: After handling broken lamps, wash hands and face thoroughly before eating, smoking or handling tobacco products, applying cosmetics, or using toilet facilities.

### Emergency & First Aid Actions

**Glass Cuts**: Perform normal first aid procedures. Seek medical attention as required.

**Ingestion**: In the unlikely event of ingestion of a large quantity of material, seek medical attention.

**Inhalation**: If discomfort, irritation or symptoms of pulmonary involvement develops, remove from exposure and seek medical attention.

**Contact Eye**: Wash eyes, including under eyelids, immediately with copious amounts of water for 15 minutes and prevent further contact. Seek medical attention.

**Contact, Ingestion, or Inhalation**: Contact, ingestion, or inhalation may cause one or more of the following symptoms: eye irritation, skin irritation, nose irritation, throat irritation, mouth irritation, cough, dizziness, headache, nausea, vomiting, diarrhea, stomach cramps, incontinence, and inability to smell properly.

**Phosphor**: Phosphor dust is considered to be physiologically inert and as such has an OSHA exposure limit of 15 mg/cubic meter for total dust and 5 mg/cubic meter for respirable dust.

### Special Handling Information — For Broken Lamps

**Ventilation**: Use adequate general and local exhaust ventilation to maintain exposure levels below the PEL or TLV limits. If such ventilation is unavailable, use respirators as specified below.

**Respiratory Protection**: Use appropriate NIOSH approved respirator if airborne dust concentrations exceed the pertinent PEL or TLV limits. All appropriate requirements set forth in 29 CFR 1910.134 should be met.