

1.0 SCOPE

This document establishes the specifications for an outdoor, direct burial, armored singlemode fiberoptic cable, in a dry block loose buffer tube design.

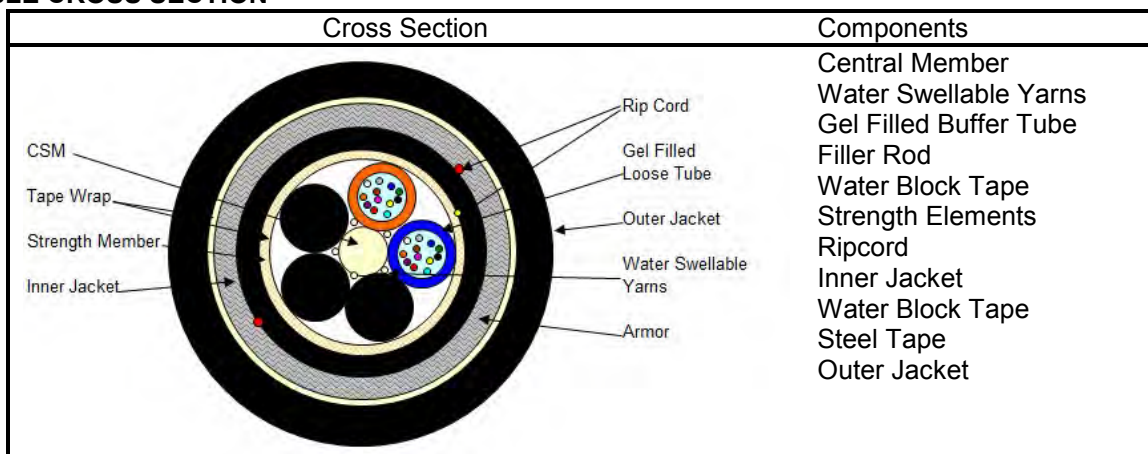
2.0 APPLICABLE DOCUMENTS

Reference Documents: TIA/EIA FOTP Standards 455
Color Coding of Fiber Optic Cables TIA/EIA-598
RUS 1755.900
GR-20-CORE

3.0 REQUIREMENTS

This document contains test values for all-important mechanical, optical, and environmental parameters and as such, is the basis for all-incoming inspection and acceptance.

4.0 CABLE CROSS SECTION



5.0 OVERALL CABLE CONSTRUCTION

5.1 Buffer tube

High Modulus Polymeric material.

Dimension: 2.8 mm., nominal.

Tube and fiber color code per EIA/TIA-598 or as specified by customer.

Filling compound: A non-toxic and dermatological safe antioxidant hydrocarbon based gel.

5.2 Dielectric Central strength member.

Epoxy glass rod with an up-coat of polymer (if necessary per construction).

Water swellable yarns are to be pulled in with the CSM.

5.3 Cable Core:

The cable elements are stranded around the CSM, using reverse oscillation.

Moisture Resistance: A water blocking tape is applied over the cable core to prevent water ingress and migration with a nominal of 25% overlap.

Non-wicking binder yarns are applied over the core tape.

5.4 Cable strength

Circumferential strength members are placed over the cable core and under the outer sheath.

5.5 Inner Sheath

Polyethylene

A ripcord is applied under the inner sheath.

5.6 Moisture Resistance

A water blocking tape is applied over the cable core to prevent water ingress and migration with a nominal of 25% overlap.

5.7 Steel Armor tape

Corrugated flexible steel with plastic coating for bonding to sheath. The armor of each length of cable shall be electrically continuous with no more than one splice allowed per kilometer of cable. The breaking strength of any section of an armor tape containing a factory splice joint, shall not be less than 80% of the breaking strength of an adjacent section of the armor of equal length without a joint.
A ripcord is applied under the armor tape.

5.8 Outer Sheath

UV Resistant Black Polyethylene

5.9 Cable Markings

Indent printed- REMFO 23 SERIES, FIBER OPTIC CABLE, # of fibers-SM, REMEE PRODUCTS CORP., TELEPHONE HANDSET SYMBOL, MM/YY (Month & Year of manufacture), Sequentially meter marked.

Special print as required by customer.

5.10 Nominal Cable Dimensions & Weights

Remee Products Part Number	No. of Fibers	No. of Fibers per Tube	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
23-006-74E-MBSFWN	6	6	15.7	.619	214	144
23-008-74E-MBSHWN	8	8	15.7	.619	213	143
23-012-74E-MBSFWN	12	6	15.7	.619	214	144
23-012-74E-MBSLWN	12	12	15.7	.619	213	143
23-016-74E-MBSHWN	16	8	15.7	.619	214	144
23-018-74E-MBSFWN	18	6	15.7	.619	214	144
23-024-74E-MBSFWN	24	6	15.7	.619	216	145
23-024-74E-MBSLWN	24	12	15.7	.619	218	147
23-030-74E-MBSFWN	30	6	15.7	.619	216	145
23-036-74E-MBSFWN	36	6	16.5	.649	235	158
23-036-74E-MBSLWN	36	12	15.7	.619	214	144
23-048-74E-MBSFWN	48	6	18.4	.724	280	188
23-048-74E-MBSLWN	48	12	15.7	.619	215	145
23-060-74E-MBSLWN	60	12	15.7	.619	215	145
23-072-74E-MBSLWN	72	12	16.5	.649	235	158
23-084-74E-MBSLWN	84	12	17.5	.689	268	180
23-096-74E-MBSLWN	96	12	18.4	.724	280	188
23-108-74E-MBSLWN	108	12	19.8	.779	333	224
23-120-74E-MBSLWN	120	12	20.7	.814	356	239
23-144-74E-MBSLWN	144	12	22.5	.884	415	279
23-216-74E-MBSLWN	216	12	23.1	.910	428	288
23-288-74E-MBSLWN	288	12	25.9	1.020	508	341



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6.0 FIBER CHARACTERISTICS

Fiber Type	Single mode*
Maximum Attenuation @ 1310/1550nm	0.35/0.25 dB/km
Cladding Diameter	125.0 ± 0.7 μm
Maximum Core/Clad Concentricity Error	0.5 μm
Maximum Cladding Non-circularity	0.7%
Primary Coating Diameter	245 ± 7 μm
Cabled Cutoff Wavelength	<1260nm
Mode Field Diameter	9.0 ± 0.4μm @1310nm 10.1 ± 0.5μm @1550nm
Temperature Dependence	≤0.05dB/km (-60°C to 85°C)
Zero Dispersion Slope	0.090ps/nm ² -km
Maximum PMD Link Design Value	0.06ps/√km
Group Refractive Index @ 1310/1550	1.467 / 1.468
Proof Test	100 kpsi

*According to ITU G.652.d

7.0 MECHANICAL & ENVIRONMENTAL PERFORMANCE

Maximum Tensile Load for:
 Installation: 2700N / 607lbf
 Long Term: 890N / 200lbf
 Minimum bending radius:
 Loaded: 20 x diameter
 Unloaded: 10 x diameter
 Crush Resistance: 440N/cm

Impact Resistance: 25 Impacts (min.)
 Flexing, ±90°: 25 Cycles (min.)
 Temperature Rating:
 Operation, -40°C to +70°C
 Installation, -40°C to +55°C
 Storage, -50°C to +70°C
 Twist Test: 25 Cycles (min.)

8.0 PREPARATION FOR DELIVERY

The cable shall be packaged to preclude the inducement of damage due to handling and transportation, and shall be in accordance with the best commercial practices available.



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