SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled): SATCO HYGRADE: High Pressure Sodium Lamps

Synonyms: None Applicable
CAS No: Not Applicable

1.2 Product Use: General lighting applications

1.3 Company Name: SATCO Products, Inc.

Company Address: 110 Heartland Blvd
Company Address Cont: Brentwood, NY 11717
Business Phone: (800) 437-2826 or (631) 243-2022
Website: www.satco.com

1.4 Emergency Telephone Number: (800) 437-2826

Date of Current Revision: January 13, 2016
Date of Last Revision: New

SECTION 2 - HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This data sheet covers all SATCO HYGRADE brand High Pressure Sodium lamps for general lighting applications.

Health Hazards: Exposure to intact lamps does not pose any known health hazards.

Flammability Hazards: This product is not considered flammable.

Reactivity Hazards: None.

Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause adverse environmental effects.

US DOT Symbols: Not Regulated
GHS Symbols: None
Signal Word: None

2.1 GHS Labeling and Classification:


This Safety Data Sheet is being provided to our customers as a courtesy and is not required by regulatory authorities because this product is classified as an “article” which according to Title 29 of the Code of Federal Regulations, OSHA Part 1910.1200. “Article means a manufactured item which is formed to a specific shape or design during manufacture which has end use function dependent in whole or in part upon its shape or design during end use, and which under normal conditions of use does not release more than very small quantities or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.” This product is odorless, stable, and poses no immediate hazard to health. No material contained in a lamp is released during normal use and operation.

Components Contributing to Classification: None applicable

2.2 Label Elements:

GHS Hazard Classifications: None applicable
Hazard Statements: None applicable
Prevention Statements: None applicable
Response Statements: None applicable
Storage Statements: None applicable.
Disposal Statements: Dispose of contents/container in accordance with local/ regional/ national/ international regulations

2.3 Health Hazards or Risks From Exposure:

Symptoms of Overexposure by Route of Exposure:
The symptoms of overexposure are described in the following paragraphs.

Acute: None applicable to an intact lamp during normal use and operations.
Chronic: None applicable to an intact lamp during normal use and operations.

Target Organs:

Acute: None known
Chronic: None known
SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Hazard Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass</td>
<td>Glass dust is considered to be physiologically inert so it has an OSHA exposure limit of 15-mg/cubic meter for total dust, and 5-mg/cubic meter for respirable dust. If glass dust is inhaled or ingested, perform normal first aid procedures and seek medical attention if needed.</td>
</tr>
<tr>
<td>Barium Compounds</td>
<td>Alkaline barium compounds, such as the hydroxide and carbonate, may cause local irritation to the eyes, nose, throat, and skin.</td>
</tr>
<tr>
<td>Mercury</td>
<td>The mercury in the air as a result of breaking one or a small number of fluorescent lamps should not result in significant damage. However, when breaking a large number of lamps for disposal, appropriate industrial hygiene monitoring and controls should be implemented to minimize airborne levels of mercury or surface contamination. We recommend a well-ventilated area, and local exhaust ventilation or personal protective equipment.</td>
</tr>
<tr>
<td>Lead</td>
<td>Ingestion and inhalation of lead dust or fume must be avoided. Irritation of the eyes and respiratory tract may occur. Excessive lead absorption is toxic and may include symptoms such as anemia, weakness, abdominal pain, and kidney disease. However, the chemical inertness and insolubility of this material is expected to reduce the potential for systemic lead toxicity.</td>
</tr>
<tr>
<td>Sodium</td>
<td>Skin contact can cause thermal and/or alkali burns. Fumes from burning sodium are highly irritating to skin, eyes and mucous membranes.</td>
</tr>
<tr>
<td>Aluminum Oxide</td>
<td>Alumina is a non-toxic material which is very low in free silica content. Sharp-edged particles can irritate the eyes, perhaps the skin, and definitely the mucous membranes of the respiratory tract.</td>
</tr>
</tbody>
</table>

SECTION 4 - FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye Contact: If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Remove contacts if present and easy to do. Seek medical attention if irritation persists.

Skin Contact: Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

Inhalation: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

Ingestion: If product is swallowed, call physician or poison center immediately. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

Medical Conditions Generally Aggravated by Exposure: None expected.

4.2 Symptoms and Effects Both Acute and Delayed: None applicable to a lamp during normal use and operation.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

<table>
<thead>
<tr>
<th>Water Spray: Yes</th>
<th>Carbon Dioxide: Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foam: Yes</td>
<td>Dry Chemical: Yes</td>
</tr>
<tr>
<td>Halon: Yes</td>
<td>Other: Any &quot;C&quot; Class</td>
</tr>
</tbody>
</table>

5.2 Unusual Fire and Explosion Hazards:

Glass may crack at high temperatures.

Explosive Sensitivity to Mechanical Impact: No

Explosive Sensitivity to Static Discharge: No

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.

5.3 Special Fire-Fighting Procedures:

SECTION 6 - ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Use cautious judgment when cleaning up spill and take normal precautions for broken glass. Avoid generating dust. Contains several components which are hazardous.

