

# MATERIAL SAFETY DATA SHEET

## Vector® Plasma™ Sleeved Light Bulb

### EMERGENCY PHONE NUMBERS:

**MEDICAL:** 800-225-3320 (PROSAR)

**TRANSPORTATION:** 800-424-9300 (CHEMTREC)

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Vector Plasma Sleeved Light Bulb  
**EPA Reg. No.:** Not Regulated  
**Light Trap Product Code(s):** 20-1080 (Vector Plasma)  
20-1080-1 (Vector Plasma One™)  
**EPA Signal Word:** Not Regulated  
**Distributed by:** Whitmire Micro-Gen Research Laboratories, Inc.  
3568 Tree Court Industrial Blvd.  
St. Louis MO 63122-6682

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

There are no known health hazards from exposure to lamps that are intact. Unless specified otherwise, the following materials are from the glass bulb part of the complete lamp. Unless specified otherwise the percentage weight refers to the complete lamp. If the lamp is broken then the following materials may be released:

#### COMPOSITION INFORMATION

INGREDIENTS (100%)	%	Long Term Exposure Limit 8 Hour TWA	Short Term Exposure Limit 15 minute	CAS NO.
Glass (Soda Lime)	40-60 %			NA
Fluorescent Phosphor as dust	<0.5%	10.0 mg m <sup>3</sup>		NA
IO <sub>3</sub>	<0.1%	10.0 mg m <sup>3</sup>		1344-28-1
Mercury (Hg)	<0.1%	0.025 mg m <sup>3</sup>		7439-97-6
Barium compounds as dust	<0.1%	0.5 mg m <sup>3</sup>		7440-39-3
Yttrium Oxide (as Y dust)	0-0.5%	1.0 mg m <sup>3</sup>	3.0 mg m <sup>3</sup>	7440-65-5
Pure Virgin FEP Copolymer (Fluorinated Ethylene Propylene Copolymer)	100%			25067-11-2

This product as supplied is not considered hazardous as defined in the US Code of Federal Regulations, 29CFR 1910.1200. This product is considered an 'article' as supplied for its intended and foreseen use.

### SECTION 3. HAZARDS IDENTIFICATION

The breakage of one or a small number of lamps will not result in significant concentrations of Mercury vapor or fluorescent phosphor powder in air.

#### NOTES TO PHYSICIAN

Expect influenza-like symptoms if thermal decomposition of FEP copolymer is inhaled: chills, fever, headache, shortness of breath, coughing. This is known as 'polymer fume-fever' and will pass after 24 to 48 hours providing no further exposure occurs.

#### EXPOSURE GUIDELINES/LIMITS

Not applicable

#### HAZARDOUS DECOMPOSITION PRODUCTS

None for intact lamps. Thermal decomposition of FEP copolymer will evolve hydrofluoric acid, carbonyl fluoride and other perfluoroolefins.

#### UNUSUAL FIRE, EXPLOSION AND REACTIVITY HAZARDS

Does not burn without external source of fuel. Fluoropolymers can increase the relative toxic properties of the gases evolved during a fire.

### SECTION 4. FIRST AID MEASURES

There are no known health hazards from intact lamps.

Have this MSDS with you when calling a poison control center or doctor or going for treatment. Describe any symptoms and follow the advice given.

**Ingestion:** Not anticipated under recommended usage conditions.

**Inhalation:** Not anticipated under recommended usage conditions. May cause Influenza like symptoms if thermal decomposition products are inhaled ('polymer fume-fever') chills, fever, headache. Avoid contamination of tobacco products. Remove victim to fresh air. If not breathing, perform mouth to mouth resuscitation. Seek medical attention.

**Skin Contact:** Not anticipated under recommended usage conditions. For hot product, immediately immerse in or flush affected area with large amounts of cold water. Cover with clean cotton sheeting or gauze and seek medical advice.

**Eye Contact:** Not anticipated under recommended usage conditions. If necessary, flush eyes with plenty of water. If symptoms persist or injury is suspected, seek medical advice.

**Note to Physician:** Expect influenza-like symptoms if thermal decomposition of FEP copolymer is inhaled: chills, fever, headache, shortness of breath, coughing. This is known as 'polymer fume-fever' and will pass after 24 to 48 hours providing no further exposure occurs.

**Medical Conditions Generally Aggravated by Exposure:** None Known

**Emergency Telephone Number of Prosar:** 800-225-3320 (for medical emergencies)

### SECTION 5. FIRE FIGHTING MEASURES

#### FIRE AND EXPLOSION

**Flash Point (TCC):** NA

**Ignition Temperature:** Not known

**Explosibility Limits In Air (% by Volume):**

Lower (LEL) = NA Upper (UEL) = NA

**Oxygen Index:** >95%

#### UNUSUAL FIRE, EXPLOSION AND REACTIVITY HAZARDS

Does not burn without external source of fuel. Fluoropolymers can increase the relative toxic properties of the gases evolved during a fire.

#### IN CASE OF FIRE

**Extinguisher Media:** Carbon Dioxide, Dry Chemical, Foam, Water

**Special Fire Fighting Procedures:** Firefighters should wear self contained breathing apparatus to prevent inhalation of dust or fumes that may come from lamps broken by the heat or fire-fighting activities.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

#### IN CASE OF SPILL OR OTHER RELEASE

For broken lamps do not breathe vapors or dust. Avoid contact with skin, eyes and clothing. Do not flush into surface water, ground water, or sanitary sewer. Collect together all components of lamp and place in clean dry container and seal. Remove for appropriate disposal.

**Emergency Telephone Number of Chemtrec:** 800-424-9300 (for transportation spills)

### SECTION 7. HANDLING AND STORAGE

**LAMP:** For indoor and outdoor use if not exposed to the weather. Must be kept dry. It is the responsibility of the waste generator to ensure proper classification of waste products, including this one.

