

# Raw Material and Energy Powder Surcharges 2023

## USD/LB (applicable at time of shipment)



If an alloy you purchase is not listed, call Carpenter within the U.S. at 800-654-6543. Outside the U.S., call 1-610-208-2000, press 2 for Customer Service.

12/1/2023 Last Modified

### Chrome-based (powder products)

Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech Micro-Melt® NiCr49Nb1	9.04	8.86	8.32	7.31	7.36	6.95	6.60	6.55	6.46	6.18	5.88	5.54
UltraFine® 17Cr-4Ni MA 3X	4.22	4.20	3.96	3.64	3.67	3.52	3.36	3.34	3.27	3.18	3.13	3.09
CarTech UltraFine® 316 MA	9.69	9.99	9.94	8.66	7.78	7.59	7.38	7.34	7.45	7.18	6.61	6.11
CarTech UltraFine® 420 MA	1.95	1.94	1.81	1.74	1.75	1.75	1.65	1.65	1.60	1.57	1.64	1.67

### Cobalt-based (powder products)

CarTech Micro-Melt® 1	10.31	7.96	6.25	6.67	6.07	4.50	5.39	7.52	7.05	5.41	6.32	6.46
CarTech Micro-Melt® 12	10.52	7.87	5.90	6.37	5.63	3.80	4.84	7.25	6.72	4.82	5.85	6.00
CarTech Micro-Melt® 188	12.15	10.22	8.75	8.67	8.24	6.86	7.44	9.11	8.73	7.35	7.90	7.85
CarTech Micro-Melt® 188B	12.15	10.22	8.75	8.67	8.24	6.86	7.44	9.11	8.73	7.35	7.90	7.85
CarTech Micro-Melt® 1B	10.81	8.29	6.44	6.89	6.24	4.55	5.51	7.79	7.29	5.52	6.50	6.65
CarTech Micro-Melt® 21	10.87	8.31	6.33	6.48	5.05	3.05	4.25	6.81	6.35	4.21	5.06	5.03
CarTech Micro-Melt® 50Nb	10.45	8.00	6.07	6.18	5.05	3.16	4.20	6.54	6.07	4.09	4.89	4.88
CarTech Micro-Melt® 6	7.85	5.72	4.07	4.43	3.91	2.41	3.21	5.10	4.59	3.09	3.91	4.03
CarTech Micro-Melt® 6LF	10.34	7.32	5.00	5.54	4.81	2.68	3.85	6.52	5.89	3.73	4.90	5.08
CarTech Micro-Melt® 9810	10.35	7.38	5.10	5.62	4.90	2.80	3.94	6.57	5.95	3.83	4.97	5.14
CarTech Micro-Melt® A4783	10.85	8.38	6.40	6.50	5.96	4.11	4.93	7.02	6.50	4.71	5.48	5.50
CarTech Micro-Melt® BioDur® CCM®	17.50	14.07	12.11	12.35	10.88	8.81	9.98	12.22	11.86	9.64	10.42	10.40
CarTech Micro-Melt® CCM	10.62	8.11	6.19	6.36	4.85	2.89	4.10	6.67	6.22	4.09	4.39	3.84
CarTech Micro-Melt® CCM GADS	10.62	8.11	6.19	6.36	4.85	2.89	4.10	6.67	6.22	5.33	4.39	3.84
CarTech Micro-Melt® CCM PLUS®	10.62	8.11	6.19	6.36	4.85	2.89	4.10	6.67	6.22	5.33	4.39	3.84
CarTech Micro-Melt® F	11.36	9.66	8.31	8.17	7.80	6.56	7.03	8.48	8.14	6.91	7.37	7.31
CarTech Micro-Melt® F75	10.99	8.33	6.30	6.50	4.97	2.90	4.17	6.86	6.38	4.16	5.05	5.05
CarTech Micro-Melt® G155	15.59	14.60	14.10	12.96	8.41	6.95	8.51	11.10	11.32	9.12	8.83	8.03
CarTech Micro-Melt® G185	11.36	8.67	6.59	6.88	6.25	4.32	5.29	7.64	7.09	5.16	6.11	6.19
CarTech Micro-Melt® G190	14.66	14.13	13.95	12.71	8.26	7.13	8.49	10.68	10.98	9.11	8.65	7.84
CarTech Micro-Melt® G195	10.80	8.87	7.14	6.81	6.46	4.86	5.37	6.91	6.49	5.00	5.46	5.33
CarTech Micro-Melt® HS31	11.33	8.65	6.58	6.87	6.24	4.32	5.28	7.63	7.08	5.15	6.10	6.18
CarTech Micro-Melt® Merl72	12.91	10.94	9.22	9.35	8.83	7.19	7.60	9.28	8.67	7.21	7.71	7.55
CarTech Micro-Melt® Mo1	10.80	8.61	7.03	7.28	6.19	4.62	5.60	7.80	7.41	5.69	6.47	6.51
CarTech Micro-Melt® P1316	11.37	8.64	6.51	6.81	6.17	4.21	5.19	7.59	7.03	5.06	6.02	6.11
CarTech Micro-Melt® P1318	11.37	8.64	6.51	6.81	6.17	4.21	5.19	7.59	7.03	5.06	6.02	6.11
CarTech Micro-Melt® P694	12.00	9.76	8.19	8.52	7.93	6.45	7.26	9.31	8.88	7.33	8.15	8.23
CarTech Micro-Melt® R31233	10.55	8.14	6.32	6.38	5.07	3.16	4.28	6.68	6.27	4.26	4.96	4.88
CarTech Micro-Melt® TDCA	10.57	8.71	7.04	6.70	6.37	4.83	5.30	6.79	6.37	4.94	5.38	5.25
CarTech Micro-Melt® WearCorr™	11.03	8.78	7.01	7.01	5.73	3.94	4.95	7.21	6.80	4.90	5.58	5.51

