

**ABRASION RESISTANCE** Ability of a wire, cable or material to resist surface wear.

**ALLOY** A metal formed by combining two or more different metals to obtain desirable properties.

**ALTERNATING CURRENT (AC)** Electric current that continually reverses its direction. It is expressed in cycles per second (Hertz or Hz).

**AMBIENT TEMPERATURE** The temperature of the medium surrounding an object.

**AMPACITY** The maximum current an insulated wire or cable can safely carry without exceeding either the insulation or jacket material limitations.

**AMPERE** A unit of current; one ampere is the current flowing through one ohm of resistance at one volt potential.

**ANNEAL** To soften and relieve strains of metal by heating to just below melting point then slowly cooling. Annealing lowers the tensile strength of copper, while improving flex life and flexibility.

**ANSI** American National Standards Institute.

**ASA** American Standards Association. Former name of ANSI.

**ASTM** American Society for Testing and Materials.

**ATTENUATION** Reduction of signal strength during transmission. In cables, generally expressed in dB per unit length, usually 1000 feet.

**AUTO FREQUENCY** The range of frequencies audible to the human ear. Usually 20-20,000 Hz.

**AWG** American Wire Gauge. See **GAUGE**.

**AWG** UL designation for Appliance Wiring Material.

**BAND WIDTH** The frequency range of transmitted electrical signals, expressed in Hertz.

**BARE CONDUCTOR** A conductor having no covering, coating or cladding on the copper.

**BEND RADIUS** Radius of curvature that a cable can bend before the risk of breakage or increased attenuation occurs. To determine bend radius a good rule of thumb is not to exceed ten times the cable diameter.

**BINDER** A spirally served tape or thread used to hold cable components in place.

**BOND STRENGTH** Amount of adhesion between surfaces, e.g., in bonded ribbon cables.

**BRAID** A group of textile or metallic filaments interwoven to form a tubular flexible structure which may be applied over one or more wires or flattened to form a strap.

**BRAID ANGLE** The angle formed by the shielding strand and the axis of the cable being shielded.

**BREAKDOWN VOLTAGE** The voltage at which insulation between two conductors will fail,

allowing electricity to 'arc' or pass through.

**BUNCH STRANDING** A group of like wires twisted together without regard to geometric pattern.

**BUS-BAR WIRE** Uninsulated tinned copper wire used as a common lead.

**CABLE ASSEMBLY** A completed cable and its associated hardware ready to install.

**CABLE FILLER** Material used in multiconductor cables to occupy interstices in order to produce a cable that is as smooth and round as possible.

**CABLING** Grouping or twisting together of two or more insulated conductors to form a cable.

**CEC** Canadian Electrical Code; Canada's version of the US National Electrical Code (NEC).

**CAPACITANCE** The ability of a dielectric material between conductors to store energy when a difference of potential exists between the conductors. Cable capacitance is usually measured in picofarads (pF) per unit length.

**CATEGORY** Rating of a cable established by TIA/EIA to indicate the level of electrical performance.

**CELLULAR POLYETHYLENE** Foamed polyethylene consisting of individual closed cells suspended in a polyethylene medium, resulting in a desirable reduction of the dielectric constant.

**CHARACTERISTIC IMPEDANCE** The ratio of voltage to current at every point along a transmission line at the point the voltage is applied. The impedance which makes a transmission cable seem infinitely long, when connected across the cable's output terminals.

**CIGARETTE WRAP** Tape insulation wrapped longitudinally instead of spirally over a conductor

**CIRCULAR MIL** The area of a circle one one-thousandth of an inch (.001") in diameter. Used in expressing wire cross sectional area and to determine conductivity and gauge size that various combinations of conductors will produce.

**CLADDING** Method of applying a layer of metal over another metal whereby the junction of the two metals is continuously welded.

**COAXIAL CABLE** Cable consisting of two cylindrical conductors with a common axis, separated by a dielectric.

**COLD BEND** A cold chamber test to determine effects of specified temperatures on cable which has been wrapped around a mandrell.

