

## ELECTRICAL COMPLIANCE FAQ

With UL requirements and NFPA standards each holding sway over different aspects of electrical compliance, it's always been tough to figure out whether your cable choices will pass regulatory muster.

The job of picking compliant cables recently became even tougher. A new version of NFPA 79, the main standard governing the electrical safety of industrial machines, drastically changes the compliance picture.

LAPP offers a variety of cables designed specifically to meet the technical and compliance requirements of variable frequency drives and servo drives. Read about [LAPP NFPA 79 Compliances!](#)

And check out the following answers to your most commonly asked compliance questions:

### **Is NFPA 79 a law?**

No. NFPA-79 is the key electrical safety standard accepted by machine builders, installers and buyers in the United States.

### **Does a machine have to comply with NFPA 79?**

In most cases, yes. The need for NFPA compliance ultimately depends on the application details and whether the machine is being installed in a building. When in doubt, it's a good idea to comply with NFPA 79 to maximize safety and avoid the potential for litigation.

### **Will machine builders and buyers standardize on the new edition of NFPA 79?**

Yes. Concerns about safety and liability issues will force compliance with the new 2012 edition of the NFPA standard. Buyers of industrial equipment are unlikely to purchase non-compliant machines that could increase the potential for litigation.

### **Who decides which cables can be installed in the field?**

Engineers may assume that UL dictates cable choice, but the real authority falls with electrical inspectors who determine compliance with the National Electrical Code. UL, however, does control the electrical, physical and environmental testing requirements and approvals that, in practice, determine cable usage in the field.

### **Are UL listed cables always allowable for use on a machine?**

Not necessarily. There are machines that use UL listed cordage incorrectly. For example, some listed cables are only intended for temporary applications. Other listed cables may not meet the minimum stranding requirements needed for NFPA 79 compliance.

### **What's special about MTW approval?**

Machine Tool Wire (MTW) approval requires that the cable be flexible and offer a high degree of mechanical durability. These characteristics allow it to perform under the challenging conditions surrounding industrial machines.

### **Are all MTW cables oil resistant?**

Yes, all compliant MTW cables minimally meet the requirements of the UL Oil Res I test. For applications requiring a more severe exposure, the more rigorous Oil Res II test is also a permitted option.

### **Can I run MTW cable into building infrastructure?**

No, not unless it is dual marked with the appropriate UL Listing. Cables marked "TC" offer the high flammability rating needed for installation in building infrastructure. The MTW requirements alone mandate that a cable only meet a minimal flame test known as VW-1.

### **Can cables be left exposed when going from the machine to the cable tray?**

In most cases, no. Cables designed for exposed runs must have a "TC-ER" approval.