

Contents

Generic Requirements Notice of Disclaimer	iii
List of Figures	ix
Preface	xi
1. Introduction	1-1
1.1 Purpose	1-1
1.2 Scope	1-1
1.3 Organization	1-1
1.4 Requirements Terminology	1-2
1.5 Requirement Labeling Conventions	1-3
1.5.1 Numbering of Requirement and Related Objects	1-3
1.5.2 Requirement, Conditional Requirement, and Objective Object Identification	1-3
2. General Information	2-1
2.1 Description of Product	2-1
2.1.1 Coaxial Drop Cable	2-1
2.1.2 Twisted Pair Wires	2-1
2.2 Ordering Options	2-2
2.2.1 User Considerations	2-2
2.3 Quality Assurance Programs	2-2
2.4 Comprehensive Tests	2-3
3. General Requirements	3-1
3.1 Safety Considerations	3-1
3.2 Units and Tolerances	3-1
3.3 Packaging Requirements	3-2
3.4 End Sealing	3-2
3.5 Marking	3-2
3.5.1 Package, Coil, and Reel Marking	3-2
3.5.2 Jacket Marking	3-2
3.5.3 Length Marking	3-3
3.5.4 Jacket Marking Durability	3-3
3.6 Compatibility with Hardware	3-3
4. Mechanical Design Requirements	4-1
4.1 Conductors	4-1
4.1.1 Conductors of Coaxial Unit	4-1
4.1.1.1 Center Conductor	4-1
4.1.1.2 Outer Conductor (Shield) of Coaxial Drop	4-1
4.1.2 Conductors of Twisted Pairs	4-2
4.2 Conductor Insulation	4-2
4.2.1 Conductor Insulation of Coaxial Unit	4-2
4.2.2 Conductor Insulation of Twisted Pairs	4-2
5. Core Construction	5-1
5.1 Core Layups	5-1

5.1.1 Hybrid Design with Messenger	5-1
5.1.2 Butterfly Design with Messenger	5-1
5.2 Binders (for Twisted Pairs Unit)	5-1
5.3 Core Wrap (for Twisted Pairs Unit)	5-1
5.4 Rip Cord (for Twisted Pairs Unit)	5-1
5.5 Flooding Compound Under Jacket	5-2
5.6 Cable Jacket	5-2
5.7 Integral Messenger	5-2
6. Completed Cable Physical Tests	6-1
6.1 Cold Bend Test - Unaged	6-1
6.2 Cold Bend Test - Aged	6-1
6.3 Impact Test - Unaged	6-1
6.4 Impact Test - Aged	6-1
6.5 Jacket Longitudinal Shrinkage	6-1
6.6 Adhesion of Dielectric to Shield (Coaxial Unit Only)	6-2
6.7 Static Load Test	6-2
6.8 Abrasion Resistance	6-2
6.9 Separation of Units Along Web	6-2
6.9.1 Room Temperature Test	6-2
6.9.2 Low Temperature Test	6-2
6.10 Low Temperature Jacket Stripping (Twisted Pair Unit)	6-3
6.11 National Electrical Code	6-3
7. Electrical Requirements	7-1
7.1 Electrical Requirements of Coaxial Unit	7-1
7.1.1 Continuity and Shorts	7-1
7.1.2 Conductor Resistance	7-1
7.1.3 Impedance	7-1
7.1.4 Structural Return Loss (SRL)	7-1
7.1.5 Shielding Effectiveness	7-1
7.1.6 Attenuation	7-2
7.1.7 Dielectric Strength Between Conductors	7-2
7.1.8 Jacket Leakage Test	7-2
7.1.9 Insulation Resistance Test	7-2
7.2 Electrical Requirements of Twisted Pair(s)	7-2
7.2.1 Continuity	7-2
7.2.2 DC Resistance	7-2
7.2.3 DC Resistance Unbalance	7-3
7.2.4 Mutual Capacitance	7-3
7.2.5 Pair-to-Pair Capacitance Unbalance	7-3
7.2.6 Pair-to-Support Wire Capacitance Unbalance	7-3
7.2.7 Attenuation - Dry	7-3
7.2.8 Attenuation - Wet	7-3
7.2.9 Equal Level Far End Crosstalk (ELFEXT)	7-4
7.2.10 Near End Crosstalk (NEXT)	7-4
7.2.11 Insulation Resistance - Dry	7-4
7.2.12 Insulation Resistance - Wet	7-4

7.2.13 Dielectric Strength - Dry	7-4
7.2.14 Dielectric Strength- Wet	7-5
7.2.15 Fusing Coordination	7-5
Appendix A: References	A-1
Appendix B: Glossary	B-1

List of Figures

Figure 5-1	Hybrid Design with Messenger of Coaxial/Twisted Pair Aerial Drop Cable	5-3
Figure 5-2	Butterfly Design with Messenger of Coaxial/Twisted Pair Aerial Drop Cable	5-4