**COLDflex GROUND CABLE™** New England Wire's flexible low-temperature ground cable for power distribution applications.

**COLD FLOW** Permanent deformation of an insulation due to mechanical force or pressure.

**COLOR CODE** A system for identifying components of cables using solid color and striped jackets.

**COMMON AXIS CABLING** In multiconductor cables, a twisting of all conductors around a

common axis yielding smaller diameter constructions.

**COMPACTED STRANDED CONDUCTOR** A unidirectional or conventional concentric conductor manufactured to a specified diameter which is approximately 8 to 10% less than the nominal diameter the standard stranded conductor.

**COMPOSITE CABLE** A cable consisting of two or more different types or sizes of wires.

**COMPOUND** An insulating or jacketing material made by mixing two or more ingredients.

**CONCENTRIC STRANDING** A group of uninsulated wires twisted around a center core with subsequent layers spirally wrapped around the core, alternating lay directions, to form a single conductor.

**CONCENTRICITY** The measurement of the location of the center of a conductor with respect to the geometric center of the surrounding insulation.

**CONDUCTANCE** The ability of a conductor to carry electric current; reciprocal of resistance. Measured in mhos (ohm backwards).

**CONDUCTIVITY** The capability of material to carry electrical current, expressed as a percentage of copper conductivity with copper being 100%.

**CONDUCTOR** A substance, usually metal, used to transfer electrical energy from point to point. A tube in which insulated wire and cables are run.

**CONNECTOR** A device used to physically and electrically connect two or more conductors.

**CONTACT** The part of a connector that actually carries the electrical current; two contacts are touched together or separated to control the flow.

**CONTINUITY CHECK** A test to determine whether electric current flows continuously throughout the length of a single wire or individual wires in a cable.

**COPOLYMER** A polymer formed from two or more types of monomer.

**COPPER-CLAD STEEL** Steel with a coating of copper welded to it; same as Copper weld.

**COPPERWELD** Trade name of (Copper weld Steel Corp.) for their copper-clad steel conductors.

**CORE** A component(s) over which additional components (shield, sheath, etc.) are applied.

**CORONA DISCHARGE** A discharge due to ionization of air around a conductor due to a potential gradient exceeding a certain critical value.

**CORROSION** Deterioration of material by chemical reaction of galvanic action.

**CRAZING** The minute cracks on the surface of plastic materials.

**CROSS-LINKED** Inter-molecular bonds between long chain thermoplastic polymers by chemical or electron bombardment means. The properties of the resulting thermosetting materials are usually improved.

**CROSSTALK** The coupling of unwanted signals from one pair within a cable to another pair. Crosstalk can be measured at the same (near) end or far end with respect to the signal source.

**C.S.A.** Canadian Standards Association; the Canadian counterpart of Underwriters Laboratories.

**CURRENT** The rate of flow of electricity in a circuit, measured in amperes.

**CURRENT-CARRYING CAPACITY** Maximum current an insulated conductor or cable can continuously carry without exceeding its temperature rating; also called ampacity.

**CUT THROUGH** A test to determine the ability of a material to withstand the application of blades or sharp edges without being cut.

**DC** Direct current.

**DECIBEL (dB)** A unit of measure to express power gaining amplifiers or power loss in passive circuits of cables.

**DERATING FACTOR** Factor used to reduce current carrying capacity of a wire when used in environments other than that for which the value was established.

**DIELECTRIC** A nonconducting insulating material that permits electrostatic attraction and repulsion to occur.

**DIELECTRIC BREAKDOWN** A change in the properties of a dielectric that causes it to become conductive.

**DIELECTRIC CONSTANT (K)** The property of a dielectric which determines the amount of electrostatic energy that can be stored by the material when a given voltage is applied to it. Also called permittivity.

**DIELECTRIC LOSS** The power dissipated in a dielectric as the result of the friction produced by molecular motion when an alternating electric field is applied.

