



DAIKOWS 25.35.4CNb



HIGH TEMPERATURE ALLOYS
HP40Nb

DESCRIPTION

Solid wire for matching HP40Nb alloy

These consumables are designed to match heat resistant cast alloys with 0.4%C-25%Cr-35%Ni-Nb. They are also suitable for high carbon Cr-Ni alloys such as HK40, HT40 and IN519. The weld deposit has excellent hot strength and creep resistance in the typical service temperature range 900-1100°C. High levels of Cr and Ni provide good resistance to oxidation and carburization. The principal applications are pyrolysis coils and reformer tubes in the petrochemical industry.

SPECIFICATIONS

Werkstoff Number	~1.4853	Certifications	-
Shielding	DAIKOFLUX 303	Positions	PA, PB, PC
Current	DC/AC	Packaging Type	K415 spool and drums.

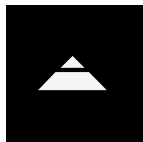
	FERRITE	PREN	HARDNESS
	-	26.99	-

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN	VARIANT
C	0.4	Tensile strength R _m MPa	-	750
Mn	1.7	Yield strength R _{p0.2} MPa	-	500
Ni	35	Elongation A (L ₀ =5d ₀) %	-	13
Cr	26	Impact Charpy ISO-V	-	-
Nb	1.3	Impact Charpy ISO-V	-	-
Mo	0.3			
Si	1.1			
Cu	0.15			
WELDING PARAMETERS				
2.4 mm				
Ampere			350A - 450A	
Voltage			27V - 31V	
Packaging			Ø 2,0÷4,0mm	
Packaging Type			K415 spool and drums.	



The information in this datasheet is the result of detailed research and is considered accurate as of the publication date. However, we cannot guarantee its complete accuracy, and it is subject to change without notice. Actual results may vary due to many factors like welding procedures, material composition, temperature conditions, bevel configuration, and specific manufacturing techniques. We accept no liability for any errors or omissions in this datasheet. For the most current information, please visit www.daikowelding.com.





HP40Nb

DESCRIPTION

HIGH TEMPERATURE ALLOYS

HP40Nb

APPLICATION

Designed to complement heat-resistant cast alloys with 0.4%C-25%Cr-35%Ni-Nb, these consumables also cater to micro-alloyed variants with Ti for enhanced creep resistance. They extend their applicability to Nb-free alloys and leaner high-carbon Cr-Ni alloys like HK40, HT40, and IN519, where overmatching weld metal is typically acceptable. Notably, Alloy HP40Nb exhibits resistance to sigma phase embrittlement, and its composition, featuring eutectic and secondary carbides, ensures remarkable hot strength and creep resistance within the common service temperature range of 900-1100°C. The elevated levels of Cr and Ni contribute to robust resistance against oxidation and carburization. Primary applications revolve around pyrolysis coils and reformer tubes essential for ethylene production in the petrochemical sector. Remarkably, these consumables generally do not necessitate preheating.

ALLOY TYPE

Consumables to match 0.4%C-25%Cr-35%Ni-Nb heat resistant cast alloys.

MICROSTRUCTURE

In the as-welded condition the weld metal consists of austenite with eutectic and secondary carbide.

MATERIALS

Also suitable for high carbon 18%Cr-37%Ni-Nb alloys e.g.W.-Nr 1.4849.

EN W.Nr.: 1.4857 (G-X40NiCrSi 35 25), 1.4853 (X 40 NiCrNb 35-25)

ASTM: A297 HP40Cb, A297 HP, A297 HP40

PROPRIETARY: Paralloy H39W (Doncasters Paralloy), Lloyds T64 (LBA), MO-RE® 10, 10-MA (Duraloy), Thermalloy 64 (Duraloy), Manaurite® 36X, 36XM (Manoir Industries), Pyrotherm G25/35Nb, NbTZ (Pose Marre), Centralloy® 4852, 4852 Micro (Schmidt + Clemens), E2535Nb, E2535Nb-MA (Engemasa), Paralloy H39 (Doncasters Paralloy), Lloyds T63 (LBA), HR33 (Cronite)