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**Raw Material and Energy Powder Surcharges 2023**  
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Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech UltraFine CCM®	10.62	8.11	6.19	6.36	4.85	2.89	4.10	6.67	6.22	4.09	4.93	4.91
CarTech UltraFine® CCM PLUS®	10.62	8.11	6.19	6.36	4.85	2.89	4.10	6.67	6.22	4.09	4.93	4.91
CarTech UltraFine® CoCr	11.16	8.45	6.38	6.59	5.03	2.93	4.22	6.96	6.48	4.21	5.13	5.12
CarTech UltraFine® F-75HP	11.01	8.37	6.34	6.53	4.99	2.93	4.20	6.89	6.41	4.19	5.08	5.07
CarTech UltraFine® H25	12.13	9.59	7.74	8.04	7.42	5.68	6.60	8.87	8.38	6.60	7.49	7.57
Micro-Melt® Maraging 509B	12.88	10.74	8.85	9.11	8.53	6.75	7.21	9.06	8.37	6.78	7.37	7.23
CarTech Micro-Melt® CTS	9.60	6.54	4.13	4.68	3.94	1.73	2.92	5.62	4.97	2.75	3.95	4.14
Micro-Melt Biodur CCM® LS	10.98	8.26	6.17	6.41	4.92	2.82	4.10	6.82	6.32	5.39	4.42	3.86
Micro-Melt CCM® A764 Mod	11.03	8.29	6.19	6.42	4.93	2.81	4.11	6.84	6.34	4.08	5.02	5.02
CarTech Micro-Melt® CoWCr	11.08	7.55	4.80	5.39	4.48	1.91	3.31	6.44	5.71	3.13	4.45	4.63
CarTech UltraFine® FeCo50	6.58	4.25	2.47	2.95	2.39	0.70	1.63	3.70	3.23	1.54	2.41	2.55
CarTech Micro-Melt® CCM MC	10.72	8.11	6.15	6.39	4.86	2.81	4.08	6.72	6.27	5.32	4.20	3.54
<b>Cobalt/Nickel-based (powder products)</b>												
CarTech UltraFine® MP35N®	13.03	11.91	10.93	9.97	8.33	7.04	7.61	9.01	8.91	7.47	7.25	6.69
<b>Copper-based (powder products)</b>												
CarTech Micro-Melt® C18200	3.87	4.27	4.22	4.17	4.13	3.81	3.87	3.89	3.85	3.79	3.64	3.79
CarTech Micro-Melt® CuNiSiCr	4.67	5.00	4.88	4.68	4.67	4.31	4.31	4.32	4.28	4.18	3.99	4.06
CarTech Micro-Melt® G72	7.88	7.98	7.62	6.86	6.93	6.42	6.23	6.18	6.12	5.90	5.51	5.32
CarTech UltraFine® CuNiSnP	5.24	5.84	5.70	5.34	5.47	5.17	5.29	5.45	5.15	5.06	4.81	4.86
CarTech UltraFine® C621	5.02	5.49	5.35	5.04	5.12	4.80	4.86	4.95	4.76	4.66	4.43	4.48
CarTech UltraFine® Cu15SnP	4.83	5.46	5.36	5.11	5.21	4.92	5.05	5.21	4.93	4.86	4.64	4.74
CarTech UltraFine® Cu-Electr.	3.86	4.25	4.20	4.15	4.12	3.79	3.86	3.88	3.84	3.78	3.63	3.78
CarTech UltraFine® Copper-MIM	3.88	4.28	4.23	4.18	4.14	3.81	3.88	3.90	3.86	3.80	3.65	3.80
UltraFine® C18000	4.07	4.45	4.38	4.29	4.26	3.93	3.98	4.00	3.96	3.88	3.72	3.85
<b>Iron-based (powder products)</b>												
CarTech Micro-Melt® 5506	4.85	5.09	5.13	4.50	3.94	3.88	3.78	3.77	3.85	3.72	3.40	3.15
CarTech Micro-Melt® 654SMO	5.64	6.02	6.25	5.48	4.59	4.56	4.51	4.48	4.60	4.43	3.85	3.42
CarTech Micro-Melt® 904L	5.72	5.94	5.96	5.22	4.70	4.55	4.42	4.37	4.47	4.28	3.78	3.39
CarTech Micro-Melt® BS2766	1.52	1.55	1.59	1.51	1.11	1.04	1.11	1.26	1.29	1.15	1.06	0.97
CarTech Micro-Melt® Fe LC	0.14	0.18	0.19	0.23	0.24	0.24	0.20	0.20	0.21	0.21	0.18	0.19
CarTech Micro-Melt® Fe Powder	0.15	0.19	0.20	0.24	0.25	0.25	0.21	0.21	0.21	0.21	0.19	0.20
CarTech Micro-Melt® LAW 100X	0.15	0.18	0.19	0.23	0.24	0.24	0.20	0.20	0.21	0.21	0.18	0.20
CarTech Micro-Melt® Sanico 28	6.50	6.62	6.53	5.72	5.35	5.13	4.94	4.88	4.94	4.71	4.19	3.77
CarTech Micro-Melt® 28	6.50	6.62	6.53	5.72	5.35	5.13	4.94	4.88	4.94	4.71	4.19	3.77
CarTech Micro-Melt NCORR®	4.12	4.19	4.09	3.64	3.39	3.28	3.15	3.13	3.14	3.03	2.85	2.68
CarTech Micro-Melt® FeCoTa	29.17	31.96	31.57	31.80	31.54	30.76	26.37	23.57	21.30	22.74	19.98	17.69
CarTech Micro-Melt® FeCoCrNi	8.25	6.89	5.64	5.36	5.13	3.99	4.31	5.38	5.07	4.02	4.32	4.22
CarTech Micro-Melt® FeCoTaMo	24.91	26.40	26.12	25.64	23.26	22.24	20.22	19.57	18.33	18.31	16.35	14.53
CarTech Micro-Melt® AFA25	5.62	5.67	5.60	4.98	4.75	4.56	4.48	4.42	4.43	4.27	3.99	3.74
CarTech Micromelt® AFA25	5.62	5.67	5.60	4.98	4.75	4.56	4.48	4.42	4.43	4.27	3.99	3.74