**DIELECTRIC STRENGTH** The voltage which an insulation can withstand before breakdown occurs. Usually expressed as a voltage gradient (such as volts per mil).

**DIELECTRIC TEST** A test in which a voltage higher than the rated voltage is applied for a specified time to determine the adequacy of the insulation under normal conditions.

**DIFFERENTIAL IMPEDENCE** The ratio of voltage to current between a pair of transmission lines which are transmitting a pair of complementary signals.

**DIRECT CURRENT (DC)** An electric current which flows in only one direction.

**DRAIN WIRE** A non-insulated wire in contact with the shield and used in termination to that shield as a ground connection.

**DRAWING** Pulling metal through a die or series of dies to reduce the diameter to a specific size. New England Wire draws wire to 50 AWG for its manufacturing processes.

**ELASTOMER** Any material that will return to its original dimensions after being stretched or distorted.

**ELECTROMAGNETIC** Pertaining to the combined electric and magnetic fields associated with movements of electrons through conductors.

**ELECTROMOTIVE FORCE (e.m.f)** Pressure or voltage; the force that causes current to flow in a circuit.

**ELECTROPLATING** The process of depositing a thin layer of metal using an anode/cathode reaction.

**ELECTROSTATIC** pertaining to static electricity or electricity at rest.  
Equal Level Far End Crosstalk (dB). A subtraction of attenuation from FEXT. ELFEXT negates the effect of attenuation on the interference as it propagates down the cable, thus bringing it to an "equal level".

**ELONGATION** An increase in the length of a wire or cable caused by longitudinal tension.  
Electromagnetic interference.

**ELECTROLYTIC TIGHT PITCH (ETP)** Copper refining process that produces a conductor that is 99.9% pure copper resulting in high conductivity.

**ETFE** Ethylene tetrafluoroethylene. An alternating copolymer consisting of ethylene and tetrafluoro ethylene segments. High impact resistance with useful mechanical properties from -200° C to 200° C.

**EXTRUSION** The process of continuously forcing both a plastic or elastomer and a conductor through a die, thereby applying a continuous coating of insulation or jacket to the core.

**FARAD** A unit of electrical capacity.

**FEP** Fluorinated ethylene-propylene. A thermoplastic with excellent dielectric properties as well as chemical and heat resistance.

**FILLER** Nonconducting components cabled with insulated conductors to impart roundness, flexibility, tensile strength, or a combination of all three, to the cable.

**FLAME RESISTANCE** The ability of a material not to fuel a flame once the source of heat is removed.

**FLAME RETARDANCE** Ability of a material to prevent or reduce the spread of combustion by a low rate of travel so the flame will not be propagated.

**FLAMMABILITY RATING** The measure of the material's ability to support combustion.

**FLAT BRAID** A woven braid, which is flattened at time of manufacturing to a specific width.

**FLEX LIFE** The measurement of the ability of a conductor or cable to withstand repeated

bending.

**FLEXIBILITY** The ease with which a cable may be bent.

**FLOUROPOLYMERS** High-temperature plastics with excellent electrical properties. New England Wire most frequently uses ETFE, FEP and PFA.

**FOAMED DIELECTRIC** Polymers are foamed, resulting in a significantly reduced dielectric constant (1.45 - 1.8) that approaches the nearly ideal properties of air.

**GAS OUT** A void in the insulation of a cable created by hot gasses escaping during the extrusion process.

**GAUGE** A term used to describe the physical size of a wire. As the AWG number gets smaller, the diameter of the wire gets larger.

**GROUND** A conducting connection between an electrical circuit and the earth or other large conducting body to serve as an earth thus making a complete electrical circuit.

**HDPE** High Density Polyethylene.

**HALOGEN** Any of the five elements: fluorine, chlorine, bromine, iodine and astatine. These elements may be combined with insulation compounds to enhance flame retardancy.

