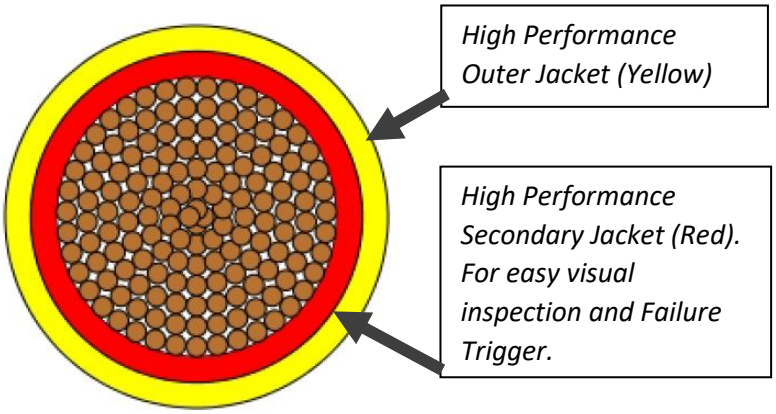
CLEAR-CUT GROUND CABLE TM

SAFETY CABLE



PRODUCT ADVANTAGES

- Easy Identification of cuts and nicks in ground cable.
- Tested for cold weather flexibility down to -40^{O}C
- UV Resistant
- High dielectric strength
- Standard sizes #2, 1/0, 2/0, 4/0, Other sizes available upon request.
- Available in different color combinations.

PRODUCT INFORMATION

CLEAR-CUT Ground Cable™ has been specifically designed to assist linemen in identifying cuts and nicks in ground cable before becoming a safety hazard.

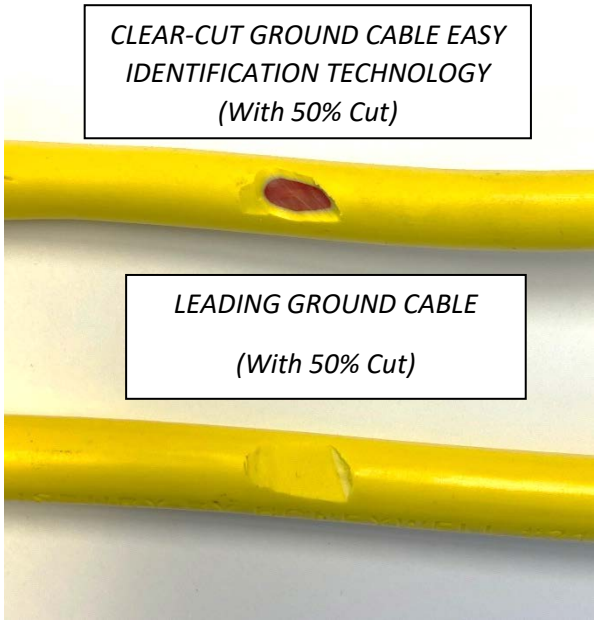
With standard industry practice requiring visual inspection before temporary protective grounding cables are used, the dual coat insulation jacket allows for ease of inspection in the toughest conditions.

This has been achieved by incorporating a two-tone 50/50 color patent in the insulating jacket of the ground cable. This technique is not new in the electrical utility trade as every lineman has used this technique to inspect their high voltage gloves with the same two-tone color technique.

CLEAR-CUT Ground Cable™ design also incorporates highly stranded bare copper conductors designed for flexible, low-temperature ground cable applications. Tested for cold weather flexibility down to -40^{o}C and is UV resistant.

CLEAR-CUT Ground Cable™ is another tool for electrical utilities and contractors to have and promote safety culture inside their organization.

CLEAR-CUT VS Leading Ground Cable



Contact us today for further information on **CLEAR-CUT Ground Cable™**

TECHNICAL INFORMATION

Conductor Information				Insulation Information			Breakdown Voltage	Cable Weight
Part Number	AWG Size	Stranding	Nom OD	Thickness	OD	Tolerance		
WHVTC-YR-4/0	4/0 AWG	2121/30	0.585"	0.085"	0.755."	+/-0.020"	>45kV	746.3#/Kft
WHVTC-YR-2/0	2/0 AWG	1344/30	0.466"	0.085"	0.635"	+/-0.020"	>35kV	486.5#/Kft
WHVTC-YR-1/0	1/0 AWG	1071/30	0.416"	0.085"	0.586"	+/-0.020"	>35kV	394.3#/Kft
WHVTC-YR-#2	2 AWG	665/30	0.319"	0.085"	0.449"	+/-0.016"	>20kV	240.9#/Kft

WHAT HAPPENS WHEN A FAULT OCCURS AND A TEMPORARY PROTECTIVE GROUND IS ENERGIZED?

