

HIGH TEMPERATURE FLEXIBLE FLUID RESISTANT CLEAR FLUOROPOLYMER 2 : 1 Shrink Ratio

MILITARY SPECIFICATION / LOW OUTGASSING



RoHS Compliant



Lead-Free

TYPICAL FEATURES

- 1) SUMITUBE KH 200 is a highly flexible and fluid resistant, inherently flame retarded fluoropolymer heat-shrinkable tubing which meets the material and functional requirements of military specifications AMS-DTL-23053/13. It is also available in a thin wall version, KH 200(TW).
- 2) SUMITUBE KH 200 meets the low outgassing requirements of NASA SP-R-0022A.
- 3) In addition to resistance to fluids in AMS-DTL-23053, SUMITUBE KH 200 is also resistant to Skydrol 500 aircraft hydraulic fluid.
- 4) Shrink temperature is 130°C.
- 5) Operating temperature range is -70°C to +200°C and up to 300°C for short periods.
- 6) SUMITUBE KH 200 is recommended for applications where resistance to aggressive solvents, including Skydrol, and high temperatures is required. Bundling, harnessing and environmental protection within engine compartments is one such application. SUMITUBE KH 200 can be used as a clear version of AMS-DTL-23053/13B.
- 7) For pigmented material, see KH 230.

STANDARD SIZES

| NOMINAL SIZE | INSIDE DIAMETER AS SUPPLIED (MIN) | | INSIDE DIAMETER AFTER RECOVERY (MAX) | | WALL THICKNESS AFTER RECOVERY (NOM) | |
|-----------------|---|------|--|------|---|------|
| | INCH | (MM) | INCH | (MM) | INCH | (MM) |
| | 1/8* | .125 | 3.2 | .062 | 1.6 | .031 |
| 3/16 | .187 | 4.8 | .093 | 2.4 | .035 | 0.90 |
| 1/4 | .250 | 6.4 | .125 | 3.2 | .035 | 0.90 |
| 3/8 | .375 | 9.5 | .187 | 4.8 | .035 | 0.90 |
| 1/2 | .500 | 12.7 | .250 | 6.4 | .035 | 0.90 |
| 5/8 | .625 | 15.9 | .312 | 7.9 | .042 | 1.10 |
| 3/4 | .750 | 19.1 | .375 | 9.5 | .042 | 1.10 |
| 7/8 | .875 | 22.2 | .437 | 11.1 | .049 | 1.20 |
| 1 | 1.000 | 25.4 | .500 | 12.7 | .049 | 1.20 |

Standard Colors: Clear
Standard Package: Spooled (S)
How to Order: (Type of material) (Size) (Color) (Packaging)
Example: KH 200 1/4 Clear S

* Non MIL-spec size

KH 200 SPECIFICATION VALUES

| PROPERTY (UNITS) | TEST METHOD | REQUIREMENT |
|---|--|---|
| Physical: Tensile strength (psi) Elongation (%) Tensile stress @ 200% elongation (psi) Cold impact (-40°C) Heat shock (300°C, 4 hrs.) Heat resistance (250°C, 168 hrs.) Elongation (%) Tensile strength (psi) Longitudinal change (%) | ASTM D 638 ASTM D 638 ASTM D 412 ASTM D 746 AMS-DTL-23053 ASTM D 638 ASTM D 638 AMS-DTL-23053 | 2000 min. 250 min. 2000 max. no cracking no cracking 200 min. 1200 min. -10 max. |
| Electrical: Dielectric strength (volts/mil) Volume resistivity (ohm-cm) | ASTM D 876 ASTM D 876 | 500 min. 1.0 X 10 ¹³ min. |
| Chemical: Vacuum outgassing, TML / CVCM, % Copper mirror corrosion (175°C, 16 hrs.) Water absorption (%) Fluid resistance (23°C, 24 hrs.) Tensile strength (psi) Elongation (%) Flammability Shrink temperature, nominal | NASA SP-R-0022A MIL-DTL-23053 ASTM D 570 AMS-DTL-23053 AMS-DTL-23053 AMS-DTL-23053 ----- | 1.0 / 0.1 max. no corrosion 0.1max. 1200 min. 250 min. 15 sec. max.. 130°C |

Specification references: AMS-DTL-23053/13, NASA SP-R-0022A



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