

## **Get the Most out of your Data Backup Tapes: Caring for magnetic media**

Magnetic tape cartridges are remarkably resilient media, but they still need to be properly cared for. Although tape life is expressed in years, careless tape handling can cut that to weeks, or even destroy a tape entirely. To get the most out of your tapes, it is important to handle them carefully and store them properly. Manufacturers have specific instructions for the care of magnetic tape cartridges, which differ from tape technology to tape technology. It is important to follow those instructions in addition to the general suggestions presented here.

### **Tapes must be kept clean**

Dust, dirt, and oils are the great enemies of tape life. Keep tapes in their plastic cases when they are not in use and do not store them in a dusty or dirty environment. Never handle the tape directly. Do not touch the tape surface and do not open the drive doors manually. Follow tape-cleaning instructions. Modern tape drives monitor the condition of the tapes and drives and will alert you when the drive needs cleaning. Do not clean the drive unless instructed to as this can shorten the life of the drive and actually decrease reliability.

### **Tape storage best practices**

When storing tape, orient the hubs in the cartridges horizontally. Do not stack the tape cartridges flat for storage. If you are shipping more than one tape in a package, pack them securely so they can't shift or knock against each other.

Tapes store best in a cool, dry environment. ANSI recommends storing tape at 45 degrees to 90 degrees Fahrenheit with humidity (non-condensing) of 5 percent to 80 percent. Generally speaking, conditions that are comfortable for humans are good for tapes. Keep tapes away from sunlight, hot air ducts, and heaters.

Keep tapes away from magnetic fields. Common devices such as refrigerators, air conditioners use induction motors, which produce strong magnetic fields. So does a color television when it is first switched on. Do not stack tapes on top of electronic equipment, even temporarily.

Some tapes need to be re-tensioned before or between uses. This requires running the tape for a full pass through the drive without trying to read or write to the tape. Not all tape technologies require re-tensioning, however. Check the manufacturer's recommendations. Tapes should be acclimated before being used when moved to a new facility. Give the cartridge time to stabilize, especially when being moved from a colder to a warmer environment or a changed humidity. Follow the manufacturer's recommendations (usually 24 hours) on acclimatization times.

Label your tapes using the proper product in the approved manner. Do not use post-it notes or other nonstandard labels. They can come off in the drive and cause a major problem. Finally, keep in mind that a tape lost is just as gone as a tape, which has been damaged. It is vital to have an effective system for tracking and storing your tapes, including some kind of auditing process to be able to prove where your tapes are. Auditing is especially important for tapes that are in transit from one location to another.