

Engineering Note

SUBJECT: CICOIL MIL CABLE AND CABLE ASSEMBLIES

CICOIL cable assemblies operate in the most sophisticated missile, fighter aircraft, commercial aviation, and space applications. CICOIL cables are ideal for mission-critical military and aerospace applications.

CICOIL Cable performance specifications:

PHYSICAL PROPERTIES:

Physical and mechanical, per ZZ-R-765E

Property	Unit	Test Method	Value
Temperature range	°C	ASTM D2137 & UL 94HB	-65 to 260
Hardness	Shore A	ASTM D2240	68-70
Water Absorption	% vol. change	ASTM D471	<+5
Tensile Strength	PSI	ASTM D412	>800
Elongation at Break	%	ASTM D412	>400
Tear Strength	lb/in Die B	ASTM D624	280
Brittle Point	°C	ASTM D2137	-70
Flame Retardant Temp.	°C	UL94HB & IEC 332	260 min
Decomposition Temp.	°C	PTL 13057	446.2
Combustion Temp.	°C	PTL 13057	710.3

CHEMICAL RESISTANCE:

<https://www.cicoil.com/images/pdf/technical-support/Chemical Compatibility for Flexx-Sil.pdf>

OUTGASSING:

Certified to: TML (Total Mass Loss)..... ≤1.00%
 CVCM (Collected Volatile Condensable Materials)..... ≤0.10%
 Vacuum bake (PSI)..... ≤10⁻⁶ torr
 Vacuum bake (Temp)..... +160°C
 Vacuum Duration (h)..... 48 hours

OTHER RATINGS:

NASA Outgassing specification..... Spec 1124
 Standard Test Method for TML and CVCM..... ASTM E595-93



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ELECTRICAL CICOIL CABLE AND CABLE ASSEMBLY PERFORMANCE:

CICOIL cable and cable assemblies offer the highest electrical performance available. CICOIL cables and cable assemblies meet or exceed various MIL and other specifications listed below:

MIL-STD-202

Department Of Defense Test Method Standard: Electronic And Electrical Component Parts

MIL-T-81490

Transmission Lines Transverse Electromagnetic Mode

MIL-PRF-39012

Performance Specification Connectors Coaxial Radio Frequency

MIL-T-81490

Transmission Lines Transverse Electromagnetic Mode

ASTM B117

Standard Practice For Operating Salt Spray (Fog) Apparatus

ASTM B196

Standard Specification For Copper-Beryllium Alloy

SAE AMS 2700

Passivation Of Corrosion Resistant Steels

MIL-STD-171

Manufacturing Process Finishing Of Metal

MIL-HDBK-454, Guideline 3

Guidelines For Electronic Equipment

MIL-STD-130

Identification Marking Of U.S. Military Property

MIL-DTL-17

Cables, Radio Frequency, Flexible And Semirigid Specification

ISO 14644-1 (ISO 3 - 8)

Cleanrooms And Associated Controlled Environments

FED-STD-209E

Airborne Particulate Cleanliness Classes In Cleanrooms And Cleanzones

UL-94V-0

Standard For Safety Of Flammability Of Plastic Materials For Parts In Devices



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MIL CUSTOMERS USING CICOIL CABLE AND CABLE ASSEMBLIES:

CICOIL supplies cable assemblies directly to the military and to all major military/aerospace prime contractors. A partial list of military/aerospace customers/programs:

- Boeing
- Raytheon
- Northrop Grumman
- Lockheed Martin
- BAE Systems
- Goodrich Aerospace
- General Dynamics
- Honeywell
- Hughes
- L-3 Communications
- NASA
- Pratt & Whitney
- Rafael
- United Technologies
- The US Navy

...and others.