

12-SDMS-03
(22-06-2018)

SPECIFICATION FOR UNDERGROUND WARNING TAPES

Saudi Electricity Company

1. SCOPE.....	3
2. CROSS REFERENCES TO OTHER SEC STANDARDS	3
3. APPLICABLE CODES AND STANDARDS	3
4. MATERIAL, DESIGN AND CONSTRUCTION REQUIREMENTS	3
5. TESTING AND INSPECTION.....	4
6. SUBMITTALS.....	4
6.1. SUBMITTALS REQUIRED WITH TENDER/INQUIRY	4
6.2. SUBMITTALS REQUIRED FOLLOWING AWARD OF CONTRACT.....	4
7. TECHNICAL DATA SCHEDULE	5
8. DRAWING.....	7

1. SCOPE

This SEC Distribution Materials Specification (SDMS) specifies the minimum technical requirements of underground warning tapes to identify and give early warning to excavators that a power cable is buried underneath.

2. CROSS REFERENCES TO OTHER SEC STANDARDS

This specification shall always be read in conjunction with SEC General Specification No. 01-SDMS-01 (latest revision) titled "General Requirements for all Equipment/Materials," which shall be considered as an integral part of this specification. It shall also be read in conjunction with SEC purchase order and/or contract schedules, and scope of work/technical specifications for projects, as applicable.

3. APPLICABLE CODES AND STANDARDS

The latest revision of the following codes and standards shall be applicable for the equipment/materials covered in this specification. In case of any deviation, the vendor/manufacturer may propose equipment/materials conforming to alternate codes or standards. However, the provisions of SEC standards shall supersede the provisions of these alternate standards in case of any difference.

Table 1: List of applicable standards

Standard #	Title
ASTM D792	Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement
ASTM D882	Test Method for Tensile Properties of Thin Plastic Films
ASTM D2103	Specification for Polyethylene Film and Sheeting
ASTM D2578	Test Method for Wetting Tension of Polyethylene and Polypropylene Films

4. MATERIAL, DESIGN AND CONSTRUCTION REQUIREMENTS

- All warning tapes shall be manufactured from high-grade virgin materials of low density polyethylene polymers.

- The warning tapes should be resistant to most soil types including alkaline and acidic soils.
- Warning tapes shall have a minimum thickness of 200µm with allowable tolerance of +50µm.
- Warning tapes shall have a width of 150mm and a roll size of 500m.
- The imprints in the warning tapes shall be indelible, lead-free, black color and shall be overcoated to protect the imprints from acids, alkalis, and other soil substances.

5. TESTING AND INSPECTION

All underground warning tapes shall be tested in conformance with the applicable clauses of the standards mentioned in this specification.

6. SUBMITTALS

6.1. SUBMITTALS REQUIRED WITH TENDER/INQUIRY

- 6.1.1 Clause-by-clause compliance with the latest revision of SEC specification 12-SDMS-03.
- 6.1.2 Manufacturer's Catalogue
- 6.1.3 Certificate stating that the raw material has been sampled, tested and inspected in accordance with relevant standard specifications.
- 6.1.4 Filled-up technical data schedule of the item offered
- 6.1.5 Proof that the product offered is already been supplied and used in utility companies.
- 6.1.6 USB Flash Drive containing e-copy of all the documents mentioned above

6.2. SUBMITTALS REQUIRED FOLLOWING AWARD OF CONTRACT

- 6.2.1 Samples
- 6.2.2 Quality assurance tests
- 6.2.3 Manufacturing and routine test schedules

7. TECHNICAL DATA SCHEDULE

Table 2: Technical Data Schedule

SEC Inquiry No:

Item No:

No	Description	SEC Specified Values (*)	Vendor Proposed Values (**)
1	Warning Tape		
1.1	Material (Virgin Grade)	Low Density Polyethylene Film	
1.2	Resistant to most soil types including alkaline and acidic soils	Yes	
1.3	Thickness + Tolerance	200µm + 50µm	
1.4	Width	150mm	
1.5	Roll Size	500m	
1.6	Color	Traffic Yellow (RAL 1023)	
2	Imprints		
2.1	Color	Black	
2.2	Material	Indelible Lead-Free	
2.3	Design	As specified	
2.4	Overlay Clear Coating	Yes	
	Manufacturer	**	
	Manufacturer Catalogue Number	**	
	Country of Origin	**	
	Submittals Required with Tender/Inquiry Included or Not?	**	

Warning Tape

SEC Inquiry No:

Item No:

- Additional Technical Information or Features Specified by SEC
- Additional Supplementary Data or Features Proposed by Bidder/Vendor/Supplier.
- Other Particulars to be filled-up by the Bidder/Vendor/Supplier.
- List of Deviations and Clauses to which exception is taken by the Bidder/Vendor/Supplier. (Use separate sheet, if necessary).

Description	Manufacturer of Material/Equipment	Vendor/Supplier
Name of Company		
Location and Office Address		
Name and Signature of Authorized Representative with Date		
Official Seal / Stamp		

8. DRAWING

Figure 1: Underground Warning Tapes



Notes:

Width: 150mm

Roll Size: 500m

Thickness: 200µm