



## Section 1: Identification of Product and Supplier

### Product Names

Trade Names: Small Wind Turbine Generator, Small Wind Turbine Generator Blue Edition, High Wind Turbine Generator

### Product Use

Wind turbines convert kinetic energy from the wind into mechanical energy which spins a generator to produce clean electricity. Pacific Sky Power wind turbines are rated at 15 watts that can be used for charging batteries or for powering LED lights directly.

### Supplier

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## Section 2: Potential Hazards

### Battery Charging Precautionary Statement

For charging, properly connect the wind turbine's power cable to the battery and make sure no loose wires or conductive material could cause a short circuit.

### Battery Charging Precautionary Statement

While using one wind turbine you can connect directly to a 12 volt battery without using a charge controller. This is possible because the output is under 15 watts. However, when using multiple turbines, a charge controller rated for wind is recommended.

### Precautionary Statement

Exercise caution during wind turbine operation. The props are relatively safe but they can cause small scrapes during high speed operation if they come in contact with any part of your body.



**Section 3: Composition/Recommended Installation**

**Composition and Form**

Pacific Sky Power wind turbines are comprised of a plastic housing, DC motor, propeller and an 8ft long, 14 GA power cable. Military grade tapes and sealants are used to weather proof the housing making these wind turbines resistant to rain but they are not water proof.

**Installation Recommendation**

All outdoor installations should use a tail and pivot so the wind turbine stays pointing into the wind at all times.

**Indoor testing**

Indoor operation with a house hold fan is a good method to start testing performance.

**Section 4: Personal Protection**

**Eye**

Safety Glasses are recommended during operational testing.

**Hands**

Gloves are recommended for operational testing.

**Section 5: Physical Appearance/ Recommended Winds**

**Appearance**

Small Wind Turbine Generators are one piece units and no assembly is required. Three different wind turbines are made for different wind conditions. The red wind turbine is recommended for areas with 10 and 20 mph winds. The blue wind turbine is recommended for areas with 10 and 30 mph winds. The white wind turbine is recommended for areas with wind speeds above 15 mph.



**Section 6: Chemical Stability and Reactivity**

Stable under normal conditions of storage and use.

**Incompatible materials**

Do not store with oxidizing agents.

**Hazardous decomposition products**

Product will start to decompose if maintained at temperatures of  $>140^{\circ}\text{C}$ .

Decomposition products are hydrochloric acid, carbon dioxide, carbon monoxides and possibly phosgene.

**Section 7: Ecological Information**

**Eco toxicity**

No adverse effects on environment have been reported.

**Section 8: Transport Information**

**Land Transport (Road/Rail)** Not classified as a dangerous goods.

**Marine Transport**

Not classified as a dangerous goods.

**Air Transport**

Not classified as a dangerous goods.

**Section 9: Regulatory Information**

There is no safety, health or environmental regulations specific to these products.



### Frequently Asked Questions

**Q:** Can I power electronics directly with this wind turbine? **A:** This wind turbine is designed for charging a 12 volt battery. Then you can run most small electronics from the battery. You can power 12 volt LED lights directly from this the wind turbine. You cannot power most other electronics directly.

**Q:** Can the turbine connect directly to a 12 volt battery? **A:** With just one turbine, you can connect the turbine directly to a 12 volt battery. We recommend using a charge controller while using more than one turbine but it is not required if you monitor the battery voltage and do not allow it to go over the rated battery voltage.

**Q:** How do I monitor the charge state of a 12 volt battery with a volt meter? **A:** A reading of 12 volts indicates a fully discharged battery. A reading of 13 volts or more indicates a fully charged battery. When a 12 volt battery is over charged, it exceeds 13.6 volts and this can damage the battery.

**Q:** Do I need a diode? **A:** No, our wind turbines are equipped with a blocking diode. The blocking diode acts as a one-way valve to prevent the wind turbine from draining the battery.

**Q:** How many amps will each wind turbine produce? **A:** Up to 1.6 amps.

**Q:** What can I power with these wind turbines? **A:** After charging a 12 volt batteries you can power anything with a 12 volt plug. You can also use an inverter to convert DC to AC 12 and run normal household electronics.

### Section 10: Technical Specifications: Red Small Wind Turbine Generator

Startup wind speed: 8 mph

Survival wind speed: 40 mph

Rotor type: Horizontal axis

Rotor diameter: 15"

Generator type: Brushed DC motor

Battery charging: 12 volt DC

Charging rpm: 500 to 2000 rpm

Output: 15 watts



**Section 11: Technical Specifications: Blue Edition Small Wind Turbine Generator**

Startup wind speed: 8 mph  
Survival wind speed: 40 mph  
Rotor type: Horizontal axis  
Rotor diameter: 15"  
Generator type: Brushed DC motor  
Battery charging: 12 volt DC  
Charging rpm: 500 to 2000 rpm  
Output: 15 watts

**Section 12: Technical Specifications: White High Wind Turbine Generator**

Startup wind speed: 15 mph  
Survival wind speed: 50 mph  
Rotor type: Horizontal axis  
Rotor diameter: 12"  
Generator type: Brushed DC motor  
Battery charging: 12 volt DC  
Charging rpm: 500 to 2000 rpm  
Output: 15 watts

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product and shall not establish a legally valid contractual relationship.

Department Issuing MSDS: Technical Analysis; Pacific Sky Power LLC  
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