

HF650

MIG/GMAW and TIG/GTAW hardfacing wire

Product name	HF650
Classification EN ISO	14700: SFe3.
Material No.	-
Classification AWS	A5.21: ERFe8.
Approvals	-
Applications	MIG/GMAW and TIG/GTAW wire for the surfacing, repair or production of new hot working tools. Suitable for operating temperatures up to ~500°C. Weld deposit can only be ground. Typical applications will include: trimming tools, punches, shear blades, and knives.
Base materials	AISI: H12. UNS: T20812. Similar hot work tool steels. Surfacing wide range of mild, CMn, low alloy, engineering steels etc.
Typical analysis of wire, weight %	C: 0.35 Si: 1.10 Mn: 0.40 Cr: 5.20 Mo: 1.40 W: 1.30 V: 0.40
Typical heat treatment ⁽¹⁾	Soft annealed or tempered tools can be welded with appropriate precautions. After welding slow cool to ~80°C and then temper, or heat treat as required. For small repairs and surfacing of other low alloy steels it may be possible to relax the welding procedure requirements. Preheat: ~350°C (possibly lower when surfacing low alloy steels). PWHT: ~550°C (if required).
Mechanical properties of weld deposit ⁽²⁾	Hardness: 590-700HV 560-650HB 55-60HRC
Other products	-

Notes (1) Application codes and project specifications should always be referred to for specific requirements.

(2) Actual mechanical properties will be dependent on specific welding procedure (including shielding gas, flux, PWHT etc) and should always be confirmed by approval of an appropriate welding procedure.