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 **WILEY-INTERSCIENCE**

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parts as well as for metal parts and roughing up metal surfaces to promote better adhesion of coatings. It has a natural color, and is supplied in 1.0 mm (0.04 in.) cubical size. *Emsodor Micro* is a micron-size medium for deflashing electrical and electronic parts. The natural color product is supplied in granules with an average size of 200-400 μm (0.008-0.016 in.) that further reduce the risk of slot-and hole-blocking in small parts.

Emu. Trademark of Boral Kinnaers Proprietary Limited (Australia) for polypropylene fibers and yarns.

emulsified asphalt. An asphalt emulsion in water used for waterproofing concrete, painting steam and hot-water pipes, and surfacing floors.

emulsifier. (1) A surface-active agent that intimately mixes with and disperses dissimilar, generally immiscible materials, such as oil and water, or water and fine particles, to produce a stable emulsion. Also known as *dispersator*; *disperser*; *dispersing agent*; *emulsifying agent*.

(2) In liquid penetrant inspection, an agent that is added to a liquid penetrant to make it soluble and thus water-washable.

emulsifying agent. See emulsifier (1).

emulsion. (1) A stable dispersion of two immiscible liquids. In an emulsion minute droplets of one of the liquids (e.g., oil) are evenly distributed throughout the other (e.g., water).

(2) The photosensitive coating on a camera film, or photographic plate.

emulsion butadiene rubber. A white, viscous aqueous suspension of butadiene rubber. Abbreviation: E-BR.

emulsion-coated paper. A paper coated with polymers or synthetic resins that are in the form of an emulsion any of various processes.

emulsion coating. An aqueous suspension of latex, oil or resin. See also emulsion paint.

emulsion-derived foams. A group of engineered, low-density polymeric foams (e.g., polystyrene, polymethacrylonitrile and resorcinol-formaldehyde) with open-celled structure produced by high internal phase emulsion. Used as absorption, separation and filter media, in supercapacitors and rechargeable batteries, and as supports for biochemical synthesis.

emulsion paint. A paint made by emulsifying the film former or binder, usually a latex, oil or resin, in a volatile liquid, usually water. See also latex paint.

emulsion polymer. A polymer, often a synthetic rubber, such as styrene butadiene, that is the end product of a polymerization reaction carried out at standard pressure (101.325 kPa or 14.696 psi) and temperatures between -20 and +60°C (-4 and +140°F) with the reacting species in emulsified form. Abbreviation: EP.

emulsion rust-preventive compound. A compound of emulsifying or soluble oils, usually oil-in-water emulsions or wax emulsions, used as temporary protective coatings on metal surfaces.

emulsion-spun fibers. Synthetic fibers that have been spun from a polymer emulsion.

Emultex. Trade name polyvinyl acetates.

Emu-Pulver. Trademark of BASF AG (Germany) for polystyrene copolymer powders.

enamel. (1) See enamel paint.

(2) See porcelain enamel.

(3) See dental enamel.

(4) See enamel leather.

enamel brick. A brick with a hard, smooth, glazed or enamellike surface produced by a fired-on, usually colored, wash-type coating. Also known as *enameled brick*.

enamel brick clay. A clay similar in composition and consistency to that used in the production of buff-colored face brick.

It can be used as in coatings, and fired to vitrification.

enamel clay. A fat clay, such as *ball clay*, suitable for use as a suspension promoter for porcelain enamels and glazes in aqueous slips. Also known as *enameling clay*.

enamel colors. Inorganic compositions used to impart color to porcelain enamels, ceramic bodies, glass and glazes.

enameled brick. See enamel brick.

enameled sheet steel. See porcelain enameled sheet steel.

enamel film insulator. A magnetic wire consisting of a core of a metallic conductor coated with a thin, flexible enamel film based on epoxy, polyester or polyvinyl acetate resins.

enamel frit. See porcelain enamel frit.

enameling clay. See enamel clay.

enameling iron. See porcelain enameled iron.

Enamelize. Trade name for alumina polishing paste for dental applications.

enamel leather. Leather having a shiny finish on the grain side. Also known as *enamel*.