6.2 Environmental Precautions:

Keep out of sewers, storm drains, surface waters, and soils.
6.3 Spill and Leak Response:

Small Spills:
Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
Approach spill areas with caution. If liquid was introduced, create a dike or trench to contain material. Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

Large Spills:

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
None under normal conditions and use.

7.2 Storage and Handling Practices:
Prevent physical damage.

7.3 Specific Uses:
See Section 1.2.

SECTION 8 - EXPOSURE CONTROL_PERSONAL PROTECTION

8.1 Exposure Parameters:
No data available

8.2 Exposure Controls:
Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.
The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.
Respiratory Protection: Not required for properly ventilated areas.
Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.
Safety glasses or goggles are recommended.
Hand Protection:
Chemical resistant gloves are recommended to prevent skin contact.
If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.
Use body protect appropriate to task being performed.
If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee’s feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

Body Protection:

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (Physical State and Color):</td>
<td>Solid</td>
</tr>
<tr>
<td>Odor:</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>No data available</td>
</tr>
<tr>
<td>pH:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting/Freezing Point:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (Solid; Gas):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper/Lower Flammability or Explosion Limits:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg @ 20°C (68°F)):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative Density:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Weight per Gallon:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-Ignition Temperature:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>VOC:</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

9.2 Other Information:
No data available

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SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity: No reactivity data available.
10.2 Stability: Stable under conditions of normal storage and use.
10.3 Possibility of Hazardous Reactions: Will not occur.
10.4 Conditions to Avoid: None known.
10.5 Incompatible Substances: None known.
10.6 Hazardous Decomposition Products: None known.

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:
  - Toxicity Data: No specific data available on this product.
  - Suspected Cancer Agent: Ingredients within this product are found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are considered to be cancer-causing agents by these agencies.
  - Irritancy: Not expected under normal conditions and use.
  - Sensitization to the Product: This product is not expected to be a skin sensitization.
  - Germ Cell Mutagenicity: This product does not contain ingredients that are suspected to be a germ cell mutagenic.
  - Reproductive Toxicity: This product does not contain ingredients that are expected to be a human reproductive toxicant.
  - Specific Target Organ Toxicity – Single Exposure: None known.
  - Specific Target Organ Toxicity – Repeated Exposure: None known.
  - Aspiration Hazard: Not an aspiration hazard.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity: No specific data available on this product.
12.2 Persistence and Degradability: No specific data available on this product.
12.3 Bioaccumulative Potential: No specific data available on this product.
12.4 Mobility in Soil: No specific data available on this product.
12.5 Results of PBT and vPvB Assessment: No specific data available on this product.
12.6 Other Adverse Effects: No data available
12.7 Water Endangerment Class: At present, there are no ecotoxicological assessments for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan. See: www.lamprecycle.org
13.2 EU Waste Code: Not determined

SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:
  This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.
  - UN Identification Number: Not applicable
  - Proper Shipping Name: Not regulated
  - Hazard Class Number and Description: Not applicable
  - Packing Group: Not applicable
  - DOT Label(s) Required: Not applicable
  - North American Emergency Response Guidebook Number: Not applicable

14.2 Environmental Hazards:
  - Marine Pollutant: One or more components of this product may be designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).
  - Other Hazards: None

14.3 Special Precaution for User:

14.4 International Air Transport Association Shipping Information (IATA):
  - This product is not considered as dangerous goods.

14.5 International Maritime Organization Shipping Information (IMO):
  - This product is not considered as dangerous goods.
SECTION 15 - REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:
United States Regulations:

U.S. SARA Reporting Requirements:
The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA 311/312:
Acute Health: No Chronic Health: No Fire: No Reactivity: No

U.S. CERCLA Reportable Quantity:
None

U.S. TSCA Inventory Status:
The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulations:
None known

California Safe Drinking Water and Toxic Enforcement Act (Proposition 66):
This product does contain ingredients on the Proposition 65 Lists.

15.2 Canadian Regulations:

Canadian DSL/NDSL Inventory Status:
Components are DSL Listed, NDSL Listed and/or are exempt from listing

Other Canadian Regulations:
Not applicable

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian WHMIS Classification and Symbols:
This product has been classified per WHMIS 2015 standards.

15.3 European Economic Community Information:

This product does not meet the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.

Chemical Safety Assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

15.4 Australian Information for Product:
Components of this product are listed on the International Chemical Inventory list.

15.5 Japanese Information for Product:

Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

15.6 International Chemical Inventories:
Listing of the components on individual country Chemical Inventories is as follows:
Australian Inventory of Chemical Substances (AICS): Listed
Korean Existing Chemicals List (ECL): Listed
Japanese Existing National Inventory of Chemical Substances (ENCS): Listed
Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed
U.S. TSCA: Listed

SECTION 16 - ADDITIONAL INFORMATION

Prepared By: Chris Eigbrett (MSDS to GHS Compliance)
Date of Printing: January 13, 2016

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SATCO Products assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SATCO Products assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET