



Ferritic/Martensitic stainless have chromium levels of 12% - 18% as the main alloying element and have carbon levels to enable air hardening to a predominantly martensitic structure. Accordingly, detailed attention must be paid to both pre-heat and PWHT during and after welding.

Duplex stainless steels for general fabrication work can be considered non-heat treatable and it is imperative that the ratio of austenite to ferrite in the weld metal matches the microstructure of the parent plate. In order to achieve matching microstructure, the weld metal, particularly with reference to austenite formers, has a higher alloy content than the material being welded. The exception may occur with large repairs to castings when PWHT involves full solution heat treatment, eg: water quenching from 1100 °C, then matching analysis weld metals should be considered.

Standard austenitics are those in the ASTM 3XX series and should, in the main, be welded with matching electrodes and for all fabrication purposes should be considered non-hardenable, non-heat treatable and thus show no PWHT requirement.

TYPE	AWS A5.4	DESCRIPTION	DATASHEET
NSD-308	E308-15	VARIOUS APPLICATIONS	<a href="#">Download</a>
NSB-308	E308-16		<a href="#">Download</a>
NSB-308Mo	E308Mo-16		<a href="#">Download</a>
NSD-308L	E308L-15		<a href="#">Download</a>
NSB-308L	E308L-16		<a href="#">Download</a>
NSB-308H	E308H-16		<a href="#">Download</a>
NSB-309	E309-16	TRANSITION WELDS BETWEEN	<a href="#">Download</a>
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NSB-309MoL	E309LMo-16		<a href="#">Download</a>
NSB-309Nb	E309Nb-16		<a href="#">Download</a>
NSB-310	E310-16	WELDING ASTM 310	<a href="#">Download</a>
NSB-310Mo	E310Mo-16		<a href="#">Download</a>
NSD-316L	E316L-15	WELDING ASTM 316 AND 316L	
STAINLESS STEELS	<a href="#">Download</a>		
NSB-316L	E316L-16		<a href="#">Download</a>
NSB-316	E316-16		<a href="#">Download</a>
NSB-316H	E316H-16		<a href="#">Download</a>
NSB-317L	E317L-16	WELDING ASTM 317L	<a href="#">Download</a>
NSB-317	E317-16	WELDING ASTM 317	<a href="#">Download</a>
NSB-318	E318-16	WELDING ASTM 318	<a href="#">Download</a>
NSD-347	E347-15	WELDING ASTM 347 and 347H	<a href="#">Download</a>
NSB-347	E347-16		<a href="#">Download</a>
NSB-410	E410-26	WELDING VARIOUS GRADES OF	<a href="#">Download</a>
NSB-17.4.Cu R	E630-26		<a href="#">Download</a>
NDS-2209	E2209-16	FOR WELDING DUPLEX STAINLESS STEEL	<a href="#">Download</a>
ND-2209	E2209-17		<a href="#">Download</a>
NDS-25.9.4.NL	E2594-16	FOR WELDING SUPERDUPLEX STAINLESS ST	<a href="#">Download</a>
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