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CarTech Micro-Melt Ferrium® M4	22.16	27.62	32.62	27.65	16.23	17.98	19.27	19.58	21.98	21.47	17.43	14.56
CarTech Micro-Melt® 2507 SDplx	12.69	12.67	12.19	10.52	10.19	9.64	9.23	9.13	9.13	8.74	8.02	7.38
CarTech Micro-Melt® VeKo25Cr	2.84	3.03	3.19	3.07	2.68	2.61	2.57	2.51	2.57	2.48	2.14	1.90
CarTech Micro-Melt® 1.4313	1.37	1.40	1.37	1.27	1.22	1.19	1.12	1.12	1.12	1.09	1.03	1.00
Micro-Melt Aermet-for-tooling®	3.86	3.30	2.79	2.65	2.41	1.89	2.06	2.58	2.47	1.97	2.05	1.98
CarTech Micro-Melt® A-286	5.10	5.10	4.91	4.33	4.27	4.05	3.87	3.83	3.82	3.66	3.40	3.16
<b>Iron/Cobalt-based (powder products)</b>												
CarTech Micro-Melt Hiperco® 50	6.77	4.50	2.77	3.24	2.70	1.00	1.91	3.91	3.45	1.79	2.62	2.74
CarTech UltraFine Hiperco® 50	6.71	4.46	2.75	3.22	2.68	1.00	1.90	3.88	3.42	1.78	2.60	2.72
Micro-Melt Hiperco® 50 HS	7.52	5.22	3.50	4.00	3.43	1.65	2.54	4.52	4.04	2.38	3.16	3.24
<b>Iron/Nickel (powder products)</b>												
CarTech UltraFine® GHS 4	8.30	8.55	8.54	7.42	6.73	6.47	6.29	6.23	6.35	6.10	5.42	4.89
<b>Nickel-based (powder products)</b>												
CarTech IN100	12.69	13.15	13.18	11.35	10.05	9.75	9.51	9.45	9.66	9.28	8.35	7.56
CarTech Micro-Melt® 230	12.68	12.37	11.96	10.87	10.63	10.18	9.95	10.17	10.13	9.75	9.35	8.92
CarTech Micro-Melt® 247LC	15.12	14.81	14.08	12.92	12.90	12.14	11.54	11.58	11.29	10.87	10.27	9.62
CarTech Micro-Melt®247LC Mod 1	15.19	14.88	14.16	13.00	12.99	12.22	11.61	11.63	11.35	10.92	10.27	9.58
CarTech Micro-Melt® 282	13.09	12.93	12.49	10.92	9.84	9.15	9.10	9.48	9.53	8.82	8.17	7.48
CarTech Micro-Melt® 50/50	9.54	9.33	8.75	7.66	7.80	7.34	6.96	6.87	6.77	6.48	6.15	5.79
CarTech Micro-Melt® 600	12.20	11.92	11.19	9.65	9.86	9.18	8.70	8.57	8.47	8.07	7.48	6.92
CarTech Micro-Melt® 622	13.53	14.15	14.38	12.45	10.83	10.61	10.43	10.39	10.69	10.32	9.27	8.41
CarTech Micro-Melt® 622 AWS	13.61	14.23	14.45	12.52	10.89	10.68	10.49	10.46	10.74	10.38	9.33	8.47
CarTech Micro-Melt® 625	11.54	11.89	11.97	10.42	9.35	9.06	8.95	8.86	8.94	8.59	7.83	7.18
CarTech Micro-Melt® 625+W	12.93	13.21	13.15	11.41	10.47	10.07	9.89	9.77	9.91	9.50	8.68	7.95
CarTech Micro-Melt® 625AM	13.84	14.17	14.13	12.25	11.19	10.76	10.58	10.45	10.61	10.18	9.27	8.47
CarTech Micro-Melt® 625Ar	13.84	14.17	14.13	12.25	11.19	10.76	10.58	10.45	10.61	10.18	9.27	8.47
CarTech Micro-Melt® 625LF	13.79	14.12	14.08	12.20	11.14	10.72	10.53	10.41	10.57	10.14	9.23	8.44
CarTech Micro-Melt® 625M	13.88	14.20	14.18	12.33	11.29	10.86	10.72	10.58	10.73	10.29	9.40	8.62
CarTech Micro-Melt® 713C	12.96	12.99	12.56	10.80	10.40	9.84	9.44	9.33	9.36	8.95	8.16	7.45
CarTech Micro-Melt® 718	10.45	10.45	10.22	8.97	8.69	8.26	8.11	7.97	7.98	7.63	7.12	6.62
CarTech Micro-Melt® 80/20	12.80	12.50	11.73	10.13	10.35	9.64	9.13	9.00	8.89	8.48	7.87	7.28
CarTech Micro-Melt® 825	9.03	9.06	8.77	7.63	7.39	7.00	6.71	6.62	6.65	6.34	5.72	5.19
CarTech Micro-Melt® A4777	12.99	12.68	11.91	10.25	10.47	9.72	9.20	9.06	8.96	8.53	7.86	7.24
CarTech Micro-Melt® A4778	14.22	13.87	13.03	11.19	11.44	10.60	10.03	9.88	9.77	9.30	8.54	7.84
CarTech Micro-Melt® A4779	14.51	14.16	13.30	11.41	11.67	10.82	10.24	10.08	9.97	9.49	8.72	8.00
CarTech Micro-Melt® A4782	11.72	11.43	10.72	9.27	9.45	8.81	8.33	8.20	8.09	7.72	7.16	6.63
CarTech Micro-Melt® B27	14.61	14.26	13.40	11.50	11.75	10.90	10.32	10.15	10.05	9.56	8.78	8.06
CarTech Micro-Melt® B40	13.12	12.81	12.03	10.35	10.58	9.83	9.30	9.16	9.06	8.63	7.96	7.34
CarTech Micro-Melt® B56	12.21	11.92	11.19	9.65	9.86	9.17	8.68	8.55	8.45	8.05	7.45	6.88
CarTech Micro-Melt® B60+	11.87	11.59	10.88	9.39	9.58	8.92	8.44	8.32	8.22	7.83	7.25	6.70

