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FOREWORD

Committee E02 on Terminology presents the Tenth Edition of the *ASTM Dictionary of Engineering Science & Technology*.

This volume allows the reader to reference terminology developed by various ASTM Committees. The dictionary also facilitates the comparison of definitions created by technical subject experts in many disciplines.

Vincent Diaz

Chairman

ASTM Committee E02 on Terminology

lea, *n*—*in cotton yarns*, the number of 120-yd lengths of yarn per pound; an indirect yarn numbering system. **D 4849, D13**

lea, *n*—*in linen yarns*, the number of 300-yd lengths of yarn per pound; an indirect yarn numbering system. **D 4849, D13**

leach, *n*—a weekly addition of water to solid material that is performed either dropwise or by flooding for a specified time period. **D 5681, D34**

leachate—liquid drainage normally associated with contaminated soils and solid waste landfills. **C 896, C04**

leachate—liquid that has percolated through or passed over a solid waste or other medium and contains dissolved or suspended materials, or both, from the medium. **D 5681, D34**

leachate, *n*—the liquid including any suspended components in the liquid that has percolated through or drained from a pile or cell of solid materials. **E 2201, E50**

leachate—the liquid residue from the migration of environmental pollutants mediated by surface or ground water. **F 1600, F20**

leaching—the removal in solution of the more soluble materials by percolating or moving waters. (ISRM) **D 653, D18**

leaching—the removal of soluble soil material and colloids by percolating water. **D 653, D18**

leaching, *v*—the operation, natural or designed, of producing leachate. **E 2201, E50**

leaching (latex), *n*—a process in which latex articles are washed in water to remove water-soluble substances. **D 1566, D11**

lead abatement contractor—any business entity, public unit, or person performing the actual abatement for a lead abatement project. **E 631, E06**

lead angle, helix angle—angle made by helix of thread with plane perpendicular to nail axis; measured at pitch line; small lead angle usually refers to less than 20°; medium lead angle usually refers to 55° to 65°; large lead angle refers to 65° to 75°; extra large lead angle refers to 80° to 85°. **F 547, F16**

lead-based paint, *n*—a dried paint film or other surface coating that contains lead in excess of the limits set by authorities having jurisdiction. **E 1605, E06**

lead-based paint activities—in the case of target housing and child-occupied facilities, inspection, risk assessment, and abatement. **E 1605, E06**

lead-based paint inspection, *n*—a surface-by-surface investigation to determine the presence of lead-based paint including a report explaining the results of the investigation. **E 1605, E06**

lead-based paint removal—action or process of abatement, that entails stripping lead-based paint from surfaces of components. **E 631, E06**

lead climbing, *n*—the skill of climbing first up a pitch, utilizing a belayer, climbing rope, and intermediate protection anchors. **F 1773, F08**

lead-containing paint—lead-based paint or other similar surface-coating materials containing lead or a lead compound, and in which the lead content is in excess of 0.06 % by weight of the total nonvolatile content of the paint, or the weight in the dried paint film. **E 631, E06**

lead-containing paint, *n*—paint or other similar surface-coating materials containing lead in excess of 0.06 % by mass of the total nonvolatile content of the paint, or by the mass of the dried paint film. **E 1605, E06**

leaded—characteristic of a metallic body containing metallic lead in dispersed form. **E 7, E04**

leaded dust—dust containing lead or lead compounds at potentially hazardous concentrations. **E 631, E06**

leaded dust hazard, *n*—a condition that might result in adverse human health effects due to lead in surface dust. **E 1605, E06**

leaded glass—pieces of glass fixed together at their edges with soldered strips of lead or other ductile metal. **C 162, C14**

leaded paint—paint or other coatings containing lead compounds at potentially hazardous concentrations. **E 631, E06**

leaded paint—paint or other coatings containing lead compounds. See **lead-containing paint**. **E 1605, E06**

leaded paint characterization—a procedure for determining the presence of lead in painted surfaces that are expected to be disturbed by planned work. **E 1605, E06**

leaded paint hazard, *n*—a condition that might result in adverse human health effects due to lead in deteriorated paint on all building surfaces, lead in paint on chewable surfaces, impact surfaces, or dust-producing friction surfaces. **E 1605, E06**

leaded soil, *n*—bare soil containing lead compounds at potentially hazardous concentrations. **E 1605, E06**

leaded soil hazard, *n*—a condition that might result in adverse human health effects due to lead in bare soil. **E 1605, E06**

leader mark—See **decating mark**. **D 3990, D13**

lead exposure—subjection to the presence of a lead hazard that could result in ingestion or inhalation of lead-containing substances. **E 631, E06**

