

## THERMET HP40Nb

MMA (SMAW)

## BASIC MMA ELECTRODE MATCHING HP40NB ALLOYS

## PRODUCT DESCRIPTION

Basic moisture resistant MMA electrode made on high purity alloy core wire, giving high resistance to microfissuring and porosity in large multi-run deposits.

Recovery is about 120% with respect to core wire, 65% with respect to whole electrode.

## CLASSIFICATIONS

No relevant national specifications.

## ASME IX QUALIFICATION

QW432 F-No --  
QW442 A-No --

## WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G

## CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn	Si	S	P	Cr	Ni	Mo	Nb	Ti
min.	0.35	0.5	0.2	--	--	23.0	32.0	--	0.75	0.02
max.	0.50	2.0	1.3	0.030	0.040	27.0	36.0	0.5	1.50	0.20
Typical	0.43	1.7	0.9	0.010	0.010	25	35	0.1	1.1	0.08

\* Does not always comply to obsolete classification BS2926: 25.3.5H.Nb.B which requires Si<1.0%. Please contact technical department for supply according to BSEN 2926: 25.3.5H.Nb.B.

## ALL-WELD MECHANICAL PROPERTIES

As welded	Min. *	Typical
Tensile strength [MPa]	600 [450]	740
0.2% proof strength [MPa]	-- [250]	560
Elongation [%] 4d	-- [5]	15
5d	--	15
Reduction of area [%]	--	17
Hardness [HV]	--	240

\* Minimum tensile strength of 600MPa is from BS2926; the values in brackets are minimum values for base material static castings.

Room temperature elongation has little significance for weld metal designed for high temperature service and creep resistance. Values down to 4.5% (on 4d) are allowed in ASTM HP40 castings and the ductility of multipass welds may approach this value due to carbide precipitation in successive runs.

## STRESS RUPTURE/CREEP DATA:

Temperature		Stress		Life	Elongation
°C	°F	MPa	ksi	Hours	%
871	1600	48.2	7	1431	6
927	1700	27.6	4	2398	3
982	1800	17.3	2.5	2414	3

## OPERATING PARAMETERS, DC +VE

Diameter [mm]	2.5	3.2	4.0
min. A	60	75	100
max. A	90	120	155

## PACKAGING DATA

	Diameter [mm]	Length [mm]	Item number	No of pieces		Weight [kg]	
				can	box	can	box
METAL CAN	2.5	300	THHP40NB-25	CONSULT US			
	3.2	350	THHP40NB-32				
	4.0	350	THHP40NB-40				

Redrying : 200 – 300°C/1-2h to restore to as-packed condition. Maximum 400° C, 3 cycles, 10h total.

## FUME DATA (WT % TYPICAL)

Fe	Mn	Ni	Cr	Cu	Mo	V	F	OES (mg/m <sup>3</sup> )
4	6	7	7	< 0.5	< 0.1	< 0.1	18	0.7

All information in this data sheet is accurate to the best of our knowledge at the time of printing. Please refer to [www.specialalloys.eu](http://www.specialalloys.eu) for any updated information.