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3M DC2000 Tape Cartridges: Storage and Longevity

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TOPIC -----

What is the storage life of DC2000 tape cartridges? How long we can safely store a cartridge without losing the data?

DISCUSSION -----

Our answer is from the 3M Recording Products Division Hotline. They don't state the probable maximum life-span of data stored on a DC2000 tape cartridge. They advise that the tape be retensioned every year, and to rewrite the data out onto the tape every 5 years.

Note: To rewrite the data onto a tape cartridge, you'll probably need to restore the data to a hard disk, then back up that hard disk again. All previous mention of how to properly store the tape applies.

Backups

The tape cartridge life-span can be greatly influenced by the environment you store and use it in, as well as whether you back up the tapes by volume or by file.

- Volume

If you back up tapes by volume, your cartridge may last for a couple thousand backups. This estimate isn't based on any controlled study. It's based on the assumption that during a volume backup, after the initial tensioning of the tape, the drive will generally record information on the tape from the beginning to wherever it stops once it completes transferring all of the information. This is usually in one or two continuous passes. Incidentally, the noise (pitch and volume changes) the drive makes when performing a volume backup isn't from the

drive stopping the tape, rewinding it, then proceeding forward.
The drive generates this noise when it switches tracks.

- File

Backing up onto the tapes by file is much more stressful on the tape. When the files are fragmented on the drive, the drive may have to reverse direction of the tape many times to lay the files down sequentially on the tape. We are unable to predict the longevity of a tape used for file backups. These three factors influence longevity:

- The great variation in the quantity of files backed up
- The differences in file size
- Degree that files are fragmented

However, prudence should dictate practice when archiving data.

Operating Environment

The operating environment also influences the tape life. Before using the cartridge, allow it to acclimate to your operating environment for eight hours, or for the amount of time it has been exposed to dissimilar conditions -- whichever is less. Recommended operating environment:

Temperature:	41 to 113 degrees F (5 to 45 degrees C)
Relative Humidity	20 to 80% non-condensing
Maximum Wet Bulb Temperature	79 degrees F (26 degrees C)

Store tapes out of the direct sunlight and where they won't be exposed to high temperatures.

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