**NORMAL HANDLING:** Plastic lamp sleeve is physiologically inert and non toxic at normal temperatures. Above 230°C, some decomposition of FEP products can be expected with evolution of gaseous and particulate products which are toxic if inhaled. This can give rise to a characteristic syndrome with influenza like symptoms known as "polymer fume-fever." These symptoms subside within 24-48 hours of exposure with no long term effects. Keep away from ignition sources – do not smoke while using Fluoropolymers.

**STORAGE RECOMMENDATIONS:** No special requirement.

### SECTION 8. EXPOSURE CONTROL / PERSONAL PROTECTION

These instructions only apply to broken lamps. As stated in Section 3, small numbers of broken lamps will present no adverse health effects.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Respiratory Protection:** Use NIOSH approved respirator with a mercury cartridge or canister with any P prefilter.

**Eye Protection:** The use of safety glasses, goggles or face shields is recommended for handling broken glass.

**Protective Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Hygiene:** After handling broken lamps wash thoroughly before eating, handling tobacco products, applying cosmetics or using the toilet facilities.

#### ADDITIONAL RECOMMENDATIONS

Heat resistant clothing and skin covering when working with hot product. Do not smoke while handling material. Keep tobacco products away from sources of contamination, hands and clothes.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. **For automatic MSDS updates, register at [www.wmmg.com](http://www.wmmg.com).**

Questions concerning the safe handling of the product should be referred to the Whitmire Micro-Gen customer service department at 800-777-8570.

NA – Not Applicable  
NE – Not Established  
PEL – Permissible Exposure Limit  
TLV – Threshold Limit Value  
STEL – Short Term Exposure Limit (15 min.)  
TWA – Time Weighted Average (8 hrs.)



**WHITMIRE MICRO-GEN**  
RESEARCH LABORATORIES, INC.  
800-777-8570 [www.wmmg.com](http://www.wmmg.com)

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WMG Part No: 19-0204-01

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## Vector® Plasma™ Sleeved Light Bulb

### VENTILATION

Use both general and local exhaust ventilation to maintain exposure levels below the long or short term limits.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Not applicable for intact lamps.

**Appearance:** Glass Tube  
**Solubility in Water:** Insoluble  
**Viscosity:** NA  
**Boiling Point:** NA  
**pH:** NA  
**Physical State:** Solid

**Odor:** Odorless  
**Vapor Pressure:** NA  
**Vapor Density:** NA  
**Specific Gravity of FEP Copolymer(H<sub>2</sub>O=1):** 2.12-2.17  
**Ignition Temperature of FEP Copolymer:** >500°C  
**Melting Point of FEP Copolymer:** 260°C

### SECTION 10. STABILITY AND REACTIVITY

#### REACTIVITY

**Chemical Stability:** Both the soda-lime glass and the PBT plastic are stable. Thermal degradation of FEP copolymer can begin at 230°C.

**Conditions to Avoid:** None for intact lamp. For FEP copolymer avoid exposure to open flame or temperatures exceeding recommended processing temperature.

**Incompatibility/Reacts (materials to avoid):** None for intact lamp. FEP copolymer reacts with molten alkali metals and interhalogen compounds. FEP copolymer will burn in atmosphere of 95% oxygen when an ignition source is present.

**Hazardous Polymerization:** Will not occur.

#### HAZARDOUS DECOMPOSITION PRODUCTS

None for intact lamps. Thermal decomposition of FEP copolymer will evolve hydrofluoric acid, carbonyl fluoride and other perfluorolefins.

### SECTION 11. TOXICOLOGICAL INFORMATION

Not applicable for intact lamps.

### SECTION 12. ECOLOGICAL INFORMATION

Not applicable for intact lamps. FEP copolymer has no known harmful effects on the environment. Material is considered inert and not expected to be biodegradable or toxic.

### SECTION 13. DISPOSAL CONSIDERATION

It is always the end user's responsibility to ensure that lamps are disposed of in accordance with local, state and federal regulations. Some states and localities have different criteria than the federal government's Toxicity Characteristic Leaching Procedure (TCLP) standard, and have different statutes and regulations regarding lamp disposal. Consult your local and state authorities for correct lamp disposal requirements. To check state regulations or to locate a recycler visit the following web site: [http://www.almr.org/support\\_files/stringency2.html](http://www.almr.org/support_files/stringency2.html)

**FEP copolymer:** Clean material may be recycled. Dispose of Fluoropolymer material as solid waste according to local regulations. Dispose of packaging as solid waste according to local regulations. Can be incinerated only if the HF effluent can be extracted from the fluegases. Product as shipped is not considered a RCRA hazardous waste if discarded. This information relates only to uncontaminated product. If used in a process which contaminates product, then disposal considerations should be re-evaluated.

### SECTION 14. TRANSPORTATION INFORMATION

This product is suitable for any transportation method.

### SECTION 15. REGULATORY INFORMATION

#### CERCLA

This product contains no CERCLA listed chemicals.

#### SARA TITLE III SECTION 311/312 HAZARD CLASS

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is NOT considered, under applicable definitions, to meet any hazard categories.

#### SARA TITLE III SECTION 313 CHEMICALS

This product contains NO substances subject to the reporting requirements of Section 313 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) or 40 CFR Part 372 in concentrations above the de minimis concentration level.

#### TSCA

All components of this product are listed or excluded from listing on the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory. This product is considered an article under TSCA.

#### WHMIS CLASSIFICATION (CANADA)

Not a controlled substance. (Considered to be a manufactured article.)

#### FOREIGN INVENTORY STATUS

Not determined

### SECTION 16. OTHER INFORMATION

No other information available.

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