Enameloid. Trade name of Gemloid Corporation (USA) for acrylic and cellulose acetate plastics and products.

enamel oxides. See porcelain enamel oxides.

enamel paint. A paint made by grinding or mixing pigments with varnishes, lacquers, synthetic resins or combinations thereof. It dries by oxidation or baking, and is used to form smooth, hard, glossy or semiglossy surfaces on metals or ceramics. Also known as *enamel*. See also baking enamel.

enamel paper. See coated paper.

enamelware. Articles of steel, cast iron, aluminum or copper coated with porcelain enamel and including various products of the kitchenware industry, such as pots, pans, etc.

Enant. Trade name for nylon fibers.

enantiomer. One of a pair of stereoisomers, whose molecular configurations have left-handed (*levo*) and right-handed (*dextro*) forms and differ only in being mirror images of each other. For example, the two glyceraldehydes *L*-glyceraldehyde and *D*-glyceraldehyde are enantiomers. See also stereoisomer.

enantiotropic liquid crystal. A type of thermotropic liquid crystal that exhibits the liquid crystalline state when the temperature of a solid is raised, or the temperature of a liquid is lowered. See also liquid crystal; monotropic liquid crystal; thermotropic liquid crystal.

enargite. A dark to metallic gray mineral of the wurtzite group composed of copper arsenide sulfide, Cu_3AsS_4 . It can also be made synthetically. Crystal system, orthorhombic. Density, 4.43-4.45 g/cm³; hardness, 3 Mohs. Occurrence: Europe (Balkan peninsula), USA (Colorado, Montana, Utah), Peru. Used as an ore of copper and arsenic.

Enathene. Trademark of Quantum Chemical Corporation (USA) for ethylene butyl acrylate copolymers used for adhesives and polymer films.

Enbiron. Trade name for vinyon (vinyl chloride) fibers with excellent acid, alkali and mildew resistance. Used for textile fabrics and carpets.

Enbo. Trade name of Surface Technology Inc. (USA) for electrodeless nickel-boron coatings.

encapsulant. An insulating material in the form of a conformal or thixotropic polymer coating, or a molten polymer or elastomer film or foam applied to an object, such as a small electronic component or device (e.g., a capacitor or circuit board module) by brushing, dipping or spraying. Polymers frequently used for this application include epoxies and silicones.

encapsulated adhesive. A special adhesive in which the particles of one of the reactants are enclosed in a protective film to suppress the curing reaction until the film is intentionally destroyed by mechanical or chemical means.

Encaptrax. Trademark of Glotrax Polymers Inc. (USA) for a line of epoxy-based potting compounds and encapsulants.

Encasa. Trade name for regenerated protein (azlon) fibers.

encaustic. A paint based on hot, pigmented wax.

encaustic tile. A ceramic tile that has a pattern or design set in its surface with clays of a color different than that of the body, followed by firing.

Encel. Trade name for rayon fibers and yarns used for textile fabrics.

ENCo-CC. Trademark of Engineered Coatings (USA) for abrasive and abradable thermal-spray composite coatings supplied in metallic, ceramic, organic and inorganic grades. They have excellent corrosion, erosion and oxidation resistance, and are applied to rotating parts, such as compressors, expanders and turbochargers, mainly for clearance control.

Encon. Trade name of Delta Enfield Metals Limited (UK) for continuously cast copper-tin alloys.

Encore. Trademark of Degussa-Ney Dental (USA) for a hard, white copper and silver-free dental bonding alloy containing 48% gold and 40.5% palladium. It has a light oxide layer, high yield strength, good resistance to margin warping, a mid-range thermal expansion coefficient compatible with most porcelain, and a hardness of 250 Vickers. Used for porcelain-to-gold restorations subject to stress.

Encore Plus. Trade name of Degussa-Ney Dental (USA) for a silver-free palladium dental bonding alloy.

Encron. Trade name for polyester fibers and yarns used for textile fabrics.

end-and-end. A plain-weave fabric made with alternating warp (longitudinal) yarns of white and a color, and alternating weft (filling) yarns of two different colors producing a small check design. Used especially for shirts. Also known as *end-to-end*.

end construction tile. A hollow concrete or fired ceramic tile designed to receive compressive stresses parallel to the axes of the cells.

end-cut brick. An extruded brick having both ends cut by a wire.

end-grained wood. A tree or log cut at right angle to the direction of the fibers. The resulting piece has a cross section revealing pitch, cambium, annual rings, etc.

