

Line Process	Production sqft/yr	Materials					Energy					Environment				Misc. Other	Annual Costs Summary	
		Water	Dragout	Bleed	Coating	Other	Vent	Rectifier	Heat	Cool	Other	Effluent	OnSite Trt	Sludge	Disposal		Total	\$/Sq Ft
<b>Sulfuric Anodize/Hardcoat</b>																		
1 - 11 Soak Clean/Alkaline Etch	625,000	\$46	\$1,875	\$2,513	\$0	\$2,176	\$806	\$0	\$462	\$0	\$2,720	\$40	\$200	\$1,468	\$0	\$27,203	\$67,983	\$0.11
2 - 12 Deoxidize	312,500	\$91	\$1,506	\$2,019	\$0	\$1,088	\$403	\$0	\$140	\$0	\$1,360	\$88	\$735	\$873	\$0	\$13,602	\$36,050	\$0.12
3 - 13 Sulfuric/Hard Anodize	312,500	\$108	\$375	\$2,252	\$0	\$1,088	\$806	\$61,125	\$0	\$67,218	\$1,360	\$116	\$580	\$488	\$0	\$13,602	\$291,870	\$0.93
4 - 14 Black Dye	31,250	\$81	\$341	\$4,566	\$0	\$109	\$3,154	\$0	\$283	\$0	\$136	\$76	\$508	\$51	\$0	\$1,360	\$15,460	\$0.49
5 - 15 Red Dye	18,750	\$81	\$53	\$1,173	\$0	\$65	\$3,154	\$0	\$283	\$0	\$82	\$76	\$508	\$49	\$0	\$816	\$10,591	\$0.56
6 - 16 Gold Dye	12,500	\$80	\$107	\$3,594	\$0	\$44	\$3,154	\$0	\$234	\$0	\$54	\$76	\$508	\$83	\$0	\$544	\$12,409	\$0.99
7 - 17 Anodize Seal	312,500	\$89	\$2,931	\$14,024	\$0	\$1,088	\$7,905	\$0	\$2,117	\$0	\$1,360	\$34	\$237	\$544	\$0	\$13,602	\$67,556	\$0.22
<b>Nickel/Electroless Ni Plate</b>																		
1 - 21 Alkaline Clean	125,000	\$48	\$755	\$3,388	\$0	\$435	\$5,913	\$0	\$362	\$0	\$544	\$44	\$220	\$51	\$0	\$5,441	\$28,918	\$0.23
2 - 22 Acid Etch	125,000	\$69	\$260	\$1,167	\$0	\$435	\$5,913	\$0	\$0	\$0	\$544	\$70	\$351	\$0	\$0	\$5,441	\$25,604	\$0.20
3 - 23 Nickel Strike	56,250	\$206	\$2,005	\$7,998	\$3,587	\$196	\$5,913	\$27	\$0	\$0	\$245	\$204	\$1,018	\$969	\$0	\$2,448	\$33,204	\$0.59
4 - 24 Electroless Nickel	62,500	\$122	\$1,653	\$118,663	\$27,899	\$218	\$14,349	\$0	\$3,089	\$0	\$272	\$12	\$62	\$28	\$17,952	\$2,720	\$207,195	\$3.32
5 - 25 Ni Plate, Sulfamate	62,500	\$296	\$4,103	\$32,732	\$79,710	\$218	\$11,826	\$900	\$2,434	\$0	\$272	\$251	\$1,255	\$3,364	\$0	\$2,720	\$157,961	\$2.53
<b>Hard Chrome Plate</b>																		
1 - 31 Alkaline Clean	62,500	\$49	\$349	\$4,405	\$0	\$218	\$7,687	\$0	\$438	\$0	\$272	\$44	\$218	\$59	\$0	\$2,720	\$27,303	\$0.44
2 - 32 Chrome Etch (C305)	62,500	\$63	\$1,945	\$4,907	\$0	\$218	\$7,687	\$0	\$479	\$0	\$272	\$51	\$427	\$2,605	\$0	\$2,720	\$32,261	\$0.52
3 - 33 Chrome Plate (C407)	62,500	\$171	\$3,679	\$3,271	\$58,438	\$218	\$15,374	\$10,406	\$4,000	\$0	\$272	\$25	\$212	\$1,489	\$0	\$2,720	\$132,776	\$2.12
<b>Cadmium Plate</b>																		
1 - 41 Alkaline Clean (C201)	250,000	\$80	\$1,397	\$3,388	\$0	\$871	\$5,913	\$0	\$362	\$0	\$1,088	\$76	\$379	\$59	\$0	\$10,881	\$41,650	\$0.17
2 - 42 Acid Etch (C301)	250,000	\$168	\$842	\$2,042	\$0	\$871	\$5,913	\$0	\$0	\$0	\$1,088	\$170	\$849	\$295	\$0	\$10,881	\$39,913	\$0.16
3 - 43 Cadmium Plate (C405)	250,000	\$50	\$10,554	\$10,242	\$67,402	\$871	\$11,826	\$649	\$59	\$0	\$1,088	\$43	\$429	\$596	\$0	\$10,881	\$138,104	\$0.55
4 - 44 Chromate (C435*)	250,000	\$75	\$2,692	\$6,530	\$0	\$871	\$5,913	\$0	\$0	\$0	\$1,088	\$76	\$637	\$911	\$0	\$10,881	\$46,469	\$0.19
<b>Chrome Anodize/Chromate</b>																		
1 - 51 Soak Clean/Alkaline Etch	1,250,000	\$311	\$3,750	\$16,157	\$0	\$4,353	\$15,768	\$0	\$1,630	\$0	\$5,441	\$315	\$1,574	\$6,658	\$0	\$54,407	\$182,168	\$0.15
2 - 52 Deoxidize (C324)	625,000	\$256	\$3,013	\$12,979	\$0	\$2,176	\$7,884	\$0	\$500	\$0	\$2,720	\$260	\$2,164	\$3,962	\$0	\$27,203	\$98,705	\$0.16
3 - 53 Cr Anodize/Chromate	625,000	\$102	\$2,308	\$18,850	\$0	\$2,176	\$15,768	\$1,500	\$1,392	\$0	\$2,720	\$87	\$724	\$7,650	\$0	\$27,203	\$126,343	\$0.20

Note 1: Accuracy of all values reported have a maximum of 3 significant figures.

Note 2: 'Per Sq Ft' cost is total annual process cost divided by total annual production square feet. Cost per square foot in this report does not include labor – see Process Sequence Cost Report for labor costs.