

FLEXIBLE POLYOLEFIN MARKER SLEEVES 2 : 1 Shrink Ratio

MILITARY SPECIFICATION

 **RoHS Compliant**

TYPICAL FEATURES

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| <p>1) SUMIMARK SM12 tubing, when used in conjunction with the SUMIMARK marking machine, provides marked sleeves that meet or exceed the print permanence requirements of SAE-AS81531.</p> <p>2) SUMIMARK SM12 is a very flexible, flame retarded, heat shrinkable polyolefin tubing that meets all the requirements of Military Specification AMS-DTL-23053/5C, Class 1 and Class 3 and is recognized by Underwriters' Laboratories (UL) Subject 224 as 125°C, 600V (VW-1) rated.</p> | <p>3) Shrink temperature is 90° C.</p> <p>4) Operating temperature range is -55° C to +135° C and up to 200° C for short durations.</p> <p>5) SM12 is recommended for use in general purpose applications such as wire marking, identification and electrical insulation of light wire harness assemblies.</p> |
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STANDARD SIZES

| SIZE | INSIDE DIAMETER AS SUPPLIED (MIN) | | INSIDE DIAMETER AFTER RECOVERY (MAX) | | WALL THICKNESS AFTER RECOVERY (NOM) | |
|-------|-----------------------------------|--------|--------------------------------------|--------|-------------------------------------|--------|
| | INCH | (MM) | INCH | (MM) | INCH | (MM) |
| 3/64 | .046 | (1.2) | .023 | (0.6) | .016 | (0.40) |
| 1/16 | .063 | (1.6) | .031 | (0.8) | .017 | (0.43) |
| 3/32 | .093 | (2.4) | .046 | (1.2) | .020 | (0.51) |
| 1/8 | .125 | (3.2) | .062 | (1.6) | .020 | (0.51) |
| 3/16 | .187 | (4.8) | .093 | (2.4) | .020 | (0.51) |
| 1/4 | .250 | (6.4) | .125 | (3.2) | .025 | (0.64) |
| 3/8 | .375 | (9.5) | .187 | (4.8) | .025 | (0.64) |
| 1/2 | .500 | (12.7) | .250 | (6.4) | .025 | (0.64) |
| 3/4 | .750 | (19.1) | .375 | (9.5) | .030 | (0.76) |
| 1 | 1.000 | (25.4) | .500 | (12.7) | .035 | (0.89) |
| 1 1/2 | 1.500 | (38.1) | .750 | (19.1) | .040 | (1.02) |
| 2 | 2.000 | (50.8) | 1.000 | (25.4) | .045 | (1.14) |

Standard Colors: White, black, yellow, red, blue, green, gray, orange, violet, brown

Standard Package: Spooled (S)

How to Order: (Type of material) (Size) (Color) (Packaging)

Example: SM12 1/4 Black S

SM12 SPECIFICATION VALUES

| PROPERTY (UNITS) | TEST METHOD | REQUIREMENT |
|---|--|---|
| Physical: Tensile strength (psi) Elongation (%) Specific gravity Low temperature flex (-55° C) Heat shock (250° C, 4 hrs.) Heat resistance (175° C, 168 hrs.) Elongation (%) Secant modulus (psi) Longitudinal change (%) | ASTM D638 ASTM D638 ASTM D792 AMS-DTL-23053 AMS-DTL-23053 ASTM D638 ASTM D882 AMS-DTL-23053 | 1500 min. 200 min. 1.35 max.. no cracking no cracking 100 min. 2.5 X 10 ⁴ max. ±5 |
| Electrical: Dielectric strength (volts/mil) Volume resistivity (ohm-cm) | ASTM D876 ASTM D876 | 500 min. 1.0 X 10 ¹⁴ min. |
| Mark Permanence: Abrasion Fluid Resistance Isopropyl Alcohol/Mineral Spirits Terpene Defluxer H2O/PGME/Monoethanolamine | SAE-AS81531(AS) MIL-STD-202F Method 215J | 20 rubs 10 rubs (x3) 10 rubs (x3) 10 rubs (x3) |
| Chemical: Corrosion (175° C, 16 hrs.) Water absorption (%) Fluid resistance (23° C, 24 hrs.) Tensile strength (psi) Flammability Shrink temperature, nominal | AMS-DTL-23053 ASTM D570 AMS-DTL-23053 UL 224 VW-1 | no corrosion 0.5 max. 1000 min. Pass 90° C |

Specification reference: MIL-S-85848/1
 AMS-DTL-23053/5C, Class 1 and Class 3.
 SAE-AS81531
 UL / CSA, 125° C, 600



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