METHARD 650R

HIGH RECOVERY MMA HARDFACING ELECTRODE OF NOMINAL 650HV HARDNESS

PRODUCT DESCRIPTION

Rutile high recovery metal powder flux made on pure low carbon core wire.
Recovery is about 160% with respect to core wire, 65% with respect to whole electrode.

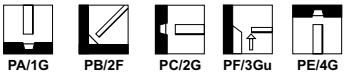
SPECIFICATIONS

BS EN 14700 E Fe2 (Nearest classification)

ASME IX QUALIFICATION

QW432 F-No

WELDING POSITIONS (ISO/ASME)



CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn	Si	Cr	Mo	V
Typical	0.4	0.3	0.8	8	1	0.6

ALL-WELD MECHANICAL PROPERTIES

Typical hardness as-welded on mild steel base plate:	1 layer	3 layers	1 layer on high carbon steel
Vickers (HV)	560-600	620-680	580-640
Rockwell (HRC)	53-55	56-59	54-57

Preheat and dilution will affect hardness in the first two layers but will have little effect in subsequent layers.
The weld metal will retain its hardness up to about 450°C but then softens markedly at temperatures in the range 550-700°C.

OPERATING PARAMETERS, DC +VE OR AC (OCV: 45V MIN)

Diameter (mm)	2.5	3.2	4.0	5.0
min. A	70	80	100	140
max. A	110	140	180	240

PACKAGING DATA

Diameter (mm)	2.5	3.2	4.0	5.0
Length (mm)	350	350	350	450
kg/carton	12.0	12.0	13.2	15.0
Pieces/carton	396	255	162	102

STORAGE

3 hermetically sealed ring-pull metal tins per carton, with unlimited shelf life. Direct use from tin is satisfactory.
For electrodes that have been exposed:
Redry 200 – 300°C/1-2h to restore to as-packed condition. Maximum 350° C, 3 cycles, 10h total.
Storage: Recommended ambient storage conditions for opened tins (using plastic lid): < 60% RH, > 18°C.

FUME DATA

Fume composition, wt % typical:

Fe	Mn	Cr	Mo	V	F	OES (mg/m³)
20	6	2.5	0.1	0.5	18	2