**HARD DRAWN** Wire that has not been annealed after drawing.

**HARNESS** An arrangement of wires and cables which have been tied together or pulled into a rubber or plastic sheath, used to interconnect an electric circuit.

**HEAT SEAL** A method for sealing by thermal fusion.

**HELICAL STRIPE** A continuous, colored, spiral stripe applied to a conductor for circuit identification.

**HENRY** Unit of inductance such that the induced voltage in volts is numerically equal to the rate of change in current in amperes per second.

**HERTZ (Hz)** A term replacing cycles-per-second as a unit of frequency.

**HI-POT** Short for High Potential. A test designed to determine the electrical integrity of an insulation.

**HOOK-UP WIRE** A single insulated conductor used for low-current, low voltage (usually under 600 volts) applications within enclosed electronic equipment.

**HOT TIN DIP** The process of passing bare wire through a bath of molten tin to provide a coating. This process has been largely replaced by electroplating.

**HYFLEX™ POWERDISTRIBUTION CABLES** New England Wire Technologies' proprietary power distribution cable designed for diesel hybrid vehicles. Using high performance

compounds specifically formulated for use in surface vehicle electrical systems operating at temperatures up to 125°C and voltages up to 600 V AC. Available in sizes 8 AWG through 250 kCMA.

**HYBRID CABLE** An assembly of two or more cables (of the same or different types or categories) covered by one overall sheath. Could include tubes, fiber optics, etc.

**HYGROSCOPIC** Capable of absorbing and retaining moisture.

**IEEE** Institute of Electrical and Electronics Engineers.

**IMPEDANCE** The total opposition that a circuit offers to the flow of alternating current or any other varying current at a particular frequency; measured in ohms.

**INDUCTANCE** The property of a circuit or circuit element that opposes a change in current flow, thus causing current changes to lag behind voltage changes. It is measured in henrys.

**INSULATION** Material having good dielectric properties used to separate close electrical components, such as cable conductors and circuit components.

**INSULATION RESISTANCE (I.R.)** Resistance to current leakage through the insulation materials.

**INTERFERENCE** Any undesired electrical signal introduced into a conductor by electrical or electromagnetic means.

**INTERSTICES** Voids or valleys between individual strands in a conductor or between insulated conductors in a multiconductor cable.

**INTRA PAIR SKEW** The difference in propagation delay between singles in a twisted pair.

**IRRADIATION** In insulations, the exposure of the material to high energy emissions for the purpose of favorably altering the molecular structure by crosslinking.

**ISO** International Standards Organization. New England Wire Technologies is an ISO 9001:2015 registered company.

**JACKET** The outer protective covering of a wire and cable product; may also provide additional insulation. A numerical prefix denoting 1000 ( $10^3$ ).

**KFT** One thousand feet

**LAMINATED TAPE** Tape consisting of two or more layers of different materials bonded together.

**LAY** The axial distance required for one cabled conductor or conductor strand to complete one revolution about the axis around which it is cabled.

**LAY DIRECTION** The direction of the progressing spiral twist in a cable while looking along the axis of the cable away from the observer. The lay direction can either be left (s) or right (z).

**LEAKAGE CURRENT** The undesirable flow of current through or over the surface of an

insulation.

**LIFE CYCLE** A test to determine the length of time before failure in a controlled, usually accelerated, environment.

**LITZ WIRE** A stranded (bunched) or cabled conductor made of magnet wire in which each strand is insulated from every other strand, with varying amounts of inter-mixing to reduce skin effect.

**LONGITUDINAL SHIELD** A tape shield, flat or corrugated, applied longitudinally with the axis of the core being shielded.

**LOW LOSS DIELECTRIC** An insulation material that has a relatively low dielectric loss, such as polyethylene or a fluoropolymer. (correlates to a low dielectric constant)

**LOW NOISE CABLE** Cable specifically designed to neutralize noise generated by mechanical shock and vibration and maximize signal quality in small-signal applications. New England Wire Technologies' product line uses NEWtral<sup>®</sup> technology.

