

**Penn Stainless Products, Inc. Stainless Steel Plate Mill Plate Specifications**

Penn Stainless Specification #	F740-1	Material Specification for stainless steel plates for destination North America										Page 1/1				
		304 304L	304H	316 316L	321 321H	309/H 309S	310/H 310S	347	347H	317L	17-4 PH	318/ 2205	410	410S	430	Alloy 20
ASTM A240/ ASME SA240		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ASTM A480/ASME SA480		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ASTM A312/ ASME SA312		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ASTM A370		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
QQ-S-766D		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ASTM E112			*			*	*									
ASTM A167						*	*									
ASTM A666/ASME SA666		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ASTM B463															*	
ASTM B906															*	
ASTMA693/ ASME SA693										*						
ASTM A 923 METHOD A,B & C		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
UNS	30400/30403	S30409	31600/31603	S32100	S30900/S30908 /S30909	S31008/S31009	S34700	S31703	S17400	S31803 S32205	S41000	S41000	S43000	N08020	S32750	
AMS Spec	5513/ 5511	5513	5524/ 5507	5510	5523	5521	5512		5604	—	5504		5503			
Dow G8S-51, Rev 2/15/2013										*						
Exxon DSS1R06,Rev 5										*						
Multiple Certified		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Chemical Analysis		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
UHA 51 Lateral Expansion										*						
Minimum Nitrogen Content										0.14-0.20%						0.25-0.32%
Minimum PREN value										34						40
* Heat treatment/ Pickling		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ferrite 40%-60% results recorded										*						*
Finish °I acc. To ASTM A480		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Tensile test at 20° C (Hardness)		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Tensile test at 20° C		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Impact test at- 50° C		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NACE MR 0103 & MR 0175		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hardness test	According to ASTM A240															
Intermetallic phases A923	Detection according to ASTM A923- Duplex Only															
Tolerance- Length/Width/Flattness	According to ASTM A 480- Aim for half of tolernace															
Corrosion Test: ASTM A262	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Marking: ASTM : grade(s)- stamp(s) + heat and plate number	Standard(s)-															
Conformity to the Directive PED n° 97/23/EC	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Certificate according to EN 10204-3.1 with the year of EN10204 issue.	Where the spec rev/edition is not notes above, standard latest edition dates must be shown on certificates															
ROHS compliant	Heat Treatment minimum solution anneal temp and quench method															
	Must be in US customary Units and have authorized signature															
	Inspector/ Quality person's name and title typed and signature or cert															
	Free from radioactive contamination/ No Mercury Contamination/ No Weld Repair															
	H Grade: Carbon must meet .04 min, Grain size must show on MTR															
	Fraud and Falsification statement must be on test report															
	Material must be supplied in unsensitized condition															
	Colbalt must be reported on test report															
	410: 2min nickel, aim for .3 min rockwell C 40-45															
	Compliance/Conformance Statement that material meets all requirements of purchase order and required specifications															
	318/2202: Ferrite Number and ASTM A923 method B charpy results mus appear on test report.															
	Approved by:															
	Date:															