

# Preparing titanium for anodizing or welding using Multi-Etch

Grade	Process	Etch time	Surface change
All grades			
	150–160°F regular strength	7-10 seconds	Brightens
	70°F double strength	2 minutes	Brightens

## Removing color from titanium using Multi-Etch

*Note: Times are for removing high-voltage green; lower voltage colors will take less time to remove.*

Grade	Process	Etch time	Surface change
1 (CP)			
	150–160°F regular strength	30 seconds	Brightens/matte
	150–160°F double strength	30 seconds	Brightens/matte
	70°F double strength	6 minutes	Brightens/matte
2 (CP)			
	150–160°F regular strength	2 minutes	Brightens/matte
	150–160°F double strength	75 seconds	Brightens/matte
	70°F double strength	24 minutes	Brightens/matte
4 (CP)			
	150–160°F regular strength	50 seconds	Brightens/matte
	150–160°F double strength	40 seconds	Brightens/matte
	70°F double strength	8 minutes	Brightens/matte
5 (6/4 aircraft grade)			
	150–160°F regular strength	1 minute 40 seconds	Brightens/matte
	150–160°F double strength	1 minute	Brightens/matte
	70°F double strength	40 minutes	Brightens/matte

# Etch rates for titanium using Multi-Etch

Grade	Process	Etch time (minutes)	Etch depth (inches, cumulative total)	Surface change
<b>1 (CP)</b>				
<b>150–160°F regular strength</b>				
		1	0.00012	Brightens/matte
		2	0.00023	Brightens/matte
		3	0.0004	Brightens/matte
<b>150–160°F double strength</b>				
		1	0.00023	Brightens/matte
		2	0.0006	Brightens/matte
		3	0.0008	Brightens/matte
<b>2 (CP)</b>				
<b>150–160°F regular strength</b>				
		1	0.00016	Brightens/matte
		2	0.00036	Brightens/matte
		3	0.00046	Brightens/matte
<b>150–160°F double strength</b>				
		1	0.00045	Brightens/matte
		2	0.00092	Brightens/matte
		3	0.00115	Brightens/matte
<b>4 (CP)</b>				
<b>150–160°F regular strength</b>				
		1	0.00015	Brightens/matte
		2	0.0003	Brightens/matte
		3	0.00035	Brightens/matte
<b>150–160°F double strength</b>				
		1	0.00025	Brightens/matte
		2	0.001	Brightens/matte
		3	0.0012	Brightens/matte

Grade	Process	Etch time (minutes)	Etch depth (inches, cumulative total)	Surface change
5 (6/4 aircraft grade)				
150–160°F double strength				
		1	no change	Brightens/matte
		2	0.000084	Brightens/matte
		3	0.00022	Brightens/matte
		4	0.00043	Brightens/matte