## Cicoil Fungus Resistant Cables

Our Flexx-Sil™ Cable Jacketing is Inherently Fungus Resistant

- Flexx-Sil<sup>™</sup> cable jacketing contains no organic materials on which fungi and molds feed
- No fungicide additives used or needed
- Meets MIL-HDBK-454, Mil-STD-810,
  MIL-E-5272, and RTCA DO-160G sec. 13

In 1998, Cicoil developed an cable jacketing material which is ideally suited for high flex, high performance flat cable applications. This unique material is a Cicoil-exclusive engineered polymer we call Flexx-Sil™, and it includes the best aspects of a silicone rubber polymer without the impurities or additives found in common silicones. Combining Flexx-Sil with our exclusive extrusion process produces the most advanced cable jacketing material available in the marketplace.

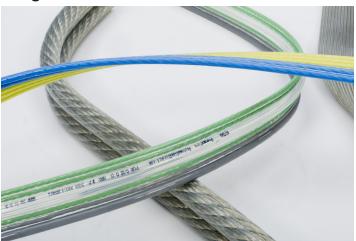
Flexx-Sil rubber offers a unique combination of mechanical and chemical properties that organic elastomers are incapable of. The backbone of most rubber materials contain carbon-carbon bonds, whereas Flexx-Sil is carbon free. Unlike other elastomers, the inorganic foundation of Flexx-Sil makes it highly resistant to many chemicals, harsh weather, and fungus. Flexx-Sil rubber is also resistant to sunlight, ozone, hot & cold temperature fluctuations and UV exposure, whereas carbon containing elastomers are not.

Due to its benefits, Flexx-Sil can be used in wet environments, since they are not a nutrient for fungus. Flexx-Sil is not adversely affected by fungus, mold, mildew and bacteria. In addition, Flexx-Sil can be utilized in the food & beverage, pharmaceutical processing, medical instrument, aircraft, cable, implantable medical devices, and Space applications due to its beneficial features.

Cicoil's Flexx-Sil<sup>™</sup> jacketing material does not contain carbon, is naturally resistant to fungus and as a result, does not require any additives or fungus inhibitors. Fungus feeds on organic matter (carbon-based) and since it is an inorganic polymer, it is not possible for Flexx-Sil<sup>™</sup> to support the growth of fungus. In addition, Cicoil's Flexx-Sil<sup>™</sup> material does not support any microbiological growth and is resistant to mold, mildew, and bacteria as well.

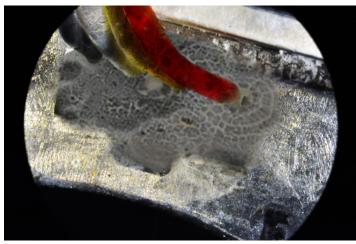
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## **Fungus Resistant Cicoil Flat Cables**



Flexx-Sil™ is ultra-clear and fully encapsulates Cicoil Flat Cables. You'll never see fungus or mold growing on Cicoil cable.

## **Fungus Attack**



Most common wire and cable jacketing is susceptible to mold and fungus attack because they are made from hydrocarbon-based compounds. Fungi feed on plastics, not because they can digest them, but because most plasticizers are esters of fatty acids, and therefore can be eaten by microorganisms. The plastic itself is damaged by the acids produced by the microorganisms, but the main issue is that the material is made brittle due to the extraction of the plasticizers. Eventually the plasticizers completely disappear, leaving a plastic with significantly decreased mechanical properties.



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