lead-free (deprecated)—term used to describe a dwelling that contains no **lead-based paint**, lead-contaminated dust, or lead-contaminated soil. Use of this term is discouraged because **leaded paint** may be present, and there is normally a small amount of lead in any paint, dust, and soil. **E 1605, E06**

lead hazard, *n*—a **leaded-dust hazard**, **leaded-soil hazard**, **leaded-paint hazard**, or any other condition that may cause exposure to lead that may result in adverse human health effects. **E 1605, E06**

lead hazard activities, *n*—procedures, measures, and actions including **abatement**, **clearance examination**, control, inspection, maintenance, management, quality systems, reduction, and risk assessment pertaining to lead hazards in buildings and associated grounds. **E 1605, E06**

lead hazard assessment—investigation of an assessed unit conducted to determine and report the location, type, severity of lead hazards which are accessible to children. **E 1605, E06**

lead hazard control—activities intended to control exposures to lead hazards and actual or potential sources of lead hazard, including **abatement** and in-place management. **E 1605, E06**

lead hazard management—activities intended to characterize the presence of lead hazards and actual or potential sources of lead hazards in a defined facility or group of facilities, develop a specific plan to control and eliminate lead hazards based on these findings, and implement a program based on this plan. **E 1605, E06**

lead hazard reduction, *n*—any measure that results in a lessening of the number or extent, or both, of lead hazards. **E 1605, E06**

lead hazard screen—a limited risk assessment activity that involves limited paint and dust sampling as described in applicable Federal, state, or local regulations. **E 1605, E06**

lead head, cast lead head, compressed lead head—lead encasement pressed or cast onto or around small 1/2-in. steel head, or both. **F 547, F16**

lead-head nail—See **roofing nail**. **F 547, F16**

leading—a typographical term indicating the amount of white space between lines of printed characters. **F 1457, F05**

leading edge—the edge of a form that is used as a base for locating the first line of data to be scanned. **F 149, F05**

leadless glaze—See **leadless glaze under glaze**. **C 242, C21**

lead paint (deprecated)—a term that is sometimes used as an alternative to **lead-based paint**. Use of this term is discouraged because it is unclear what level of lead it refers to. **E 1605, E06**

lead paint hazard—presence of lead-based paint in places and site conditions posing a danger of ingestion or inhalation. **E 631, E06**

lead poisoning—toxic condition caused by excessive exposure to lead. **E 631, E06**

lead positive/negative—qualitative (not quantitative) judgment of lead content that determines abatement action measures. **E 631, E06**

lead screen—see **intensifying screen (a)**. **E 1316, E07**

lead screen (deprecated)—a term sometimes used for **lead hazard screen**. Its use is discouraged because there are several alternatives in use, and this one is particularly unclear. **E 1605, E06**

leaf—the sandwich layer of flat-sheet membrane/product channel spacer/flat-sheet membrane, glued together on the sides and across the outer end in a spiral wound element. **D 6161, D19**

leak—a hole, or void in the wall of an enclosure, capable of passing liquid or gas from one side of the wall to the other under action of pressure or concentration differential existing across the wall, independent of the quantity of fluid flowing. **E 1316, E07**

leak—any opening in a flexible package that is contrary to intention and either lets contents escape or permits substances to enter. **F 1327, F02**

leakage, *n*—the flow of liquid from one hydrogeologic unit to another. **D 653, D18**

leakage current—current flow through the insulation between test points. **F 2112, F01**

leakage field—see **field, magnetic leakage**. **E 1316, E07**

leakage flux—the flux outside the boundary of the practical magnetic circuit. **A 340, A06**

leakage rate—the flow rate of a liquid or gas through a leak at a given temperature as a result of a specified pressure difference across the leak. Standard conditions for gases are 25°C and 100 kPa. Leakage rates are expressed in various units such as pascal cubic metres per second or pascal litres per second. **E 1316, E07**

leakance, $n(T^{-1})$ —the ratio K'/b' , in which K' and b' are the vertical hydraulic conductivity and the thickness, respectively, of the confining beds. **D 653, D18**

leak artifact—a device used to introduce gas into a system at a controlled rate, usually 10^{-7} mol/s or less. **E 1316, E07**

leak detector—a device for detecting, locating, or measuring, or combination thereof, leakage. **E 1316, E07**

leak exit—the point where a leak appears. **E 631, E06**

leak exit—the point where a leak appears. **E 1749, E06**

leak path—the path a leak follows from the leak source to the leak exit. **E 631, E06**

leak path—the path a leak follows from the leak source to the leak exit. **E 1749, E06**

leak source—the point where a leak starts. **E 631, E06**

leak source—the point where a leak starts. **E 1749, E06**

leak testing—comprises procedures for detecting or locating or measuring leakage, or combinations thereof. **E 1316, E07**

