

density, n —see **reflectance density, reflection density, transmission density, or transmittance density.** E 284, E12

density, n —the mass of a unit volume of material. E 344, E20

density—weight per unit volume, usually expressed in pounds per cubic inch, pounds per cubic foot, or kilograms per cubic metre. E 631, E06

density—the mass of a unit volume of a material at a specified temperature. The units shall be stated, such as grams per millilitre, grams per cubic centimetre, pounds per cubic foot, or other. The form of the expression shall be the following:

Density at x . . .

where x = temperature of the material. See also **Baumé**

gravity and specific gravity. E 1547, E15

density—weight per unit volume, usually expressed in pounds per cubic inch, pounds per cubic foot, or kilograms per cubic metre. E 1749, E06

density, n —the mass per unit volume; weight per unit volume, expressed as grams per cubic centimeter or pounds per cubic foot for solids and liquids and usually as grams per liter for gases. E 2201, E50

density—see **image density.** F 335, F05

density, n —in *printedsymbologies*, the number of data characters that can be contained in a given unit of measure. Linear bar code density is expressed in characters per inch (CPI) and two-dimensional symbol density is expressed in characters per square inch (CPSI). F 1294, F05

density, absolute or true—the mass under specified conditions of a unit volume of a solid sorbent excluding its pore volume and inter-particle voids. D 2652, D28

density, apparent—the weight in air of a unit volume of a material. D 883, D20

density, apparent—the mass per unit volume of a sheet of pulp or paper. It is commonly calculated by dividing the basis weight by the caliper, although it must be recognized that the numerical value thus obtained is dependent upon the definition of the ream. D 1695, D01

density, apparent—the weight in air of a unit volume of a material at a specified temperature. The units shall be stated. The form of expression shall be the following:

Apparent density at x

where x = temperature of the material. E 1547, E15

density, apparent, n —the weight in air of a unit of volume of a material. F 1251, F04

density, apparent (density, bulk, packing)—the mass under specified conditions of a unit volume of a solid sorbent including its pore volume and inter-particle voids. D 2652, D28

density, apparent (of applied insulation), n —the mass per unit volume of in-place mass thermal insulation. C 168, C16

density, block—see **density, particle.** D 2652, D28

density, bulk—the weight per unit volume of a material including voids inherent in material as tested. D 883, D20

density, bulk, n —the mass per unit volume of a material, including any voids present. D 1566, D11

density, bulk—the mass of a cellulosic material that will fill a unit volume of a container under specified conditions. D 1695, D01

density, bulk—see **density, apparent.** D 2652, D28

density, bulk, n —the weight in air of a unit of volume of a material. F 1251, F04

density comparison strip—alternative term for **step-wedge comparison film.** E 1316, E07

density current—the movement of one fluid under, through, or over another fluid of differing density. D 4410, D19

density (dry), n —the mass per unit volume of an unimpregnated powder metallurgy part. B 243, B09

density (film)—transmission density is the common logarithm of the

ratio of the radiant flux incident on the sample to the radiant flux transmitted by the sample, assuming no reflection. E 7, E04

density (film)—the quantitative measure of film blackening when light is transmitted or reflected.

$$D = \log(I_0/I) \text{ or } D = \log(I_0/R)$$

where:

D = density,

I_0 = light intensity incident on the film,

I = light intensity transmitted, and

R = light intensity reflected.

E 1316, E07

density in air—the weight per unit volume in vacuum minus the weight of a volume of air equal to the difference between the volume of the sample and the volume of brass weights equivalent to weight in vacuum of the sample. D 4790, D16

density (ρ , (ML⁻³), kg/m³), n —mass per unit volume. D 4439, D35

density of frozen ground—the ratio of mass per unit of volume of frozen earth materials. D 7099, D18

density (of gases)—the mass of a unit volume of a gas at a stated temperature and pressure. The units shall be stated. The form of expression shall be the following:

Density at x, y

where:

x = temperature of the gas, and

y = pressure of the gas.

