

PVC jackets offer some flame retardance, depending on the compound selected.

Flame retardant jackets, which are actually within the flame, will burn. If the flame is removed, they will self-extinguish. PVC jackets will not drip burning material. However, if the dielectric is polyethylene, the dielectric may drip ignited materials. PTFE and FEP will not support combustion, drip or burn. TMS has a series of Low Smoke / Low Toxicity cables to provide the utmost in protection. These cables utilize a proprietary TMS compound which is non-halogenated and produces combustion products that are low smoke and low toxicity. See the LSSB/LLSB, LMR-FR and M17 qualified cable lines.

#### P. CABLE STRENGTH

The break strength of the cable depends primarily on the strength of the outer conductor. The cables will normally achieve at least 70% of the break strength of the outer conductor, if the center conductor will stretch up to 10% before breakage. Caution must be taken with cables with copper-covered steel or alloy center conductors where breakage would occur with only 1 to 10% elongation. Conductor sizes less than 26 AWG can easily be broken during assembly operations. Special alloy conductors are available which can achieve a tensile strength of 110,000 psi and 10% elongation.

#### Q. QUALIFICATION APPROVAL

Often, cables must be qualified to certain standards to allow usage in particular applications. Typical examples of necessary qualifications are:

**Military:** Most military applications require that cable conform to particular specifications. Many of these specifications require the manufacturer to qualify product by conducting a series of tests on a length of cable with a military representative present as a witness. MIL-C-17, the basic specification for most coaxial cables, requires a Qualified Products List (QPL). TMS maintains numerous MIL-C-17 qualifications.

**Commercial (UL) Approval:** The building codes of many cities require that cables installed in their buildings be approved by the Underwriters Laboratories (UL). With UL service, the cable is subjected to a clearly defined series of tests and examinations, and has met the quality and safety standards

imposed by Underwriters Laboratories. Approval of new designs meeting UL standards normally can be made in a relatively short period of time. A large variety of TMS products are UL approved.

**New York State Requirements:** Article 15, Part 1120 of the New York State Uniform Fire Prevention and Building Code requires that materials used in some buildings and transit systems be tested and registered with The New York Department of State. For the TMS products tested, the fire/gas/toxicity data is found in: DOS file number 16120-931203-4001.

**London Underground Limited:** TMS has gained LUL approval on a series of low-smoke cable constructions. These cables were tested for smoke emission, toxic fume emission, and flammability assessment against the requirements of the London Underground Code of Practice for fire safety.

Contact your TMS representative for more information regarding TMS product qualifications.