

# Stainless Steel Dissimilar Welding Chart

Base Metals	201	202	301	302	302B	303	304	304L	305	308	309	309S	310	310S	314	316	316L	317	317L	321	330	347	348	403	405	410	414	416	420	430	430F	431	440A	440B	440C	446	Base Metals	
	308	308	308	308	308	308 312	308	308	308	308	308	308	308	308	308 312	308	308	308	308	308	312 309	308	308	309	309	309	309	309	309	309	309	309	309	309	309	310	201	
		308	308	308	308	308 312	308	308	308	308	308	308	308	308	308 312	308	308	308	308	308	312 309	308	308	309	309	309	309	309	309	309	309	309	309	309	309	310	202	
			308	308	308	308 312	308	308	308	308	308	308	308	308	308 312	308	308	308	308	308	312 309	308	308	309	309	309	309	309	309	309	309	309	309	309	309	310	301	
				308	308	308 312	308	308	308	308	308	308	308	308	308 312	308	308	308	308	308	312 309	308	308	309	309	309	309	309	309	309	309	309	309	309	309	310	302	
					308	308 312	308	308	308	308	308	308	308	308	308 312	308	308	308	308	308	312 309	308	308	309	309	309	309	309	309	309	309	309	309	309	309	310	302B	
						308 312	308 312	308 312	308 312	308 312	308 312	308 312	312	312	312	308 312	308 312	308 312	308 312	308 312	312 309	308 312	308 312	309	309	309	309	309	309	309	309	309	309	309	309	312	303	
							308	308	308	308	308	308	308	308	308 312	308	308	308	308	308	312 309	308	308	309	309	309	309	309	309	309	309	309	309	309	309	309	310	304
								308L	308	308	308	308	308	308	308 312	308	308L	308	308L	308L	312 309	308L	308L	309	309	309	309	309	309	309	309	309	309	309	309	310	304L	
									308 310	308	308	308	310 308	310 308	312	308	308	308	308	308	312 309	308	308	309	309	309	309	309	309	309	309	309	309	309	309	310	305	
										308	308	308	308	308	308 312	308	308	308	308	308	312 309	308	308	309	309	309	309	309	309	309	309	309	309	309	309	310	308	
											309	309	309	309	309 312	309	309 316	309	309	308 347	312 309	308 347	308 347	309	309	309	309	309	309	309	309	309	309	309	310	309		
												309	309	309	309 312	309 316L	316	316	316	308 347	312 309	308 347	308 347	309	309	309	309	309	309	309	309	309	309	309	310	309S		
													310	310	310 312	316	316	317	317L	308	312 310	308 347	308 347	309	309	309	309	309	309	309	309	309	309	309	309 310	310		
														310	310 312	316	316	317	317L	308	312 310	308 347	308 347	309	309	309	309	309	309	309	309	309	309	309	309 310	310S		
															310 312	316	316	317	317	308	312 310	308	308	309	309	309	309	309	309	309	309	309	309	309	309 310	314		
																316 16-8-2	316	316	316	308	312 309	308 16-8-2	308 316	309	309	309	309	309	309	309	309	309	309	309	310	316		
																	316L	316	316L	308L	312 309	316L	316L	309	309	309	309	309	309	309	309	309	309	309	310	316L		
																		317	317	308	312 309	308L 16-8-2	308L 16-8-2	309	309	309	309	309	309	309	309	309	309	309	310	317		
																				317L	308L 347	312 309	308L	308L	309	309	309	309	309	309	309	309	309	309	310	317L		
																					347	312 309	347	347	309	309	309	309	309	309	309	309	309	309	310	321		
																						330	312 309	312 309	312	312	312	312	312	312	312	312	312	312	312	330		
																							347	347	309	309	309	309	309	309	309	309	309	309	309	327		
																								348	309	309	309	309	309	309	309	309	309	309	309	348		
																									410	410	410	312 309	410	430	309	410	410	410	410	410	403	
																										410	410	410	312 309	410	430	309	410	410	410	410	405	
																										410	410	312 309	410	430	309	410	410	410	410	410		
																											309	312 309	410	430	309	410	410	410	410	414		
																												410 309	309	410 309	309	410 309	309	309	309	416		
																													420 410	410	309	410	420	420	430	420		
																														430	309	430	430	430	430	430		
																															309	309	309	309	309 310	430F		
																																309	309	309	309	310	431	
																																	309	309	309	310	440A	
																																		309	309	309	440B	
																																			309	309	440C	
																																			312 310	446		

This chart is only a suggestion of which filler metals should be adequate for the joining of the stainless steels. This does not mean the other filler metal alloys are not recommended or of less quality. In all instances the chart should be used as a reference only. Actual application should dictate the proper alloy choice.

The gray sections of this chart indicate “free-matching” alloys, which are considered not weldable. This is due to the high percentage of sulphur or other low melting point elements that cause hot cracking. If high-quality joints are required, welding is not generally recommended.

This chart does not indicate welding procedure. Some stainless steels require preheat while others should not have a preheat. Some welds require a buttering layer or other more rigid procedure. Suppliers may be contacted regarding procedure recommendations.

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