

## MILITARY SPECIFICATIONS

Military specifications are one of the key design requirement standards for cable ties and similar products. Because the military was an early large-scale user of these products, the industry adopted their specifications. Consequently, many users have adopted the Mil Specs as their criteria.

Mil Spec classifications do not exist for every type of product in all types of materials. However, All-States products are all designed to meet similar standards, even if there is no specific Mil Spec category for that product. Products that have a Mil Spec listing are identified in the ordering information tables.

All-States tests all applicable products with an independent testing laboratory to confirm conformance to Mil Specs. Test results are on file for inspection at the All-States corporate office.

### The Mil Spec Numbering System

There are three kinds of numbers in the Mil Spec system. The MS (Military Standard) number covers the physical dimensions and strengths that a product must meet. The MIL (Military Specification) number represents the actual testing procedures utilized to determine whether the product meets the MS requirements. The MIL number also contains information on how to certify and qualify products and how to maintain the qualification. Finally, the QPL (Qualified Products List) number is assigned to a company's products that meet the MS criteria, as determined by the MIL number tests.

#### MS Numbers

The MS number defines the specifications and criteria a product must meet. It gives maximum dimension requirements, with the exception of minimum length; minimum and maximum bundle diameter ranges; and minimum tensile strength. It also specifies the cross-section, identifies installation tools and settings, and gives procurement specifications. MS3367, for example, is a number covering cable ties. All-States manufactures a cable tie for every MS3367 dash number (1 through 7).

#### MIL Numbers

The MIL number covers the testing procedures required for a product to meet MS standards. MIL-S-23190, for example, is the military specification number for straps, clamps, mounting hardware, plastic for cable harness tying and support. It contains standards ranging from sampling procedures to testing equipment calibration, as well as a battery of product tests.

#### QPL Numbers

The QPL number is a means of identifying a company's products that meet Mil Spec. For example, those All-States cable ties that meet MS3367 and MS3368 have QPL-23190 listing. The numerical portion is the same as the MIL with a different prefix, "QPL." The Qualified Products List is published by the military and lists all model numbers and manufacturer names that meet the Mil Spec. All-States Federal Supply Code for Manufacturers (FSCM) is 26863.

## UNDERWRITERS LABORATORIES

UL is an independent, not-for-profit organization, testing for public safety, founded in 1894. They examine and test devices, systems and materials to determine their relation to life, fire, casualty hazards and crime prevention. UL's



standards are widely accepted over a broad range of industry and public interests. Their credibility has been established by exhaustive testing, follow-up and documentation procedures.

### Flammability Ratings

In the case of All-States products, specifically the product materials, UL is primarily concerned with possible danger from electrical or heat sources. Materials rated by UL with the best flammability rating (i.e., least flammable material) being UL94V-0. The fire-retardant nylon which All-States uses meets UL94V-0, as does Tefzel®. All other nylon materials meet UL94V-2. Polypropylene is classified as UL94V-HB (horizontally burns) and polyethylene has no UL flammability rating.

### Component Program

Because All-States products are designed and used as parts of a finished assembly, they are tested in accordance with Underwriters Laboratories' Component Program. Those All-States products recognized by UL are identified in the ordering information tables within each product listing. Like "complete" UL listed products, components undergo comprehensive testing and follow-up procedures. Using recognized component products can reduce the amount of testing to be done to the finished product by UL.

Recognized components may be identified with the following mark:



In addition to testing to their Safety Standards, the Component Program verifies manufacturers' published claims about their products and material specifications. UL requires in-plant checking for the amount of re-grind material used in the All-States manufacturing process. They also check color additives to determine whether the right amount is added, and that the colorants are of a comparable material.

During in-plant inspections, UL also checks mold release materials for possible contamination and incompatibility with the product's material. Mold release materials are frequently used to assist in removing the finished product from the mold. Mold release additives may change the UL flammability rating for nylon; therefore, All-States uses lubricated nylon to avoid the need for applying mold releases.

### Product Quality Control

All-States products undergo extensive quality control on regular basis. Our quality control manual was written to and certified under MIL-I-45208A and gives guidelines for conducting sampling, process inspections, tool and gauge control, packaging and other criteria. All-States Inc. is a government certified and approved supplier under the MIL-I-45208A guidelines.

Tefzel® is a registered trademark of E.I. DuPont de Nemours & Co.