

How Excel Stores Dates And Times

Excel stores dates and times as a number representing the number of days since 1900-Jan-0, plus a fractional portion of a 24 hour day: `dddd.dttttt` . This is called a **serial date**, or **serial date-time**.

Dates

The integer portion of the number, `dddd`, represents the number of days since 1900-Jan-0. For example, the date 19-Jan-2000 is stored as 36,544, since 36,544 days have passed since 1900-Jan-0. The number 1 represents 1900-Jan-1. It should be noted that the number 0 does **not** represent 1899-Dec-31. It does not. If you use the `MONTH` function with the date 0, it will return January, not December. Moreover, the `YEAR` function will return 1900, not 1899.

Actually, this number is one greater than the actual number of days. This is because Excel behaves as if the date 1900-Feb-29 existed. It did not. The year 1900 was not a leap year (the year 2000 is a leap year). In Excel, the day after 1900-Feb-28 is 1900-Feb-29. In reality, the day after 1900-Feb-28 was 1900-Mar-1 . This is not a "bug". Indeed, it is by design. Excel works this way because it was truly a bug in Lotus 123. When Excel was introduced, 123 has nearly the entire market for spreadsheet software. Microsoft decided to continue Lotus' bug, in order to fully compatible. Users who switched from 123 to Excel would not have to make any changes to their data. As long as all your dates later than 1900-Mar-1, this should be of no concern.

Source: <http://www.cpearson.com/excel/datetime.htm>