leaky aquifer, *n*—aquifers, whether artesian or unconfined, that lose or gain water through adjacent less permeable beds. **D 653, D18**

lean gas—natural gas containing little or no hydrocarbons commercially recoverable as liquid products. **D 4150, D03**

lease—grant or rights by a lessor to a lessee to possess and use real or personal property for a period of time in exchange for rent or other consideration. **E 2135, E53**

lease (bail)—contract between the owner of real property (lessor) and another party (lessee) for the possession and use of the property for a specified term in return for rent or other income. **E 631, E06**

lease (bail)—contract between the owner of real property (lessor) and another party (lessee) for the possession and use of the property for a specified term in return for rent or other income. **E 1480, E06**

leash—a cord-like device wherein one end is attached to the top surface of the snowboard, or the binding, and the other end provides an apparatus to attach to one of the rider's legs. **F 1107, F27**

least count, *n*—*in tensile testing machines*, the smallest change in the indicated property that can customarily be determined. (See **sensitivity**) **D 123, D13**

least count, *n*—*in tensile testing machines*, the smallest change in the indicated property that can customarily be determined. **D 4849, D13**

least count, *n*—the smallest change in indication that can customarily be determined and reported. **E 6, E28**

least difference of practical importance, *6, n*—the smallest difference based on engineering judgment deemed to be of practical importance when considering whether a significant difference exists between two statistics or between a statistic and a hypothetical value. **D 123, D13**

leather—a general term for hide or skin that still retains its original fibrous structure more or less intact, and that has been treated so as to be imputrescible even after treatment with water. The hair or wool may or may not have been removed. Certain skins, similarly treated or dressed, and without the hair removed, are termed "fur." No product may be described as leather if its manufacture involves breaking down the original skin structure into fibers, powder or other fragments by chemical or mechanical methods, or both, and reconstituting these fragments into sheets or other forms. **D 1517, D31**

leatherboard—a type of fiberboard in which the fiber content is at least 75 % leather, usually with asphaltic or resinous binder. **D 1517, D31**

Le Chatelier's theorem—if a system in equilibrium is subjected to a constraint by which the equilibrium is altered, a reaction takes place which opposes the constraint, that is, one by which its effect is partially annulled. **E 7, E04**

LED—light emitting diode. **F 1457, F05**

LF, see **line feed**.

ledeburite—intimate mixture of austenite and cementite in metastable equilibrium, formed on rapid cooling during the eutectic reaction in alloys of iron and carbon containing greater than 2 percent but less than 6.67 percent carbon. Further slow cooling causes decomposition of the austenite into ferrite and cementite (pearlite) as a result of the eutectoid reaction. **E 7, E04**

ledge—see **bedrock**. **D 653, D18**

ledger paper, *n*—a paper characterized by strength, high tearing resistance, erasability, water resistance, ink receptivity, uniformity of surface, and smoothness. **D 1968, D06**

leeches—permanent magnets or electromagnets that are attached to the electrodes carrying magnetizing current and that are strong enough to hold electrode contact firmly. **E 1316, E07**

leg—staple part connecting staple crown with staple point; driven through and into or through materials being fastened. **F 592, F16**

legging—the drawing of filaments or strings from adhesive-bonded substrates are separated. (See also **stringiness** and **webbing**.) (Compare **teeth**.) **D 907, D14**

legs, *n*—*in zippers*, the two portions of a separate element that affix the element to the bead. **D 123, D13**

legs, *n*—the two portions of a separate element that affix the element to the bead. **D 2050, D13**

leg thickness—maximum dimension of staple-leg cross section measured parallel to staple-crown axis. **F 592, F16**

leg width—maximum dimension of staple-leg cross section measured perpendicular to staple-crown axis. **F 592, F16**

lehr, leer—a long, tunnel-shaped oven for heat treating glass by continuous passage. **C 162, C14**

lehr loader—a device for properly placing and spacing glass articles on a continuous lehr belt. **C 162, C14**

length, *n*—the maximum dimension of the tile measured parallel to the water channels or perpendicular to the eave of the roof. **C 43, C15**

length, *n*—horizontal dimension of the face of a unit when the unit is positioned as a stretcher. **C 1232, C15**

length, *n*—*of a fabric*, the distance from one end of a fabric to the other, measured parallel to the side edge of the fabric while it is under zero tension and is free of folds or wrinkles. **D 123, D13**

length, *n*—*of a fabric*, the distance from one end of a fabric to the other, measured parallel to the side edge of the fabric while it is under zero tension and is free of folds or wrinkles. **D 4850, D13**

length—distance between beginning and end of point, measured along edge of point. **F 547, F16**

length—distance measured parallel to shank axis from maximum

- leakage**, n —the flow of liquid from one hydrogeologic unit to another. F 1327, F02
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