E 1547, E15

density of plastics—the weight per unit volume of material at 23°C expressed as D23c, g/cm³ (kg/m³). F 412, F17

density, packing—see **density, apparent.** D 2652, D28

density, packing (bulk)—the ratio of the mass of a collection of discrete pieces of solid material to the sum of the volumes of: the solids in each piece, the voids within the pieces, and the voids among the pieces of the particular collection. D 3766, D32

density, particle (density, block)—the mass under specified conditions of a unit volume of a solid sorbent including its pore volume but excluding inter-particle voids. D 2652, D28

density, particle (envelope)—the ratio of the mass of a particle to the sum of the volumes of: the solid in each piece and the voids within each piece, that is, within close-fitting imaginary envelopes completely surrounding each piece. D 3766, D32

density ratio, n —the ratio, often expressed as a percentage, of the density of a porous material to the density of the same material completely free of porosity. Synonymous with **relative density.**

B 243, B09

density, skeletal—the ratio of the mass of discrete pieces of solid material to the sum of the volumes of: the solid material in the pieces and closed (or blind) pores within the pieces. D 3766, D32

density, tamped—the density of packed bed of powdered carbon. D 2652, D28

density, theoretical—the ratio of the mass of a collection of discrete pieces of solid material to the sum of the volumes of said pieces, the solid material having an ideal regular arrangement at the atomic level. D 3766, D32

density (wet), n —the mass per unit volume of a powder metallurgy part impregnated with oil or other nonmetallic materials. B 243, B09

dents—depressions in the copper foil which do not significantly change the thickness of the copper foil. B 846, B05

dents per unit width, n —for *woven pile yarn floor covering*, the number of binding sites per unit width; dents being the reed spaces through which the warp yarns pass in the loom or the metal strips, in the reed that form these spaces. D 123, D13

dents per unit width, n —for *woven pile floor covering*, the number of binding sites per unit width; dents being the reed spaces through which the warp yarns pass in the loom or the metal strips in the reed that form these spaces. D 5684, D13

denuder, *n*

denuder, *n*—a device designed to collect or remove gases from an air stream by diffusion to a collecting surface or secondary air stream while permitting the passage of particles. **D 1356, D22**

deoxidation—process of reducing the oxygen content from steel during the process of steel making, either by adding strong oxide forming elements, such as silicon or aluminum, or by the process of vacuum degassing to such a level that no oxidation of carbon or other elements takes place during solidification of steel. **F 1789, F16**

deoxidation products—a term specifically applied to those non-metallic inclusions formed as a result of the addition of deoxidizing agents to molten metal. **E 7, E04**

deoxidized copper, high-residual phosphorus—copper deoxidized with phosphorus residual in amounts 0.015 to 0.040 %. The copper is not susceptible to hydrogen embrittlement, as determined in Specification B 379. The copper is of relatively low-electrical conductivity due to the amount of phosphorus present.

NOTE—International Standards Organization specifications permit up to 0.050 % phosphorus. **B 846, B05**

deoxidized copper, low-residual phosphorus—copper deoxidized with phosphorus residual in amounts 0.004 to 0.012 %. The copper is not readily susceptible to hydrogen embrittlement, as determined in Specification B 379. The copper in the annealed condition has a minimum conductivity of 90 % IACS. **B 846, B05**

depacifying, *adj*—the process of removing hydrogen ions (protons) from the cathodic surface of an electrolytic cell, thereby promoting continued electrolytic corrosion. **D 4175, D02**

dependent variable, *n*—See **response variable**. **E 456, E11**

dependent variable, *n*—see **response variable**. **E 1325, E11**

deplasticize, *v*—the process of breaking down polymers in plastics and similar materials, resulting in loss of the material's structural integrity. **D 4175, D02**

depletion—selective removal of one component of an alloy, usually from the surface or preferentially from grain boundary regions. **E 7, E04**

depletion—decrease of toner concentration in a developer composition characterized by low-image density. **F 335, F05**

deployed length, *n*—the coils as extended for use. It is specified by the coverage where:

Helical coverage = number of coil loops per unit × helical loop spacing

Concertina coverage = number of coil loops divided by 2 × concertina loop spacing.

