



Designation: ~~C899 – 79 (Reapproved 2013)~~ C899 – 79 (Reapproved 2018)

Standard Practice for Use of Metric Units of Measure for Reporting Properties of Refractory Materials¹ (~~COMMITTEE C-8C08~~ SUPPLEMENT TO E-380)E380)

This standard is issued under the fixed designation C899; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice presents the units to be employed for reporting the properties of refractories, such as density, crushing stress, modulus of rupture, tensile stress, thermal conductivity, and permeability.

1.2 For convenience, a table of conversion factors between inch-pound units and SI units is included.

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

E380 Practice for Use of the International System of Units (SI) (the Modernized Metric System) (Withdrawn 1997)³

2.2 *ISO Standard:*⁴

ISO 1000 SI Units and Recommendations for the Use of Their Multiples and of Certain Other Units

3. Significance and Use

3.1 This practice is provided to facilitate comparison of physical and mechanical properties of refractory materials by establishing uniform presentation of data.

3.2 Units have been chosen, where possible, to result in numbers of magnitude familiar in the refractories industry, that is, g/cm^3 rather than the SI preferred unit kg/m^3 . It is recommended that SI prefixes be selected for use with the units such that the resulting numerical values lie between 0.1 and 1000. For most properties, the prefixes kilo (k) and mega (M) are preferred. Other prefixes are given in the following table:

¹ This practice is under the jurisdiction of ASTM Committee C08 on Refractories and is the direct responsibility of Subcommittee C08.92, the Joseph E. Kopanda Subcommittee for Editorial, Terminology, and Classification.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.