**MAGNETIC FIELD** The region within which a body or current experiences magnetic forces.

**MCM** One thousand circular mils.

**MFT** One thousand feet

**MHz** Megahertz; one million cycles per second.

**MICROPHONICS** Electrical noise in a system caused by mechanical vibrations. (also called triboelectric noise)

**MIL** Unit used to measure diameter of a wire or thickness of insulation over a conductor. One one-thousandth of an inch (.001").

**MYLAR** DuPont trademark name for polyethylene terephthalate (polyester) material used in form of tape.

**NATIONAL ELECTRICAL CODE (NEC)** A consensus standard published by the National Fire Protection Association (NFPA) and incorporated in OSHA regulations.

**NE-FI** New England Wire Technologies' Class F (155°C) Electrical Insulation System. Approved for use in the construction of transformers, motors and coils.

**NEMA** National Electrical Manufacturers Association.

**NEWcel<sup>®</sup>** A closed-cell foamed dielectric material specifically designed by New England Wire Technologies to reduce dielectric constant and dissipation factor yielding low-capacitance, low-loss, high V.O.P. ultraminiature coaxial, triaxial and twinaxial cables.

**NEWguard<sup>™</sup>** New England Wire Technologies' proprietary cables designed for the most challenging environmental challenges--extreme temperatures, mechanical abuse and exposure to chemicals, oils, dust, wind, salt water spray and vibration.



**NEWlan™** New England Wire Technologies' line of networking cables.

**NEWtral®** A low-noise cable designed by New England Wire Technologies to neutralize noise generated by mechanical shock and vibration and to maximize signal quality in small-signal applications.

**NEWturf®** New England Wire Technologies' proprietary silicone rubber jacket specifically designed to provide high axial tensile strength while maintaining superior flexibility and high temperature performance.

**NEWind®** A specialty winding wire designed by New England Wire Technologies to eliminate additional ground, interwinding and turn insulation in motors and transformers reducing cost and size.

**NEXT** Near End Crosstalk (dB). Crosstalk induced on the pairs, measured at the end "near" the transmitter.

**NOISE** Unwanted and/or unintelligible signals picked up on a cable circuit. Dupont trademark for a temperature-resistant, flame retardant nylon. An abrasion-resistant thermoplastic with good chemical resistance.

**OFHC** Oxygen-free high-conductivity copper (OFHC) has 99.95% minimum copper content with an average conductivity in the annealed state of 101%.

**OHM** Unit of measure for electrical resistance. The value of resistance through which a potential difference of one volt will maintain a current of one ampere.

**OVERALL DIAMETER** Finished diameter of a wire or cable.

**OVERLAP** The amount the trailing edge laps over the leading edge of a tape wrap. Percentage of oxygen necessary to support combustion of a specified material. Two insulated wires of a single circuit associated together.

**PATCH CABLE** A flexible piece of cable terminated at both ends with connectors. Used for interconnecting circuits on a patch panel or cross connect.

**PE** Polyethylene.

**PET** Polyester.

**PEEK** Polyether ether ketone.

**PERFECT CONDUCTIVITY** Conductivity of a material expressed as a percentage of that of copper.

**PFA – PERFLUOROALKOXY** A melt processible insulation with excellent thermal and electrical insulation properties including resistance to practically all chemicals, resistance to weathering, and low friction coefficient.

**PICK** The distance from the intersection of two opposing groups of wires to the next corresponding intersection along the length of the braid.

**PICKS PER INCH (P/I)** The number of times the carriers in a braid cross over each other in the same direction along the longitudinal axis for each inch of length. The number of picks per inch determines the density of the braid pattern.

**PITCH** In flat cable, the nominal distance between the index edges of two adjacent conductors.

**PLASTICIZER** A chemical agent added to plastics to make them softer and more pliable.

**PLENUM CABLE** Cable approved by Underwriters Laboratories for installation in plenums without the need for conduit.

**POLYETHYLENE (PE)** A thermoplastic material having excellent electrical properties, low dielectric constant, and very high insulation resistance. Can be stiff to very hard, depending on molecular weight and density. Moisture resistance is rated excellent.

