



Academic Press Dictionary of Science and Technology

Edited by
Christopher Morris



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molar heat capacity *Physical Chemistry*. the quantity of heat needed to raise the temperature of one mole of a substance by one degree. Also, MOLECULAR HEAT CAPACITY, MOLAL HEAT CAPACITY.

molarity *Physical Chemistry*. a description of the concentration of a solution, expressed by the number of moles of solute per liter of solution.

molar latent heat *Physical Chemistry*. the amount of latent heat per mole of a substance.

molar mass *Physical Chemistry*. the mass in grams of one mole of a given substance; the practical unit of measurement is g mol^{-1} .

molar refraction *Optics*. a formula that shows the refractive index of a compound when modified by the molecular weight and density of the compound. Also, LORENTZ-LORENZ MOLAR REFRACTION.

molar solution *Physical Chemistry*. a solution that contains one mole of solute for each liter of the solution.

molar specific heat *Physical Chemistry*. the ratio between the quantity of heat needed to raise the temperature of one mole of a given substance by one degree and the quantity of heat needed to raise the temperature of one mole of a reference substance, such as water, by one degree at a given temperature. Also, MOLAL SPECIFIC HEAT; MOLECULAR SPECIFIC HEAT.

molar surface *Physical Chemistry*. the area occupied by a sphere of one mole of a substance.

molar volume *Physical Chemistry*. the volume that one mole of a given substance occupies in the form of a solid, liquid, or gas at standard temperature and standard atmospheric pressure. Also, MOLAL VOLUME; MOLECULAR VOLUME; MOLE VOLUME.

Molasse *Geology*. 1. a sedimentary sequence deposited during the Miocene period in southern Germany, subsequent to the rising of the Alps; composed primarily of soft green sandstone associated with marl and conglomerates. 2. *molasse*. any similar sedimentary sequence.

mole. molar concentration.

mold *Engineering*. a hollow form or pattern into which molten metal or plastic is poured to form a desired shape when the material cools.

Acoustical Engineering. the metal negative counterpart used to press record albums in the disk recording production. **Building Engineering**. a thin board or zinc sheet cut to a particular profile and used to run cornices. **Geology**. 1. an original mark or depression made by a shell or other body on a sedimentary surface. 2. a soft, friable humus-rich soil suitable for plant growth. **Graphic Arts**. a negative impression of a type character or line into which molten metal is poured to cast positive type.

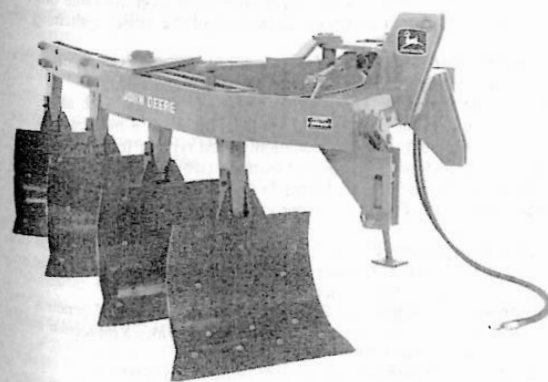
Paleontology. the sediment or volcanic material that surrounds a dead organism (an **external mold**) or that fills any void inside the organism when its soft parts decay (an **internal mold**); corresponding artificial molds may be produced by various techniques. **Mycology**. a common term for fungi that have a cottony or wooly appearance.

moldability *Materials Science*. the relative ability of a material to be molded into shape.

moldavite *Mineralogy*. a translucent, olive to pale green tektite from western Czechoslovakia, whose surface has been etched by solution. Also, MOLDAVITE, PSEUDOCRYSOLE.

moldboard *Agriculture*. the part of a plow bottom just behind the share that turns the furrow slice. Also, **moldboard bottom**.

moldboard plow *Agriculture*. a common type of plow that uses a moldboard to turn the furrow slice.



moldboard plow

mold constant *Materials Science*. a constant, denoted by the letter B in Chvorinov's rule stating that $t_s = B(F(V,A))^2$ where t_s is the total solidification time, V is the volume of the casting, and A is the surface area of the casting in contact with the mold.

molded breadth *Naval Architecture*. the maximum width of a hull as measured across its frames, excluding the thickness of the shell plates or planking.

molded brick *Mechanical Devices*. a brick fabricated from a mold, as distinguished from a wire-cut brick; used for ornamental work.

molded capacitor *Electricity*. a capacitor that is encased in a protective plastic-insulating material to keep out dust and moisture.

molded depth *Naval Architecture*. the depth of a hull as measured from the upper deck beam to the keel.

mold efficiency *Engineering*. in the molding of objects, the amount or percentage of total turn-around time used for formation, cooling, and ejection from the molds.

mold inclusion *Metallurgy*. in the casting of metals, an inclusion defect that may appear as a result of a reaction between the molten metal and the mold material or the mechanical spalling of the mold.

molding *Architecture*. a continuous decorative band of curved or rectangular profile that is applied to or carved into a surface such as a wall or doorjamb. *Medicine*. adaptation of the fetal head to the size and shape of the birth canal.

molding cycle *Engineering*. 1. all the operations involved in forming a molded object. 2. the total amount of time required to complete a molding operation.

molding press *Metallurgy*. in powder metallurgy, a press used to make a compact.

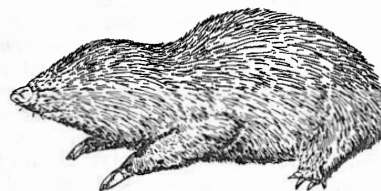
molding pressure *Engineering*. the amount of pressure required to force molten material into a mold.

molding shrinkage *Engineering*. the difference in size between a mold and the mold cavity when measured at room temperature.

mold loft *Engineering*. a room or building in which the components of the hull of a ship or aircraft are laid out and assembled.

mold shrinkage *Materials Science*. in a molding process, the initial shrinkage that occurs while the part is forming in the mold.

mold steel *Metallurgy*. any steel suitable for making molds.



mole

mole *Vertebrate Zoology*. any small insectivorous mammal of the family Talpidae, living underground and having velvety fur, a long, naked muzzle, very small eyes, and strong forefeet for burrowing. *Mechanical Engineering*. an egg-shaped mechanical device that is pulled behind a subsoil plow and used in tunnel excavation. (From the Middle English name for this animal.)

mole *Medicine*. 1. a congenital discolored spot elevated above the skin; a nevocytic nevus. 2. broadly, any skin blemish. 3. a fleshy mass or tumor formed in the uterus by the degeneration or abortive development of an ovum. (From an Old English word.)

mole *Chemistry*. the fundamental SI unit used to measure the amount of a substance; it is equal to the amount of a substance containing the same number of given elementary entities (such as atoms, molecules, ions, or electrons) as there are atoms of carbon in 12 grams of carbon-12. One mole of atoms contains Avogadro's number of atoms (6.02×10^{23}). It is most often used to express molecular weight. (From *molecule*.)

mole *Civil Engineering*. 1. a massive breakwater or berthing facility, usually built of stone and extending from the shore to deep water. 2. the area enclosed or protected by such a structure. (From Latin for *dam*.)

molecular *Chemistry*. 1. relating to, consisting of, or caused by molecules. 2. see Molar.

molecular adhesion *Physical Chemistry*. the force that causes solids or liquids to bind to each other; generally applied to adhesion between different materials.