

Re: Compile Error C1017 With sizeof()

Source: <http://www.tech-archive.net/Archive/VC/microsoft.public.vc.language/2006-05/msg00411.html>

- *From:* "Alex Blekhman" <tkfx.N05P4M@xxxxxxxxxx>
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Alexander J. Oss wrote:

It should, since sizeof isn't part of the preprocessor language. And you're right, sizeof(char) is 1 by definition. In C and C++ terms, "char" and "byte" are synonymous, and they don't necessarily imply 8 bits, though usually they do.

The preprocessor language includes "constant-expression" (according to 16.1.1 and 16.1.3), and 5.19 is what defines an integral "constant-expression", and that definition includes sizeof().
...ugh, I just found the following quote at <http://msdn2.microsoft.com/en-us/library/ew2hz0yd.aspx>:

The expression cannot use sizeof or a type-cast operator.

Why is this quote present here but not in the C++ standard (that I could find)?

Because C++ Standard is terse document, which provides shortest (most of the time) definitions of language concepts. MSDN is broader and includes commentaries and interpretations. Once it's in preprocessor section of the Standard the assumption is that compiler stuff is excluded. MSDN explicitly states this fact and enumerates limitations for preprocessor constant expression.

`sizeof' is compile time operator, i.e. it's evaluated by compiler. Preprocessor runs before compilation, hence `sizeof' is unknown during this stage.