**POLYAMIDE** A compound characterized by more than one amide group. See nylon.

**POLYIMIDE** Available for high-temperature wire insulation in both tape form and as a film coating.

**POLYMER** A substance made of many repeating chemical units or molecules. The term polymer is often used in place of plastic, rubber or elastomer.

**POLYOLEFIN** Any of the polymers and copolymers of the ethylene family of hydrocarbons, such as polyethylene and polypropylene.

**POLYPROPYLENE** A thermoplastic similar to polyethylene but stiffer and having a higher softening point (temperature). This material is used primarily as an insulation material. Typically, it is harder than polyethylene which makes it suitable for thin wall insulations.

**POLYURETHANE** A class of polymers noted for good abrasion and solvent resistance as well as outstanding 'memory' properties, making it an ideal jacket material for retractile cords. Some formulations also have good flame resistance.

**POLYVINYL CHLORIDE (PVC)** A thermoplastic material composed of polymers of vinyl chloride which may be rigid or elastomeric, depending on specific formulation.

**PRIMARY INSULATION** The first layer of nonconductive material applied over a conductor. Its function is to act as an electrical insulation.

**PRIMARY INSULATION** Time required for a signal to travel from one end of the wire to the other.

**PUT-UP** Packaging of finished wire or cable.

**RATED TEMPERATURE** The maximum temperature at which an electric component can operate for extended periods without undue degradation or safety hazard.

**RATED VOLTAGE** The maximum voltage at which an electric component can operate for extended periods without undue degradation or safety hazard.

**REACH** Registration, Evaluation, Authorization and Restriction of Chemicals. European Union regulation addressing production and use of chemical substances and potential impacts to human health and the environment.

**REACTANCE** A measure of the combined effects of capacitance and inductance on an alternating current. The amount of such opposition varies with the frequency of the current. The reactance of a capacitor decreases with an increase in frequency. The opposite occurs with an inductance.

**RESISTANCE** In DC circuits, the opposition a material offers to current flow, measured in ohms. In AC circuits, resistance is the real component of impedance and may be higher than the value measured at DC.

**RETRACTILE CABLE** A coiled cable that returns by its own stored energy from an extended condition to its original retracted form.

**RETURN LOSS** Measure of the power of the signal that is reflected back to the source due to discontinuity in the cable.

**RFI** Radio Frequency Interference.

**RIP CORD** A cord placed directly under the jacket of a cable in order to facilitate stripping (removal) of the jacket.

**RoHS** Restricting the use of Hazardous Substances. A European directive that restricts the use of certain hazardous substances during manufacture of electronic/electrical products and components.

**ROPELAY CABLE** A cable composed of a central core surrounded by one or more layers of helically laid groups of wires, resembling a rope.

**RIBBON CABLE** A flat cable of individually insulated conductors laid parallel and held together by extrusion, bonding or woven textile yarn.

**SAE** Society of Automotive Engineers.

**SERVE** A filament or group of filaments such as fibers or wires, wound around a central core to act as an insulation or protective barrier.

**SHIELD** A tape, serve or braid (usually copper, aluminum or other conductive metal) placed around or between electric circuits or cables or their components, to prevent signal leakage or interference.

**SHIELD COVERAGE** The physical area of a cable that is actually covered by shielding material; expressed in percent. The relative ability of a shield to screen out undesirable signals.

**SIGNAL INTEGRITY** Set of measures to determine electrical signal quality.

**SILICONE RUBBER** Jacketing material made from silicone and oxygen. Noted for high heat resistance and excellent electrical properties plus ozone resistance, low moisture absorption, weather resistance and radiation resistance.

**SKIN EFFECT** The tendency of alternating current, as its frequency increases, to travel only on the surface of a conductor.

