



Glas-Col®

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Heating Tapes & Cal-Cords - Instructions for Use

Instructions for use of Glas-Col Cal-Cords

Catalog Numbers CC-- SCC--

The upper temperature limit is 400°C (750 °F) for Cal-Cord (CC--) and 600°C (1100 °F) for Super Cal-Cord (SCC--). Use above these temperatures will cause degradation of the outer covering. Cal-Cord which is applied with turns ½" or more apart and not covered with insulation will normally not exceed the upper limit when operated at rated power.

The Cal-Cord is not waterproof and should be used in dry areas only. Use caution when applying the Cal-Cord to metal objects to ensure that the outer covering is not abraded or ruptured. A thin layer of high-temperature material, such as fiberglass, between the Cal-Cord and the object will help to avoid accidental abrasion of the covering.

When wrapping the Cal-Cord around an object, tie or tape the end bearing the electrical connector in place on the object. As the wrapping proceeds, smooth the outer covering back toward the loose end of the Cal-Cord. A length of fiberglass cord is provided with each Cal-Cord to aid in securing it. Do not cover the Cal-Cord with insulation having a considerable amount of organic binder and do not cover the electrical connector with insulation.

The Cal-Cord should be operated through an appropriate regulating device of adequate capacity. Variable transformers, stepless input controllers, or automatic controls are all satisfactory. The specific choice will depend on whether manual or automatic operation is desired and accuracy required. **Heating cords that may be left unattended should always be operated through automatic temperature-limiting controls.** If the outer covering of the cord becomes abraded or otherwise damaged, use of the cord should be discontinued.

CAUTION

Be certain to check the power source to ensure that it has the proper voltage, is grounded, and has adequate capacity for the intended load.

Do not alter product construction features, such as modifying electrical connectors. Such alteration may cause unsatisfactory product performance, shock hazard, and the warranty to be voided.

Catalogs

Glas-Col manufactures a complete line of heating mantles, heating tapes and cords, power controls, liquid mixing equipment and accessories for the laboratory. Send for complete details and prices or visit Glas-Col at www.glascol.com.

Instructions for use of Glas-Col Heating Tapes

Catalog Numbers	DET0.25-- FET0.6--	DET0.5-- SET1--	DET1--
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Glas-Col laboratory heating tapes are constructed of heating ribbons encased in glass braid and silicone rubber. The glass and rubber covering insulates and waterproofs the tape so that it may be used on conductive objects and in damp areas. However, if the covering is punctured, ruptured or otherwise damaged, the tape is no longer serviceable and its use should be discontinued. The tape should be protected from organic vapors and liquids that will cause the silicone covering to swell.

Before using a heating tape, determine the tape operating voltage from the rating tag. Be sure that the voltage ratings of the power source, power control and the heating tape are compatible.

The limiting factor in the operation of Glas-Col laboratory heating tapes is the 250°C (480 °F) temperature limit of the covering. Above this temperature, the covering will begin to char and disintegrate. This destroys the moisture-resistant and dielectric properties of the tape.

Because of the temperature limit, the wattage and voltage ratings of the tape are arbitrary. That is, under some conditions, the tape may become overheated when used at or below its rated voltage. Under other conditions, the voltage may be increased and the temperature limit will not be exceeded. Therefore, it is extremely important to monitor the tape temperature to ensure that it does not exceed 250°C (480 °F).

When applying the tape to the object to be heated, wrap it snugly so that the tape is in good contact with the object. **DO NOT FOLD OR WRAP THE TAPE OVER ITSELF!** This will cause a hot spot in the tape that may destroy the silicone covering. Refer to the close spiral wrapping chart here for tape widths and their applications.

MINIMUM SIZES FOR CLOSE SPIRAL WRAPPING

<u>TAPE WIDTH</u>	<u>OBJECT DIAMETER</u>
1/4"	3/8" or larger
1/2"	3/4" or larger
1"	1-1/2" or larger

Tapes should not be close spiral wrapped on objects with diameters smaller than those shown in the chart.

For temperatures up to 150°C (300 °F), the tape may be held on the heated object with adhesive tape rated appropriately. For higher temperatures, glass cord can be used. The tape may be covered with insulation if desired as long as the temperature of the tape is controlled below 250°C (480 °F).

Heating tapes should be operated through an appropriate regulating device of adequate capacity. Variable transformers, stepless input controllers, or automatic controls are all satisfactory. The specific choice will depend on whether manual or automatic operation is desired and accuracy required. **Heating tapes that may be left unattended should always be operated through automatic temperature-limiting controls.**

Limited Warranty

Glas-Col is not responsible for damage to apparatus due to improper installation or through attempts to operate the apparatus beyond its rated capacity, intentional or otherwise. Glas-Col warrants products of its manufacture to be free from defects in material and workmanship and agrees to repair or replace without charge any products found defective upon examination at the factory. With proper care and operation, Glas-Col Heating Tapes and Cords will give long and efficient service. Chemical spillage, overheating and general misuse will greatly reduce the service life.

Glas-Col products are intended for commercial laboratory or industrial use only. Glas-Col reserves the right to make product refinements without notice.