Endobon. Trademark of Biomet Merck (Germany) for a highly biocompatible *hydroxyapatite* ceramic with an interconnecting pore system (pore size, 100-1500 μm , or 0.004-0.06 in.). Supplied in blocks, granules and cylinders, it is used as a bone graft material in total joint replacement and in the repair of bone defects.

Endofix. Trade name Acufex Microsurgical Inc. (USA) for biodegradable polymers based on poly(L-lactide) or poly(glycolide-co-trimethylene carbonate) and used for medical and surgical fixation devices, e.g., screws and tacks.

EnDOTec. Trademark of Eutectic Corporation (USA) for continuous gas-shielded welding alloys for maintenance, repair and wear resistance. They have good abrasion resistance under high pressure and moderate impact.

Endox. Trade name of Enthone-OMI, Inc. (USA) for alkaline compounds for removing rust and scale from iron and steel. They are supplied in powder form for addition to water.

end-to-end. See *end-and-end*.

Endur. (1) Trademark of Rogers Corporation (USA) for a series

of thermoplastic elastomers with good tear strength, good resistance to ultraviolet light, ozone and oils, and a long wear life. Used for business equipment, industrial equipment, machine elements, etc.

(2) Trademark of Ormco Corporation (USA) for dental adhesives.

(3) Trade name of Corhart Refractories Corporation (USA) for fused cast magnesite-chrome refractories.

Endura. Trademark of Endura Coatings Inc. (USA) for special non-stick, dry-film polyurethane coatings with excellent wear resistance, good anti-galling properties, good chemical and corrosion resistance, and low friction coefficients.

Enduralac. Trade name of Egyptian Lacquer Manufacturing Company Inc. (USA) for a clear lacquer.

Enduran. Trademark of GE Plastics (USA) for a series of polybutylene terephthalate (PBT) resins, and polybutylene terephthalate/polyethylene terephthalate (PBT/PET) alloys available in unfilled extrusion, and glass- and/or mineral-filled injection grades.

Endurance. (1) Trade name of A. Cohn Limited (UK) for a series of tin bronzes supplied in various grades: *Endurance AA* is a wear-resistant bronze containing 87% copper, 12% tin, and 1% phosphorus. It has a low coefficient of friction, and is used for automotive and aircraft bearings. *Endurance BB* is a wear-resistant bronze containing 89% copper, 10.5% tin and 0.5% phosphorus, and is used for bushings. *Endurance CC* is a corrosion-resistant bronze containing 65-89.5% copper, 10-24.65% tin and 0.35% phosphorus used for bearings, collars and pumps. *Endurance DD* is a heavy-duty bronze containing 80% copper, 10% tin, 9.75% lead and 0.25% phosphorus used for connecting-rod and railroad bearings. *Endurance EE* is a heavy-duty bronze containing 84% copper, 9.5% tin, 6.3% lead and 0.2% phosphorus used for connecting-rod and railroad bearings.

(2) Trade name of American Hard Rubber Company (USA) for hard rubber.

Endur-C. Trademark of Rogers Corporation (USA) for a microcellular urethane with good vibration-damping properties, wear resistance and chemical resistance, used to control vibration and shock in computer peripherals, office equipment, telecommunications equipment, appliances and electronic components.

Endur-Ever. Trade name of Kelly Moore/Preservative Paints (USA) for a white baking enamel.

Enduria. Trade name of Bethlehem Steel Corporation (USA) for a spring steel containing 0.7% carbon, and the balance iron.

Enduro. Trademark of Republic Steel Corporation (USA) for an extensive series of heat-resistant and stainless steels including various low-nickel austenitic, standard chromium-nickel, and ferritic chromium grades.

Enduron. Trade name of Sheepbridge Engineering Limited (UK) for a heat- and abrasion-resistant cast iron containing 1.9% carbon, 16% chromium, 1.9% silicon, 0.06% phosphorus, and the balance iron. Used for cylinder liners and piston rings.

Endweldur. Trade name of American Chain & Cable (USA) for a series of steels containing 0.2-0.4% carbon, 0-3.5% nickel, and the balance iron. Used for chains.

Enebra. Trade name of Eisenwerke Neubrandenburg GmbH (Germany) for an extensive series of cast bronzes and brasses including several highly corrosion resistant tin bronzes for chemical and textile equipment, various high-strength bearing bronzes for pumps and automotive gasoline and diesel engines, miscellaneous copper-zinc alloys for general construction applications, and diverse special bronzes for electrical applications.