**SLEEK™** A NEWT trademark, silicone-based material, applied in a continuous process and provides smooth, slick surfaces to silicone rubber insulated cables.

**SPARK TEST** A test designed to locate imperfections (usually pinholes in the insulation of a wire or cable) by application of a voltage for a very short period of time while the wire is being drawn through the electrode field.

**SPECIFIC GRAVITY** The ratio of the density (mass per unit volume) of a material to that of water. The helical wrap of a material over a core; also referred to as a serve.

**SPLICE** A joining of conductors generally from separate sheaths.

**STRANDED CONDUCTOR** A conductor composed of individual groups of wires twisted together to form a larger conductor. The force required to remove a small section of insulating material from the conductor it covers. A spirally applied tape over an insulated or uninsulated wire.

**STRIP FORCE** The force required to initiate or continue a tear in a material under specific conditions.

**SVHC** Substance of very high concern.

**TEMPERATURE RATING** The maximum temperature at which an insulating material may be used in continuous operation without loss of its basic properties.

**TENSILE STRENGTH** The pull stress required to break a given specimen.

**TFE (TETRAFLUOROETHYLENE)** A thermoplastic material with good electrical insulating properties, chemical and heat resistance. Rated to 260° C.

**THERMOCOUPLE** A device consisting of two dissimilar metals in physical contact, which when heated will develop an emf output.

**THERMOPLASTIC** A polymer which can be melted, and re-melted.

**TIN OVERCOAT (TOC)** Tinned copper wire, stranded and then coated with tin.

**TINSEL** A type of electrical conductor comprised of a number of threads, each thread having a fine, flat ribbon of copper or other metal closely spiraled about it. Used for small size cables requiring flexibility and long flex life.

**TPE** Thermoplastic Elastomer.

**TRANSFER IMPEDANCE** The ratio of internal longitudinal voltage to external current flow on the cable shield; used to determine shield effectiveness against both the ingress and egress of interfering signals.

**TRIAxIAL CABLE/TRIAx** A coax cable with an additional outer shield insulated from signal carrying conductors. It has a core conductor and two concentric conductive shields.

**TRIBOELECTRIC NOISE** Noise generated in a shielded cable due to variations in capacitance between shielding and conductor as the cable is flexed.

**TWINAX OR TWINAXIAL CABLE** A type of communication transmission cable consisting of a pair of insulated conductors, which in turn is surrounded by a tubular outer conductor (usually a braid, foil or both). The entire assembly is then covered with an insulating and protective outer layer. It is similar to coaxial cable except that there are two conductors at the center.

**TWISTED PAIR** Two insulated conductors twisted together.

**TWISTED TRIAD** Any three individually insulated conductors which are twisted together.

**UL** Underwriters Laboratories; a nonprofit organization which tests and verifies construction and performance of electronic parts and equipment.

**UNILAY** More than one layer of helically laid wires with the direction and length of lay the same for all.

**VELOCITY OF PROPAGATION** The speed of an electrical signal down a length of cable compared to speed in free space expressed as a percent. It is the reciprocal of the square root of the dielectric constant of the cable insulation.

**VHF** Very High Frequency, 30 to 300 MHz.

**VOLT** A unit of electrical pressure. One volt is the amount of pressure that will cause one ampere of current in one ohm of resistance.

**VOLTAGE** Electrical potential or electromotive force expressed in volts.

**VOLTAGE RATING** The highest voltage that may be continuously applied to a wire in conformance with standards or specifications.

**WALL** The thickness of the applied insulation or jacket.

**WATT** A unit of electrical power. One watt is equivalent to the power represented by one ampere of current under a pressure of one volt in DC circuit.

**WICKING** The longitudinal flow of liquid in a wire or cable due to capillary action.

**ZIP CORD** Two or more independently insulated conductors in a parallel configuration that can easily be pulled apart leaving the insulation of each conductor intact. May be extruded together or extruded independently and later bonded together.