F 1379, F14

deployment, *n*—*forinflatable restraints*, the sequence of events related to the activation of a module. **D 123, D13**

deployment, *n*—*forinflatable restraints*, the sequence of events related to the activation of a module. **D 6799, D13**

deployment—placing a boom in the water and making it operational. **F 818, F20**

depolarization—a decrease in the polarization of an electrode at a specified current density. **B 374, B08**

depolarization—not a preferred term. (See **polarization**.) **G 15, G01**

depolarizer—a substance or a means that produces depolarization. **B 374, B08**

depolymerization, *n*—reduction in length of a polymer chain to form shorter polymeric units. Depolymerization may reduce the polymer chain to oligomeric or monomeric units, or both. **F 2312, F04**

deposit—the amount of pesticide on a unit area of surface. **E 609, E35**

deposit corrosion—localized corrosion under or around a deposit or collection of material on a metal surface. (See also **crevice corrosion**.) **G 15, G01**

deposition, *n*—the transfer of an atmospheric constituent to a surface due to gravity or another mechanism, or the material which is transferred.

dry deposition, *n*—all forms of deposition derived from the net vertical transfer of chemical species to a surface that are not

the result of precipitation.

wet deposition, *n*—the precipitation of water from the atmosphere in the form of hail, rain, sleet, and snow.

D 1356, D22

deposition—the chemical, mechanical, or biological processes through which sediments accumulate in a resting place.

D 4410, D19

deposition aid—a material that improves the ability of agricultural sprays to deposit on targeted surfaces. **E 1519, E35**

depositional carbon, *n*—*as used in Test Method D 5061*, a group of carbon forms that are formed from cracking and nucleation of gas-phase hydrocarbon molecules during coal carbonization.

pyrolytic carbon, *n*—*as used in Test Method D 5061*, an anisotropic carbon form that is formed by the deposition of carbon parallel to an inert substrate causing the resulting texture to appear ribbon-like.

sooty carbon, *n*—*as used in Test Method D 5061*, an isotropic carbon form comprised of approximately spherical particles of less than 1- μ m diameter sometimes referred to as combustion black.

spherulitic carbon, *n*—*as used in Test Method D 5061*, a spherical anisotropic carbon form sometimes referred to as thermal black that is formed by the deposition of carbon concentrically around a nucleus.

divided sample—See *divided sample* under **sample**. **D 121, D05**

deposit rate—the amount of any material deposited per unit area. **E 1102, E35**

depreciation—the annual charge to income that results from a systematic and rational allocation of costs over the life of a tangible asset. **E 2135, E53**

depression, *n*—localized pavement surface areas at a lower elevation than the adjacent paved areas. **E 867, E17**

depression, *n*—localized pavement surface areas at a lower elevation than the adjacent paved areas. **E 1778, E17**

depth, *n*—in the case of a beam, the dimension parallel to the direction in which the load is applied. **D 883, D20**

depth, *n*—in the case of a beam, the dimension parallel to the direction in which the load is applied. (D20) **F 412, F17**

depth-dose distribution—variation of absorbed dose with depth from the incident surface of a material exposed to a given radiation. **E 170, E10**

depth factor—the factor included in deriving the allowable bending stress for rectangular members which takes into account the somewhat lower unit strength developed in larger members as compared to smaller members. Archaic terminology, more correctly termed **size factor**. **D 9, D07**

depth-integrated sample—a discharge-weighted (velocity-weighted) sample of water-sediment mixture collected at one or more verticals in accordance with the technique of depth integration; the discharge of any property of the sample expressible as a concentration can be obtained as the product of the concentration and the water discharge represented by the sample. **D 4410, D19**

depth-integrating sediment sampler—a device that collects a representative water-sediment mixture at all points along the sampling vertical. **D 4410, D19**

depth integration—a method of sampling at every point throughout a given depth (the sampled depth) whereby the water-sediment mixture is collected isokinetically so that the contribution from each point is proportional to the stream velocity at the point. This process yields a sample with properties that are discharge weighted over the sampled depth. Ordinarily, depth integration is performed by traversing either a depth- or point-integrating sampler vertically at an acceptably slow and constant rate; however, depth integration can also be accomplished with vertical slot samplers. **D 4410, D19**

depth of field—the depth or thickness of the object space that is simultaneously in acceptable focus. **E 7, E04**

depth of field—the range of distance over which an imaging system