Ascent Battery Supply, LLC  
1325 Walnut Ridge Drive  
Hartland, WI 53029

SAFETY DATA SHEET (SDS)  
LINEAR AND COMPACT FLUORESCENT LAMPS

The information and recommendations below are believed to be accurate at the date of document preparation. Ascent Battery Supply makes no warranty or merchantability or any other warranty, express or implied, with respect to this information and assumes no liability resulting from its use. This SDS provides guidelines for safe use and handling of product. It does not, and cannot, advise all possible situations. All specific uses of this product must be evaluated by the end user to determine if additional safety precautions should be taken.

The Safety Data Sheet (SDS) requirements of the Occupational Safety and Health Administration (OSHA) for chemicals are not applicable to manufactured articles such as lamps. No material contained in a lamp is released during normal use and operation.

The following information is provided as a courtesy to Ascent customers.

SECTION 1 – IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Linear Fluorescent and Compact Fluorescent Lamps: self-ballasted and not self-ballasted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Name(s)</td>
<td>CFL: spiral lamps, floods, globes, A-lamps, torpedoes, pin base; Linear: tube, U-bend, circle</td>
</tr>
<tr>
<td>Synonyms</td>
<td>T5, T8, CFL Twist</td>
</tr>
<tr>
<td>DOT Description</td>
<td>N/A</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>N/A</td>
</tr>
<tr>
<td>Distributed By</td>
<td>Ascent Battery Supply, LLC</td>
</tr>
<tr>
<td>Address</td>
<td>1325 Walnut Ridge Drive, Hartland, WI 53029</td>
</tr>
<tr>
<td>Emergency number</td>
<td>CHEMTREC 1-800-424-9300</td>
</tr>
<tr>
<td>International Emergency Number</td>
<td>CHEMTREC +1 703-741-5970 (Collect)</td>
</tr>
</tbody>
</table>

SECTION 2 – HAZARD(S)

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

No adverse effects are expected from occasional exposure to broken lamps.

SECTION 3 – COMPOSITION

Glass: Made from soda lime, similar to that used throughout the glass industry for common consumer goods.

Metal: Common elemental and alloyed Aluminum, Tin, Lead, Copper, Zinc or Nickel: filaments are Tungsten.

Phosphor (P): Products in these categories may use varying phosphor mixes, depending on design performance of the lamp. Common mixes: Halo Phosphate - calcium chloro-fluoro-phosphate, with small amounts (less than 1-2% by weight) of antimony (Sb) and manganese (Mn), both of which are tightly bound in the phosphor matrix; Tri-phosphor - mixture of rare earth elements such as lanthanum (La), and yttrium (Y) as either an oxide or as a phosphate, along with a barium/aluminum (Ba-Al) oxide.

Mercury (Hg): Small quantities of mercury are present in fluorescent lamps. For linear tubes this amount may vary from 3-9 mg: for compact fluorescents approximately 0.025% by weight.
SECTION 4 – FIRST AID MEASURES

Glass Cuts: Employ standard first aid practices. Consult a physician if necessary.

Dust Inhalation: Remove to a well-ventilated area. Consult a physician if necessary.

SECTION 5 – FIRE-FIGHTING MEASURES

These lamps are not generally flammable, although some components of some lamps may be. These lamps are not known to spontaneously combust. If the lamps are involved in a fire, use standard fire-fighting procedures. Dial 911 for emergency assistance.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Should breakage occur, the following measures are recommended:

Glass: Take usual precautions for collection of broken glass; use protective gloves and/or clothing. Place broken material in a closed container to prevent generation of excessive dust.

Lead Solder: Dispose of any lead-bearing sections of the lamp (ballast/driver circuitry) in accordance with federal, state and local regulations.

Mercury and other inorganic compounds: When breaking large numbers of lamps for disposal, appropriate industrial hygiene monitoring and controls should be implemented to minimize airborne levels or surface contamination.

SECTION 7 – HANDLING AND STORAGE

Store lamps appropriately; avoid storage areas that are wet or prone to flooding.

Keep lamps protected from accidental breakage. Should breakage occur, refer to the protective measures in Sections 6 & 8.

SECTION 8 – EXPOSURE/PERSOAL PROTECTION

Glass: Wear gloves while handling broken glass.

Lead Solder: Wear gloves while handling electronic components, particularly those constructed with lead-bearing solder. Always wash hands after handling these materials.

Dust from broken lamps: If exposed to a large number of broken lamps (such as in preparing for lamp recycling), make sure to move to a well-ventilated area with local exhaust ventilation or wear protective breathing equipment.

SECTION 9 – PHYSICAL/CHEMICAL PROPERTIES

N/A

SECTION 10 – STABILITY & REACTIVITY
As constructed, the materials in these lamps are stable and non-reactive at standard operating temperatures.

SECTION 11 – TOXICOLOGICAL INFORMATION

**Mercury (Hg)**: Inhalation of metallic mercury vapors or organic mercury may affect many different areas of the brain and their associated functions, resulting in a variety of symptoms. These include personality changes, tremors, changes in vision, deafness, muscle incoordination, loss of sensation, and difficulties with memory.

**Glass**: Glass dust is considered to be physiologically inert, with an OSHA exposure limit of 15 mg/m³ for total dust and 5 mg/m³ for respirator dust.

**Phosphor (and ingredients)**: There have been no significant adverse effects on humans by ingestion, inhalation, skin contact or eye contact with the phosphor mix in these lamps. Though some of the elemental ingredients in this mix are characterized by OSHA as hazardous materials, due to their insolubility, relatively low toxicity and small amount present, these materials do not present a significant hazard in the event of exposure.

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity Characteristic Leaching Procedure (TCLP) conducted on these lamps showing no indication of hazardous waste leaching.

SECTION 13 – DISPOSAL

Manage in accordance with federal, state and local disposal laws and regulations. See www.lamprecycle.org

SECTION 14 – TRANSPORT

N/A

SECTION 15 – REGULATORY INFORMATION

N/A

SECTION 16 – OTHER INFORMATION

| Document Control No: | SDS20019 – Ascent SDS for Linear and Compact Fluorescent Lamps | Revision: | 6 | Effective Date: | 05/24/2018 |