

Glossary

ELECTROSTATIC DISCHARGE — (ESD) An instantaneous flow of an electrical charge on a nonconductor through a conductor to ground.

ELECTRO-TINNED — Electrolytic process of tinning wire using pure tin.

ELEXAR — Shell trademark for a thermoplastic elastomer (TPE).

ELONGATION — The fractional increase in the length of a material stressed in tension.

EMA — (Electrical Moisture Absorption) A water tank test during which sample cables are subjected to voltage and water maintained at rated temperature; the immersion time is long, with the object being to accelerate failure due to moisture in the insulation; simulates buried cable.

EMBOSSING — Identification by means of thermal indentation which leaves raised lettering on the sheath material of cable.

EMERGENCY OVERLOAD — A situation in which larger than normal currents are carried through a cable or wire for a limited period of time.

EMI — Electromagnetic Interference. External signals that disrupt the data being transmitted on the local area network or electronic device being operated. Typically, these external signals emanate from universal motors with brushes, fluorescent lights, personal computers, printers or other devices including copy machines, etc. The Federal Communications Commission (FCC) regulates this emission area.

ENDOSMOSIS — The penetration of water into a cable by osmosis; aggravated and accelerated by DC voltage on the cable.

ENDS — In braiding, the number of essentially parallel wires or threads on a carrier.

ENERGIZE — To apply rated voltage to a circuit or device in order to activate it.

EO — A UL cable type. Elevator lighting and control cable with thermoset insulation.

EOT — End of Transmission Character. A transmission control character used to indicate the end of transmission, which may include one or more texts and any associated message headings.

EP, EPR, EPM, EPDM — Designations for a synthetic rubber based upon the hydrocarbon ethylene propylene.

EPA — Environmental Protection Agency. The federal regulatory agency responsible for keeping and improving the quality of our living environment — mainly air and water.

EPDM — Ethylene propylene diene monomer.

EPRDM — Erasable Programable Read Only Memory.

EPR — Ethylene propylene rubber.

EQUILAY CONDUCTOR — See Concentric-lay Conductor.

ET — A UL cable type. Elevator lighting and control cable with thermoplastic insulation, three braids, flame-retardant and moisture-retardant finish. May have steel supporting strand in the center, 300 V.

ETCHED WIRE — A process applied to Teflon® wire in which the wire is passed through a sodium bath to create a rough surface to allow epoxy resin to bond to the Teflon®.

ETFE — Ethylene tetrafluoroethylene. Tefzel is DuPont's trademark for this material.

ETHERNET — A baseband local area network specification developed jointly by Xerox Corporation, Intel Corporation, and Digital Equipment Corporation to interconnect computer equipment using coaxial cable and "Transceivers."

ETL — Electrical Testing Laboratories, Inc.

ETPC — Abbreviation for electrolytic tough pitch copper. It has a minimum conductivity of 99.9%.

EXIT ANGLE — The angle between the output radiation vectors and the axis of the fiber or fiber bundle.

EXPANDED DIAMETER — Diameter of shrink tubing as supplied. When heated the tubing will shrink to its extruded diameter.

EXTERNAL WIRING — Electronic wiring which interconnects subsystems within the system.

EXTRUDED CABLE — Cable with conductors which are uniformly insulated and formed by applying a homogeneous insulation material in a continuous extrusion process.

EXTRUSION — A method of applying insulation to a conductor or jacketing to a cable. The process is continuous and utilizes rubber, neoprene or a variety of plastic compounds.

F

FACSIMILE — The remote reproduction of graphic material; an exact copy.

FARAD — A unit of capacitance when a difference of potential of 1 volt produces a displacement of one coulomb in a capacitor. The farad is a very large unit and a much smaller unit, the microfarad (μf), is more commonly used.

FATIGUE RESISTANCE — Resistance to metal crystallization which leads to conductors or wires breaking from flexing.

FAULT, GROUND — A fault to ground.

FCC — Federal Communications Commission.

FDDI (Fiber Distributed Data Interface) — An ANSI defined token-passing ring using fiber optic media to attain a 100 mbps transmission rate.

FDX — Full Duplex. Transmission in two directions simultaneously, or, more technically, bidirectional simultaneous two-way communications.

FEP — Fluorinated ethylene propylene. Teflon is DuPont's trademark for this material.

FEPB — A UL cable type. Fluorinated ethylene propylene insulated wire with glass braid.

FFH-2 — A UL type of fixture wire with a 600 V rating.

FIBER DISPERSION — Pulse spreading in an optical fiber caused by differing transit times of various modes.

FIBER OPTICS — Transmission of energy by light through glass fibers. A technology that uses light as an information carrier. Fiber optic cables (light guides) are a direct replacement for conventional cable and wire pairs. The glass-based transmission cable occupies far less physical volume for an equivalent transmission capacity; the fibers are immune to electrical interference.

FIBER TUBING — A loose, crush-resistant cylinder applied over individual fibers to provide mechanical protection. Also called a buffer tube.

FIELD COIL — A suitable insulated winding mounted on a field pole to magnetize it.

