

COR™FORGE F45 FC

DESCRIPTION

COR™FORGE F45 FC is a flux-cored, chrome-nickel-moly tool steel alloy designed for hammer and press die applications. The welding characteristics allow flood welding and continuous multiple passes.

APPLICATIONS

F45 is typically used to repair and rebuild forging die impressions requiring a hardness of 41-46 Rc. It is also used as an underlay in press die applications.

PROCEDURE

A minimum preheat/interpass temperature of 800°F is recommended for forging dies. Post heat at 800°F for 3 hours after welding, and then allow the deposit to cool below 200°F. Temper at 1050°F for 1 hour/inch thickness. Preheat and post heat according to the base material for all other applications.

WELDING PARAMETERS

Type	Size	Volts	Amps	Shielding Gas/Flux
FC-G	.045"	18-20	150-200	100% CO ₂ or Ar-CO ₂ mixtures
FC-G	1/16"	23-25	200-400	100% CO ₂ or Ar-CO ₂ mixtures
FC-G	3/32"	29-31	350-600	100% CO ₂ or Ar-CO ₂ mixtures
FC-G	1/8"	30-32	450-650	100% CO ₂ or Ar-CO ₂ mixtures

Submerged arc wires are available in 1/16"-3/16"; Use a neutral flux.

MECHANICAL PROPERTIES AFTER 1050°F TEMPER, 10 HOURS

Hardness: 42-47 Rc
 Tensile: 186,000 psi
 Yield: 168,000 psi
 Elongation: 12%
 R.A.: 40%

CLASSIFICATION

Chrome-Nickel-Moly Iron base alloy