HAZARDGUARD
SAFETY WIRE

INSTRUCTION SHEET (HG-RFC, HG-RRC, HG-RSW)
RESIDENTIAL COLOR-CHANGING CABLE CLIPS: FLAT AND ROUND AND/OR SPIRAL WRAP

OVERVIEW
These patented products have been designed and manufactured with thermochromic heat sensitive colorants. The sole purpose of these products are to provide a reversible color-changing alert if and when the section of flexible electrical cable (including; extension cords, appliance cords, power strips, etc) it covers incurs some heat producing condition. Heat producing conditions are most often electrically induced such as when there is excessive electrical resistance occurring in the conductor. Sometimes this unsafe condition is caused by the user over-loading the conductor, frays or breaks in the conductor, corroded or poor connections or using end devices that are failing. PLEASE READ AND FOLLOW THESE INSTRUCTIONS.

RECOMMENDED USE

- Residential HazardGuard Clips (HG-RFC and HG-RRC) are produced in flat and round cord shapes. Determine the type of cord (flat or round) to be monitored and gently pinch the clip's finger grips as the device is pushed and securely attached around the appropriate cord set. Since the area near the plug (male and/or female) represents one of the more common weak and hot spots in a cord set **(see illustration),** attach the clip(s) adjacent to the plugs (called the strain relief area) where it can be visually monitored.

- Residential HazardGuard Spiral Wrap (HG-RSW) is produced in a very flexible cork-screw shape. Determine the type of cord (round or flat) to be monitored and open one end of the spiral while placing the wire or cable on the inside of the spiral. Then begin wrapping the spiral securely around the appropriate cord set. Since the area of the more common weak and hot spots in a cord set **(see illustration),** place the spiral wrap adjacent to the plugs (called the strain relief area) where it can be visually monitored. Spiral wrap can also be used to cover and monitor other weak spots on a flexible cord set such as where there have been properly repaired splices or minor abrasions to the insulation.

- Upon the color-change alert of any HazardGuard safety product, the user must immediately disconnect the cord set and/or circuit and have a qualified electrician fix or discard the source of the excess heat. This includes examining and testing the cord set to ensure that it has not been damaged. HazardGuard recommends that when there is any doubt as to the condition of the cord set or end device, it be replaced.

PRECAUTIONS AND CARE

- The use of these products is a complement to proper electrical conductors and circuit protection devices such as fuses or circuit breakers. These are *passive devices* that only change their color based on heat absorption and do NOT shut-down or otherwise prevent unsafe circuits or user abuse. Check with a qualified electrical contactor or inspector if you have any questions regarding your electrical wiring or device.

- These products respond only as quickly as the underlying material they cover becomes hot. In most cases, where conditions are slowly deteriorating (that is chronic) color-change results will follow nearly simultaneously. However, where there are intermittent shorts or brief and intense resistance in a non-covered section, it is unlikely that the product will have adequate time to respond with a color-change unless and until the resulting heat ultimately reaches the product.

- Unless the entire product becomes hot, the clip's 'finger grips' may maintain its original cold color.

- Ensure that the product fits securely on the cord. If the cords are too small they clips may not stay attached or be as effective. Consider using the spiral wrap for smaller, larger or odd-shaped cords.

- All thermochromic products may also change colors as the result of proximity to convection heat sources such as portable heaters and fireplaces, cooking appliances, hair dryers and the like. Such ambient hot air or liquid conditions can be dangerous in that the external heat source may ultimately cause the conductor's insulation to be dangerously compromised and possibly melt, short-out or worse catch fire.

- All thermochromic pigments are sensitive to fading from UV light and must be used *exclusively indoors* and away from windows and/or strong lighting. When not in use store unused products in a cool, dry and low light location. If fading occurs the product will lose its COLD (green) color and show the HOT color. The product must be discarded and replaced with a new clip.

- To ensure that the products are working properly, periodically remove the product from the cable and dip into a warm-to-touch cup of water (at least 110 F) to observe functioning of proper color-change. After removing from warm water observe the reversible color-change as it cools (at least below 95 F).

TECHNICAL SPECIFICATIONS

- HazardGuard Residential Clips and spiral wraps are made with high and low density Polyethylene (PE) based polymers. Max. Operating temp is 150F (66C)

- The standard color is brilliant green when COLD and when becoming HOT changes to a soft orange color near 110F (44C).

- Product colors begin to change approx. 10F before fully changing at their stated rating.

- Product colors will return to their original color if and when the temperature cools at least 15F less than the original temperature that caused the HOT color-changing condition. This 'memory' feature or delay in the COLD color recovery allows for the user to better identify intermittent and or mild HOT conditions.

- **READ AND SAVE THESE INSTRUCTIONS**
- **USE ONLY AS DIRECTED**
- **INDOOR USE IN LOW LIGHT AREA ONLY**
- **KEEP OUT OF REACH OF CHILDREN**
- **KEEP AWAY FROM UV/ SUNLIGHT**
- **ALWAYS USE SAFE ELECTRICAL PRECAUTIONS TO PREVENT ELECTRICAL SHOCK AND FIRES**

HazardGuard®/ Patent and Pat. Pending/ #6,646,206, and others

Independently Tested
Manufactured and Printed in the USA

(PLEASE SEE OTHER SIDE OF INSTRUCTION SHEET)