

RW-011
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ENGINEERING AND OPERATIONS
NORTHERN AIRPORTS

**SPECIFICATION FOR ARMORED AIRPORT SERIES
LIGHTING CABLE**

FOR USE IN MEDIUM INTENSITY

AIRFIELD LIGHTING SYSTEMS

**Manitoba
Transportation and
Government Services**



**TRANSPORTATION AND GOVERNMENT SERVICES
NORTHERN AIRPORTS**

**SPECIFICATIONS FOR ARMORED AIRPORT SERIES
LIGHTING CABLE SUITABLE FOR DIRECT EARTH BURIAL
(CSA TYPE DESIGNATION: AASLC)**

1. SCOPE

This specification defines the general requirements applicable to Armored Airport Series Lighting Cable. The intent of this specification is to establish minimum acceptable electrical, mechanical, design and performance requirements, which all Armored Airport Series Lighting Cable must meet to ensure satisfactory and reliable operation. It is not intended to impose restrictions upon design or materials, which must conform to the CSA standard. All CSA standards, current CSA specifications at time of contract, not specifically mentioned in this specification will apply. Where there is a conflict between this specification and the latest CSA standard, this specification will apply.

2. REQUIREMENTS

2.01 AASLC must be manufactured in accordance CSA C22.2 No.179.

2.02 The cable must be suitable for use in metallic or non-metallic raceways or ducts or by direct earth burial in wet or dry locations.

2.03 Cable construction as follows:

- Conductor: Bare, 7 strand, compressed copper Size #8 AWG
- Insulation: black cross-linked polyethylene with a minimum average thickness of 2.8mm
- Conductor Shield: extruded semi-conducting cross-linked polyethylene, 0.5mm thick
- Rated voltage: 5000 volts

2.04 Armor Components:

- The armor must be manufactured in accordance with Rules of the Canadian Electrical Safety Code and CSA C22.2 No. 51 and No. 123.

2.05 The armor must be suitable for use in metallic or non-metallic raceways or ducts or by direct earth burial in wet or dry locations.

2.06 Armor Construction as follows:

- Aluminum sheath-welded sheath OD=0.614"(15mm) or
- Aluminum sheath-interlocking sheath OD=0.614"(15mm)
- PVC Jacket 0.050"(0.12mm), rated for -40°C
- Flame test 4 Black PVC OD= 0.714"(18mm)

- 2.07 The outside diameter of AASLC cable must match primary connector kits supplied by the manufacturer. The diameter of the actual conductor will be used for sizing of the primary connection kits. Immediately upon award of Contract, the cable supplier must supply a cable specification to the manufacturer of the primary connection kits for appropriate sizing.
- 2.08 The cable must be delivered in non returnable reels of 915 metres per reel.
- 2.09 The cable must be clearly identified at 1 metre intervals for the entire length of each reel with the following information:
- the name of the manufacturer
 - the date of manufacture
 - the cable specification number/type
 - the rated voltage
 - the conductor size
- 2.10 In addition to the marking at 1 metre intervals, the cable must also be marked to show the length of cable remaining on the reel.

3. WARRANTY

- 3.01 All units must be guaranteed against failure for one year from date of acceptance by the Traffic Engineering Branch of the Department of Transportation and Government Services.

4. INSPECTION AND ACCEPTANCE

- 4.01 The vendor must provide a 1 m sample of the cable being supplied along with all test and technical documentation for evaluation purposes.

Armored Airport Series Lighting Cable that conform to this specification and are not currently in use by this Department must be submitted to the Traffic Signal Workshop for a one-year evaluation period by the Department. At the end of the evaluation period the supplier will be advised by the Traffic Operations Engineer if the cable submitted for evaluation is acceptable.

The total cost of supplying this AASLC for evaluation must be borne by the supplier. The bidder must complete the attached "Specification Compliance Summary" (attached). Failure to complete the summary will result in disqualification from the bidding.

- 4.02 All shipments of AASLC cables are subject to the inspection by the Traffic Engineering Branch of the Department of Transportation and Government Services.

Acceptance will be based on the supplied equipment meeting the requirements of this specification.

- 4.03 For additional technical information please contact Mark Seniuk at (204) 945-7335 office, or (204) 799-8682 cellular.