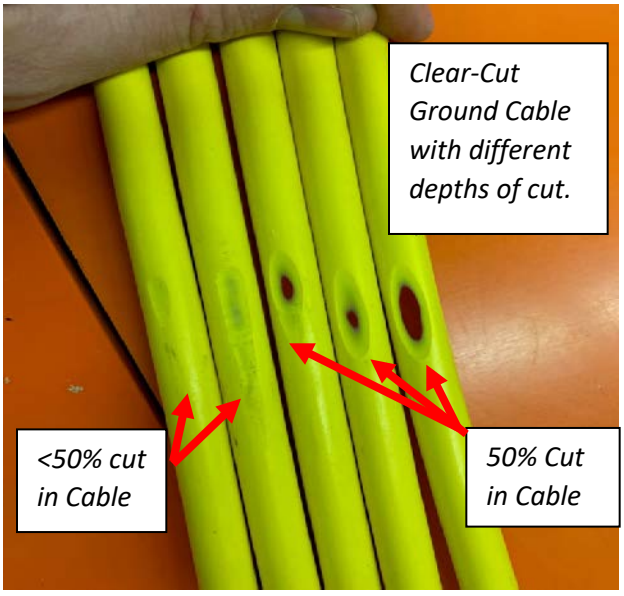
To understand what happens to a temporary protective ground when it is energized, it is first important to note what the equipment is used for. The purpose of using temporary protective grounding is to protect linemen, electricians, and utility professionals from unintentional electric shock. Below is a list of scenarios where temporary protective grounding is used for protection:

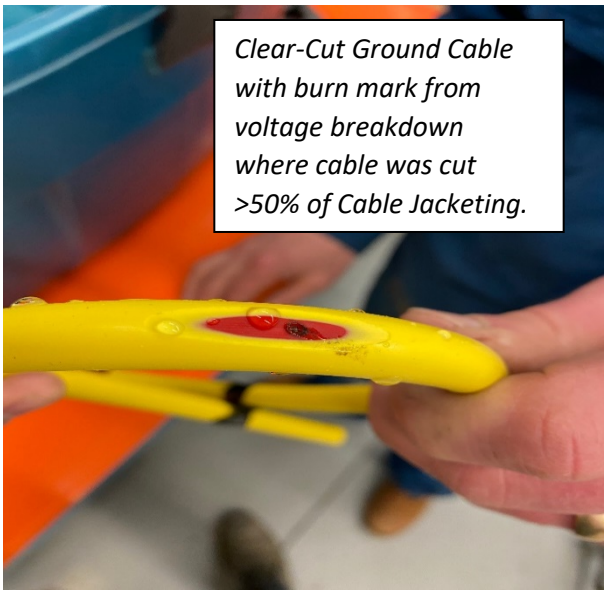
- Lightning;
- Static build-up;
- Induced Voltage-feedback-from adjacent circuits;
- Mechanical or equipment failure;
- Switching errors;
- Stored charges from capacitors; and
- Faulty automatic re-closing devices

In the event of one of the above situations happens, the temporary protective ground is subject to its rated maximum fault current and must withstand the fault without its components separating. Simply put you want the temporary protective ground to manage the path to ground of the fault. The most important part of the temporary protective ground in a fault situation is that its components stay intact. The critical components of a temporary protective ground are the clamps, ferrules (ferrules are used to provide a solid connection between the cable and clamps) and cable. If anyone of these components fail the whole temporary protective ground fails, which can result in serious consequences.

While it is very important to ensure clamps are secured correctly to the ferrules and ferrules are installed correctly to cable. It is far more common to have cuts in the jacketing of the cable. ***It is a common misconception that cuts in ground cable do not affect the performance of the temporary protective grounds, however this is incorrect. This can be seen when electrical tape is used to cover cuts on temporary protective ground cable. The jacketing provides additional mechanical strength to the copper cable but also prevents arcing which causes the copper strands to melt and fail prematurely. In the picture below a temporary protective ground with a cut in the cable (more than 50% of the jacket) is subjected to a fault condition. The insulating jacket breaks down at the cut in the jacket and results in arcing. As the arcing continues the mechanical and electrical integrity of the cable declines and results in premature failure of the temporary protective ground.***

Electrical testing has shown that shallow cuts where only the yellow insulation is visible, will maintain 80% of this dielectric strength. Cuts where the red insulation is visible means that more than 50% of the insulation is compromised and the dielectric strength declines rapidly. Therefore, if the temporary protective ground is subjected to a fault as little as 1 to 4 kA* the insulation could fail and result in arcing and premature failure.





** The magnitude of current depends on the depth of the cut and assumes a ground impedance of 10 ohms.*