

Standard Definitions of TERMS RELATING TO MAGNESIUM OXYCHLORIDE AND MAGNESIUM OXY-SULFATE CEMENTS¹



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This Standard of the American Society for Testing Materials is issued under the fixed designation C 376; the final number indicates the year of original adoption as standard or, in the case of revision, the year of last revision.

Aggregate.—Any hard inert material in graduated sizes for mixing with a cementing material. (C 238)³

Compressive Strength.—A property of solid material that indicates its ability to withstand a compressive load. (C 246, C 257, C 275)

Consistency.—A degree of viscosity defined by the flow under specified force. (C 249, C 255)

Filler.—Nonfibrous inert materials such as silica, limerock, talc, etc., in particle sizes passing a No. 100 (149-micron) sieve. Fibrous materials such as sawdust, asbestos, and the like, in particle sizes passing a No. 20 (840-micron) sieve, for mixing with a cementing material. (C 238)

¹ Under the standardization procedure of the Society, these definitions are under the jurisdiction of the ASTM Committee C-2 on Magnesium Oxychloride and Magnesium Oxysulfate Cements.

² Prior to adoption as standard, these definitions were published as tentative from 1955 to 1958.

³ These designations refer to the ASTM specifications and methods to which the definition applies. Consult the 1968 Book of ASTM Standards, Part 4, and its annual supplements, for the latest editions of the specifications and methods.

nesium oxide, MgO. (See Oxychloride Magnesia)

Magnesium Oxychloride.—The cementitious matrix formed by the reaction of oxychloride magnesia with gaging solution.

Magnesium Oxchloride Cement.—The conglomerated mass formed of various aggregates and fillers cemented in a matrix of magnesium oxychloride.

Magnesium Oxychloride Composition.—An intimate mixture of various dry ingredients, including oxychloride magnesia, which when mixed with gaging solution forms magnesium oxychloride cement.

Nonplastic Contraction.—The decrease in length from the time of final set to maximum contraction of a specimen prepared and tested under standardized conditions, expressed as the percentage of the total length. (C 246, C 252, C 275).

Oxychloride Magnesia.—Magnesia of quality suitable for the preparation of magnesium oxychloride cement. (Synonymous with Plastic Calcined Magnesite, Caustic Calcined Magnesite, Oxychloride Magnesite, and Plastic Calcined Magnesite.) (C 275)

Setting Time.—The time in minutes required for a specimen prepared and tested under standardized conditions to attain specified degree of rigidity. (C 24 C 254, C 275)

Standard Conditions.—Conditions of temperature, humidity, and air velocity for the preparation, storage, and testing of oxychloride specimens. (C 251)

Westvaco Needle.—A needle of specific dimensions and weight, which is used for the purpose of determining setting time (C 254)

Flexural Strength.—A property of solid material that indicates its ability to withstand a flexural or transverse load. (Synonymous with Transverse Strength and Modulus of Rupture.) (C 246, C 256, C 275)

Gaging Ratio.—The ratio of oxychloride magnesia to gaging solution used in mixing a magnesium oxychloride cement and usually expressed as pounds of MgC per gallon of gaging solution. (C 251)

Gaging Solution.—A water solution of magnesium chloride, with or without $MgSO_4 \cdot 7H_2O$ equivalent to 10 per cent of the weight of $MgCl_2 \cdot 6H_2O$, of designated concentration or specific gravity for mixing with oxychloride cement composition. (C 250)

Linear Change.—The change in length of a specimen prepared and tested under standardized conditions, expressed as the percentage of the total length. (C 246 C 253, C 275)

Linear Contraction.—The decrease in length of a specimen prepared and tested under standardized conditions, expressed as the percentage of the total length. (C 246, C 252, C 275)

Magnesia.—The chemical compound mag-