

CABLE SPLICING SOLDERS

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1. GENERAL

1.01 This section is issued to describe the solders used by outside plant forces. Section WR-G50.601.5 is hereby cancelled.

1.02 Before soldering it is important that the metal surface to be soldered is clean and free from dirt, oil, grease, etc. In addition, clean metal oxidizes quickly in contact with air and a flux is used in most soldering operations to remove this oxide film. Rosin and stearine are the only fluxes which are suitable for this purpose. Rosin is generally used where copper is being soldered while stearine is used for lead. To avoid possible corrosion, stearine should **NOT** be used on copper connections exposed to the atmosphere.

1.03 Any specific instructions necessary in a soldering operation are covered in the appropriate Bell System Practices describing the operation.

2. GENERAL SOLDERS

2.01 **B and C Rosin-Core Solders:** These solders are alloys consisting of 38 per cent tin and 62 per cent lead. Other metals present do not exceed about 1/2 of 1 per cent. These solders have a core of rosin to facilitate soldering. They are used for soldering conductors to terminal lugs and for miscellaneous soldering.

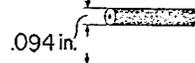
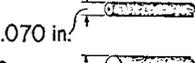
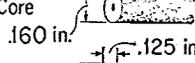
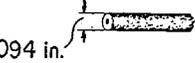
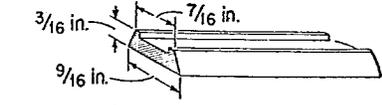
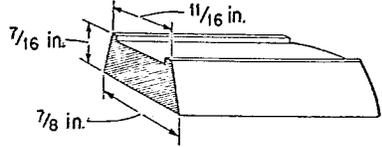
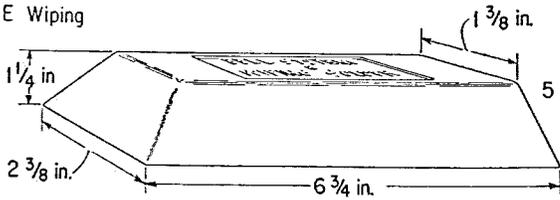
2.02 **Low Content Rosin-Core Solder:** An alloy of 38 per cent tin and 62 per cent lead. Other metals present do not exceed about 1/2 of 1 per cent. The rosin content is reduced. This solder is suitable for soldering conductor joints in man-holes or other locations where it is desirable to keep rosin fumes to a minimum.

2.03 **B and C Stearine-Core Solder:** These solders are alloys consisting of 34-1/2 per cent tin, 1-1/4 per cent antimony, 1/10th of 1 per cent arsenic and about 64 per cent lead. They have a stearine core. The B solder is used for soldering lead cable sheath and lead sleeves. The C solder is used for soldering pressure testing flanges to lead sheath. These solders may be used to solder conductor joints instead of the rosin-core solders, except that the stearine-core solders should **NOT** be used on open terminal lugs or main distributing frame terminations which are exposed to the atmosphere.

2.04 **D Seam Solder:** An alloy consisting of 50 per cent tin and 50 per cent lead. Other metals present do not exceed about 1/2 of 1 per cent. The seam solder is used for running seams on split lead sleeves and for miscellaneous soldering on lead sheath or sleeves. It is also used to enrich the wiping solder where a mixture with a higher tin content is desired.

2.05 **E Wiping Solder:** An alloy consisting of 34-1/2 per cent tin, 1-1/4 per cent antimony and 1/10th of 1 per cent arsenic, the remainder being lead. It is used for wiping joints in lead sheath cables.

2.06 The following illustration covers the shape, size and weight of these general solders.

Type of Solder	Shape and Nominal Dimensions	Supplied in
B Rosin-Core	 .094 in.	1 lb. and 5 lb. Spools
C Rosin-Core	 .070 in.	1 lb. and 5 lb. Spools
Low Content Rosin-Core	 .160 in. .125 in.	5 lb. Spool
B Stearine Core	 .185 in.	5 lb. Spool
C Stearine Core	 .094 in.	1 lb. Spool
D Seam	 3/16 in. 7/16 in. 9/16 in.	1/2 lb. Bar
	 7/16 in. 11/16 in. 7/8 in.	1/2 lb. Bar
E Wiping	 1 1/4 in. 2 3/8 in. 6 3/4 in. 1 3/8 in.	5 lb. Pig

3. SPECIAL SOLDERS

3.01 **C Sealing Solder:** An alloy consisting of 38 per cent lead, 37 per cent bismuth and 25 per cent tin. It melts at 200° F. and is used to seal porosities in wiped joints as described in another section of the practices.

3.02 **Aluminum Solder:** An alloy of special composition which is used when it is necessary to bond to the aluminum in polyethylene sheath cables.