SAFETY DATA SHEET (SDS)  
LIGHT EMITTING DIODE (LED) 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>Self-Ballasted Light Emitting Diode (LED) Lamps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Name(s)</td>
<td>LED</td>
</tr>
<tr>
<td>Synonyms</td>
<td>LED Bulb, LED Lamp</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.

Never look directly at an illuminated LED chip, as the eye may be injured from exposure to the emitted light. The UV (ultraviolet) energy emitted by an LED lamp complies with the Photobiological Safety of Lamps, IEC 62371.

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

LED: LEDs consist of metals, phosphor, plastics and InGaN (Indium Gallium Nitride) semiconductor ship. Due to the insolubility and inertness of these materials, there is no significant health hazard.

Electronic Driver: Built into the lamp housing and consists of components similar, but may not be identical, to those used throughout the consumer electronics industry.

Plastics: This product consists of high molecular weight polymers that are non-hazardous: such as PBT and/or PET.

SECTION 4 – FIRST AID MEASURES

Cuts due to Glass, Metal, or Plastic: 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, Plastic, Metal:** Take usual precautions for collection of broken materials; 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.

**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/PERSOANL 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 – STABILITLY & REACTIVITY**

As constructed, the materials in these lamps are stable and non-reactive at standard operating temperatures.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

**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 respiratory dust.

**SECTION 12 – ECOLOGICAL INFORMATION**
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

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