

ENGINEERING MATERIAL SPECIFICATION

Material Name	Specification Number
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**STEEL WIRE, #18 GA. HARD DRAWN - ROUND OR SHAPED
(HIGH TENSILE)**

ESB-M1A110-A

STEEL WIRE, #18 GA. HARD DRAWN - ROUND OR SHAPED

ESB-M1A112-A

1. SCOPE

The material defined by these specifications is a cold drawn steel wire. This wire is to be coated as specified in paragraph 3.4.

2. APPLICATION

These specifications were released originally for material used in staple machines for fastening weatherstrip to roof, to wheelhouse strainer and similar applications.

3. REQUIREMENTS

3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.2 CHEMICAL COMPOSITION

Carbon	0.70 - 0.85
Manganese	0.70 - 0.85
Sulfur	0.04 max
Phosphorus	0.03 max
Silicon	0.10 - 0.20

3.3 MECHANICAL PROPERTIES (ASTM E 8)

3.3.1	Tensile Strength, min	290,000 psi (2000 MPa)
3.3.2	Yield Point, min	275,000 psi (1900 MPa)
3.3.3	Elongation, in 10 in (250 mm)	4.0 % min
3.3.4	Reduction in Area	50.0 % min

Date	Action	Revisions
2002 08 29	Revised	Updated and Renumbered; Removed Inactive ESB-M1A111-A
1978 04 25		Metricated and Retyped CAH1-RD572066-12
1963 06 25		Released AS1 #948

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3.4 SURFACE FINISH

The wire shall be supplied with one of the following three surface finishes

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Plain
Zinc

The surface must be smooth and bright, free from rust and dark spots, excessive drawing lubricants and visible scratches, seams, and slivers. The zinc finish must withstand a 24 hour salt spray corrosion test (ASTM B 117).

No electrolytic zinc deposit will be allowed with a Rockwell "C" 32 hardness or above.

3.5 WEIGHT
(Approximately)

166 ft/lb (111 m/kg)