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CarTech Micro-Melt® C-276	14.53	15.34	15.76	13.63	11.60	11.43	11.29	11.27	11.65	11.27	10.04	9.07
CarTech Micro-Melt® C-901	13.19	13.74	13.84	11.88	10.42	10.12	9.90	9.84	10.09	9.70	8.65	7.80
CarTech Micro-Melt® G142	12.07	11.77	11.05	9.54	9.74	9.06	8.57	8.44	8.34	7.94	7.37	6.81
CarTech Micro-Melt® G173	14.20	13.83	12.88	11.64	11.71	10.78	10.12	10.09	9.73	9.25	8.63	7.96
CarTech Micro-Melt® G183	12.90	12.50	11.86	10.51	10.09	9.37	9.22	9.56	9.52	8.86	8.38	7.80
CarTech Micro-Melt® G186	12.60	11.96	11.11	9.81	9.29	8.35	8.32	8.86	8.76	7.91	7.53	6.99
CarTech Micro-Melt® G192	11.39	11.14	10.46	9.05	9.23	8.62	8.16	8.04	7.94	7.58	7.05	6.54
CarTech Micro-Melt® G202	10.43	10.43	10.20	8.95	8.68	8.25	8.10	7.96	7.96	7.62	7.10	6.61
CarTech Micro-Melt® G207	13.01	12.70	11.93	10.28	10.50	9.78	9.26	9.12	9.02	8.59	7.96	7.35
CarTech Micro-Melt® G81	11.72	11.43	10.72	9.27	9.45	8.81	8.33	8.20	8.09	7.72	7.16	6.63
CarTech Micro-Melt® GHS-4	8.42	8.67	8.64	7.50	6.79	6.54	6.35	6.30	6.42	6.17	5.56	5.06
CarTech Micro-Melt® HX	10.44	10.85	10.91	9.42	8.32	8.10	7.91	7.86	8.04	7.75	6.97	6.32
CarTech Micro-Melt® HyMu 800	13.62	13.66	13.23	11.34	10.87	10.26	9.84	9.72	9.78	9.34	8.44	7.66
CarTech Micro-Melt® IN738	13.15	12.77	12.00	10.79	10.69	9.91	9.50	9.64	9.43	8.89	8.39	7.80
CarTech Micro-Melt® MAR-M-247	15.43	15.13	14.40	13.26	13.20	12.43	11.82	11.86	11.56	11.14	10.53	9.86
CarTech Micro-Melt® N5A	11.19	10.29	9.20	8.20	8.18	7.18	7.09	7.62	7.39	6.60	6.45	6.08
CarTech Micro-Melt® N5A/N5B	11.05	10.14	9.06	8.08	8.06	7.06	6.98	7.50	7.28	6.48	6.34	5.98
CarTech Micro-Melt® N5B	10.71	9.80	8.74	7.81	7.77	6.79	6.72	7.25	7.02	6.24	6.11	5.77
CarTech Micro-Melt® NFM 24	11.92	11.05	10.02	8.91	8.57	7.54	7.52	8.14	7.96	7.08	6.83	6.39
CarTech Micro-Melt® NiCoCrMo	12.75	12.08	11.22	9.95	9.28	8.32	8.36	8.99	8.89	7.99	7.63	7.08
CarTech Micro-Melt® NiCrMoAl	13.17	13.24	12.85	11.04	10.53	9.97	9.57	9.46	9.52	9.10	8.26	7.53
CarTech Micro-Melt® NiCrMoB	14.82	15.46	15.61	13.38	11.66	11.32	11.08	11.01	11.32	10.87	9.65	8.66
CarTech Micro-Melt® TDCA/TDCB	10.43	8.76	7.21	6.79	6.51	5.08	5.46	6.75	6.38	5.08	5.41	5.25
CarTech Micro-Melt® TDCB	10.18	8.87	7.58	6.97	6.79	5.60	5.77	6.71	6.40	5.36	5.50	5.27
CarTech UltraFine® 713C	12.93	12.96	12.53	10.78	10.37	9.81	9.41	9.30	9.34	8.93	8.14	7.43
CarTech UltraFine® 718	10.45	10.45	10.22	8.97	8.69	8.27	8.12	7.97	7.98	7.64	7.12	6.63
CarTech UltraFine® Alloy X	10.84	11.17	11.15	9.64	8.53	8.24	8.06	8.08	8.24	7.89	7.12	6.46
CarTech UltraFine® HX	10.96	11.29	11.27	9.76	8.65	8.35	8.18	8.20	8.36	8.00	7.23	6.58
CarTech UltraFine® K500	14.79	14.56	14.66	13.37	13.41	12.70	13.24	12.76	12.69	12.09	11.73	11.23
CarTech UltraFine® NiCoCrAlY	10.44	9.16	7.91	7.16	7.03	5.83	5.97	6.84	6.57	5.55	5.57	5.27
CarTech Micro-Melt® BRB	12.65	11.94	10.92	9.57	9.65	8.70	8.42	8.69	8.51	7.82	7.43	6.93
CarTech Micro-Melt® G204	13.07	12.76	11.98	10.31	10.53	9.78	9.26	9.12	9.01	8.58	7.91	7.28
CarTech Micro-Melt® Waspaloy	12.63	12.06	11.25	9.93	9.41	8.53	8.47	8.94	8.85	8.05	7.65	7.10
CarTech Micro-Melt® A914	13.87	12.65	11.27	9.99	9.96	8.63	8.56	9.26	8.98	7.93	7.69	7.18
CarTech Micro-Melt® 5 Fe	11.79	9.79	7.99	7.51	7.18	5.47	5.96	7.51	7.08	5.54	5.91	5.70
CarTech Micro-Melt® 725	12.96	13.18	13.07	11.35	10.56	10.12	9.93	9.81	9.92	9.51	8.70	7.98
CarTech UltraFine® 625	13.84	14.17	14.13	12.25	11.19	10.76	10.58	10.45	10.61	10.18	9.27	8.47
CarTech UltraFine® Fe-50Ni	7.75	7.59	7.14	6.16	6.30	5.85	5.53	5.45	5.39	5.14	4.72	4.34
CarTech Micro-Melt® L1	13.49	13.77	13.75	12.03	11.08	10.71	10.54	10.44	10.58	10.19	9.36	8.64
CarTech Micro-Melt® Ni-24.5Cr	15.36	15.00	14.09	12.09	12.36	11.47	10.86	10.69	10.58	10.07	9.25	8.49

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**Raw Material and Energy Powder Surcharges 2023**  
**USD/LB (applicable at time of shipment)**



Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech Micro-Melt® HX-1LC	10.94	11.25	11.22	9.73	8.62	8.31	8.15	8.19	8.35	7.98	7.23	6.58
CarTech Micro-Melt® R95	13.37	13.00	12.44	11.05	10.67	9.94	9.85	10.07	10.02	9.38	8.89	8.32
CarTech Micro-Melt® R125-1	15.27	15.09	14.41	13.21	13.00	12.25	11.63	11.63	11.34	10.92	10.24	9.51
CarTech Micro-Melt® C263	12.85	12.11	11.23	10.00	9.16	8.15	8.27	9.02	8.93	7.94	7.62	7.09
CarTech Micro-Melt® 718 AM	10.42	10.42	10.19	8.93	8.65	8.23	8.07	7.93	7.94	7.60	7.07	6.58
CarTech Micro-Melt® 690	10.41	10.18	9.55	8.30	8.46	7.92	7.50	7.39	7.30	6.97	6.52	6.08
CarTech Micro-Melt® 82	12.64	12.36	11.68	10.16	10.34	9.65	9.25	9.09	8.98	8.57	8.01	7.44
Micro-Melt® STAL18SILAY	14.87	14.89	14.20	12.90	12.90	12.19	11.33	11.02	10.67	10.42	9.63	8.87
CarTech Micro-Melt® 738 LC	13.54	13.21	12.48	11.21	11.08	10.32	9.91	10.01	9.81	9.28	8.75	8.13
CarTech Micro-Melt® 263	13.44	12.72	11.85	10.66	10.13	9.18	9.31	10.10	10.02	8.95	8.68	8.09
CarTech Micro-Melt® HX LC	10.96	11.29	11.27	9.76	8.65	8.35	8.18	8.20	8.36	8.00	7.23	6.58
CarTech Micro-Melt® HX-4	10.90	11.21	11.18	9.69	8.61	8.31	8.14	8.15	8.31	7.95	7.20	6.55
CarTech Micro-Melt® R77	12.71	12.07	11.21	9.91	9.38	8.45	8.41	8.95	8.85	8.00	7.62	7.07
CarTech Micro-Melt® 109 Mod	12.36	11.41	10.28	9.44	9.41	8.35	8.25	8.84	8.52	7.67	7.56	7.16
CarTech Micro-Melt® Ni60H	11.95	11.67	10.95	9.45	9.65	8.98	8.50	8.37	8.27	7.88	7.30	6.75
CarTech Micro-Melt® 625F-1	13.28	13.62	13.61	11.81	10.74	10.35	10.18	10.07	10.23	9.82	8.93	8.17
CarTech Micro-Melt® 792	15.01	14.90	14.21	12.98	12.84	12.09	11.40	11.31	11.00	10.61	9.88	9.14
CarTech Micro-Melt® NiCrAlY	11.11	10.87	10.21	8.83	9.01	8.41	7.96	7.85	7.75	7.39	6.88	6.38
CarTech Micro-Melt® 720	12.33	11.62	10.74	9.58	9.23	8.32	8.29	8.84	8.71	7.89	7.60	7.12
CarTech UltraFine® Ni20Cr	13.10	12.80	12.01	10.37	10.59	9.87	9.34	9.21	9.10	8.68	8.05	7.45
CarTech UltraFine® NiCrMo	8.86	9.06	8.97	7.79	6.99	6.71	6.55	6.58	6.68	6.37	5.79	5.29
CarTech UltraFine® 90	12.16	11.10	9.87	8.84	8.83	7.71	7.66	8.31	8.06	7.13	7.00	6.61
CarTech UltraFine® M400	11.63	11.51	10.88	9.50	9.67	8.96	8.57	8.46	8.37	8.00	7.40	6.93
CarTech UltraFine® R77	12.66	12.02	11.17	9.87	9.35	8.41	8.38	8.92	8.82	7.97	7.59	7.05
UltraFine® Maraging 247	15.05	14.71	13.98	12.85	12.79	12.03	11.48	11.56	11.28	10.84	10.27	9.64
CarTech UltraFine® HyMu 800	13.62	13.66	13.23	11.34	10.87	10.26	9.84	9.72	9.78	9.34	8.44	7.67
CarTech Micro-Melt® 75	12.73	12.44	11.70	10.13	10.37	9.65	9.13	8.99	8.89	8.45	7.74	7.08
<b>Tool Steel (powder products)</b>												
<b>Alloy Description</b>												
CarTech Micro-Melt Custom 470®	2.42	2.47	2.42	2.18	2.12	2.04	1.94	1.92	1.93	1.85	1.66	1.51
CarTech Micro-Melt® 100	2.76	2.96	3.10	2.81	2.40	2.41	2.36	2.35	2.41	2.32	2.01	1.80
CarTech Micro-Melt® 100Cr6	0.19	0.22	0.23	0.27	0.28	0.28	0.24	0.24	0.24	0.24	0.21	0.22
CarTech Micro-Melt® 1045	0.15	0.18	0.19	0.23	0.24	0.24	0.21	0.21	0.21	0.21	0.18	0.20
CarTech Micro-Melt® 15Cr-5Ni	1.44	1.45	1.39	1.31	1.32	1.27	1.20	1.19	1.17	1.14	1.11	1.10
CarTech Micro-Melt® 16MnCr5	0.18	0.21	0.22	0.25	0.27	0.27	0.23	0.23	0.23	0.23	0.20	0.21
CarTech Micro-Melt® 17Cr-4Ni	1.34	1.37	1.32	1.27	1.30	1.24	1.17	1.15	1.14	1.09	0.98	0.92
CarTech Micro-Melt® 20-4	1.74	1.79	1.84	1.85	1.73	1.64	1.60	1.58	1.56	1.51	1.34	1.23
CarTech Micro-Melt®2205 Duplex	2.37	2.56	2.70	2.44	2.03	2.04	2.01	2.00	2.05	1.97	1.69	1.50
CarTech Micro-Melt®2505 SDplx	2.49	2.68	2.78	2.53	2.18	2.17	2.13	2.11	2.15	2.07	1.78	1.59
CarTech Micro-Melt® 2205M	2.41	2.61	2.74	2.48	2.08	2.08	2.05	2.03	2.09	2.01	1.72	1.52

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**USD/LB (applicable at time of shipment)**



Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech Micro-Melt® 23	3.08	3.39	3.75	1.76	1.48	1.50	1.49	1.50	1.54	1.54	1.40	1.32
CarTech Micro-Melt® 2357	3.07	3.22	3.26	2.90	2.60	2.54	2.45	2.43	2.48	2.38	2.08	1.87
CarTech Micro-Melt® 23S	3.07	3.38	3.74	3.53	2.86	2.94	2.98	3.01	3.11	3.09	2.80	2.62
CarTech Micro-Melt® 25-10-10	4.39	5.03	5.59	4.98	3.57	3.78	3.88	3.93	4.19	4.13	3.68	3.35
CarTech Micro-Melt® 253	2.08	2.06	1.98	1.83	1.88	1.79	1.69	1.65	1.62	1.54	1.39	1.28
CarTech Micro-Melt® 254SMO	4.69	5.02	5.22	4.59	3.85	3.82	3.77	3.75	3.85	3.71	3.22	2.87
CarTech Micro-Melt® 25-7-4	2.94	3.20	3.37	3.01	2.49	2.50	2.46	2.45	2.55	2.45	2.09	1.84
CarTech Micro-Melt® 2739	4.06	3.93	3.97	3.99	3.62	3.45	3.54	3.80	3.77	3.59	3.51	3.41
CarTech Micro-Melt® 2888	3.28	2.96	2.79	2.81	2.42	2.17	2.35	2.80	2.78	2.44	2.47	2.41
CarTech Micro-Melt® 2906	2.57	2.71	2.77	2.52	2.26	2.23	2.16	2.13	2.18	2.09	1.80	1.60
CarTech Micro-Melt® 30	3.82	3.85	4.00	3.84	3.11	3.00	3.14	3.41	3.45	3.24	3.06	2.89
CarTech Micro-Melt® 304	2.02	2.00	1.92	1.77	1.82	1.73	1.63	1.60	1.57	1.50	1.35	1.25
CarTech Micro-Melt® 304B4	2.92	2.88	2.71	2.43	2.47	2.34	2.21	2.18	2.15	2.07	1.97	1.88
CarTech Micro-Melt® 304B6	2.91	2.87	2.70	2.42	2.46	2.34	2.20	2.18	2.14	2.07	1.97	1.88
CarTech Micro-Melt® 304B7	2.94	2.90	2.74	2.46	2.49	2.37	2.23	2.20	2.17	2.09	1.99	1.91
CarTech Micro-Melt® 304L	2.29	2.27	2.14	1.94	1.97	1.88	1.77	1.75	1.72	1.66	1.60	1.54
CarTech Micro-Melt® 308L Mod	2.24	2.22	2.12	1.94	2.00	1.90	1.78	1.74	1.73	1.64	1.47	1.35
CarTech Micro-Melt® 309L	3.11	3.11	2.97	2.66	2.62	2.51	2.38	2.36	2.34	2.26	2.15	2.05
CarTech Micro-Melt® 30LS	4.40	4.33	4.41	4.26	3.46	3.27	3.47	3.85	3.92	3.62	3.47	3.29
CarTech Micro-Melt® 30Nb	4.35	4.25	4.30	4.17	3.42	3.20	3.40	3.79	3.85	3.54	3.41	3.25
CarTech Micro-Melt® 312	2.38	2.35	2.25	2.09	2.15	2.05	1.92	1.89	1.86	1.77	1.57	1.43
CarTech Micro-Melt® 316L	2.56	2.67	2.71	2.43	2.20	2.15	2.08	2.06	2.08	2.00	1.76	1.59
CarTech Micro-Melt® 316L AWS	2.76	2.89	2.91	2.60	2.35	2.30	2.22	2.19	2.24	2.15	1.88	1.69
CarTech Micro-Melt® 316L+S	2.76	2.89	2.91	2.60	2.35	2.30	2.22	2.19	2.24	2.15	1.88	1.69
CarTech Micro-Melt® 316LHSi	3.37	3.51	3.52	3.11	2.77	2.72	2.63	2.62	2.66	2.58	2.36	2.19
CarTech Micro-Melt® 316LN	3.32	3.45	3.45	3.05	2.74	2.68	2.59	2.58	2.62	2.53	2.32	2.16
CarTech Micro-Melt® 316Lx1.5	3.89	4.06	4.09	3.63	3.27	3.19	3.09	3.06	3.12	2.99	2.62	2.34
CarTech Micro-Melt® 347H	2.27	2.25	2.14	1.96	2.01	1.91	1.79	1.75	1.74	1.65	1.49	1.36
CarTech Micro-Melt® 410	0.37	0.39	0.40	0.42	0.37	0.34	0.31	0.30	0.30	0.30	0.27	0.27
CarTech Micro-Melt® 410L	0.60	0.62	0.60	0.61	0.62	0.62	0.57	0.57	0.56	0.55	0.55	0.57
CarTech Micro-Melt® 4112	0.91	1.00	1.06	1.03	0.90	0.91	0.88	0.87	0.89	0.86	0.72	0.65
CarTech Micro-Melt® 4130	0.28	0.35	0.39	0.39	0.34	0.35	0.32	0.32	0.34	0.33	0.29	0.28
CarTech Micro-Melt® 4140	0.19	0.23	0.24	0.27	0.28	0.27	0.24	0.24	0.24	0.24	0.21	0.23
CarTech Micro-Melt® 416R	0.64	0.68	0.69	0.70	0.69	0.68	0.63	0.62	0.62	0.60	0.52	0.48
CarTech Micro-Melt® 420	0.64	0.66	0.63	0.64	0.65	0.65	0.60	0.60	0.58	0.58	0.58	0.59
CarTech Micro-Melt® 420 LCM	0.66	0.68	0.65	0.66	0.66	0.66	0.61	0.61	0.59	0.58	0.59	0.60
CarTech Micro-Melt® 420-CW	2.23	2.26	2.32	2.37	2.24	2.06	2.00	1.94	1.91	1.86	1.67	1.54
CarTech Micro-Melt® 420LC	0.64	0.66	0.63	0.64	0.65	0.65	0.60	0.60	0.58	0.58	0.58	0.59
CarTech Micro-Melt® 422	1.19	1.27	1.31	1.25	1.13	1.16	1.12	1.13	1.14	1.13	1.08	1.06
CarTech Micro-Melt® 431	1.05	1.06	1.01	0.97	0.99	0.96	0.90	0.89	0.87	0.85	0.84	0.85

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CarTech Micro-Melt® 4340	0.45	0.47	0.47	0.46	0.48	0.46	0.42	0.41	0.41	0.40	0.36	0.36
CarTech Micro-Melt® 4370	2.12	2.10	1.99	1.82	1.82	1.73	1.63	1.61	1.58	1.53	1.48	1.43
CarTech Micro-Melt® 440	1.81	1.83	1.87	1.90	1.84	1.71	1.65	1.60	1.59	1.54	1.38	1.27
CarTech Micro-Melt® 440C	0.91	0.97	0.96	0.93	0.86	0.87	0.83	0.83	0.83	0.82	0.79	0.79
CarTech Micro-Melt® 440-XH	1.12	1.20	1.21	1.15	1.04	1.04	1.00	1.00	1.00	0.99	0.94	0.92
CarTech Micro-Melt® 4848	4.23	4.15	3.90	3.47	3.52	3.33	3.15	3.11	3.06	2.94	2.80	2.66
CarTech Micro-Melt® 53	3.07	3.24	3.48	3.41	2.98	2.90	2.89	2.87	2.90	2.87	2.62	2.45
CarTech Micro-Melt® 5499	0.98	1.15	1.30	1.20	0.90	0.93	0.92	0.92	0.99	0.96	0.81	0.72
CarTech Micro-Melt® 60	5.11	5.17	5.39	5.16	4.15	3.95	4.14	4.46	4.51	4.24	3.96	3.69
CarTech Micro-Melt® 6126Ni-free	1.70	1.90	2.04	1.85	1.41	1.45	1.45	1.45	1.51	1.48	1.35	1.25
CarTech Micro-Melt® 7339	0.33	0.40	0.44	0.44	0.38	0.39	0.36	0.36	0.38	0.37	0.32	0.31
CarTech Micro-Melt® 736A	1.90	1.92	1.85	1.70	1.66	1.62	1.53	1.52	1.50	1.46	1.42	1.39
CarTech Micro-Melt® 80	6.91	6.47	6.35	6.29	5.38	4.90	5.24	5.94	5.95	5.40	5.35	5.16
CarTech Micro-Melt® 800	3.40	3.32	3.33	3.41	3.36	3.03	2.95	2.84	2.79	2.74	2.58	2.45
CarTech Micro-Melt® 9038	1.79	1.98	2.18	2.07	1.68	1.69	1.69	1.68	1.74	1.72	1.52	1.40
CarTech Micro-Melt® 9040	2.90	3.27	3.65	3.38	2.60	2.65	2.69	2.70	2.82	2.78	2.44	2.21
CarTech Micro-Melt® 9055	3.84	3.89	4.06	3.88	3.12	3.01	3.16	3.42	3.47	3.26	3.07	2.89
CarTech Micro-Melt® 9078	2.53	2.66	2.83	2.76	2.36	2.23	2.21	2.18	2.21	2.15	1.90	1.73
CarTech Micro-Melt® 9098	1.61	1.68	1.73	1.74	1.61	1.53	1.48	1.45	1.44	1.39	1.22	1.11
CarTech Micro-Melt® 9655	3.95	4.26	4.46	3.94	3.28	3.27	3.22	3.20	3.33	3.20	2.75	2.42
CarTech Micro-Melt® 9659	4.17	4.45	4.58	4.04	3.39	3.38	3.33	3.32	3.42	3.32	3.03	2.79
CarTech Micro-Melt® 9660	4.17	4.45	4.58	4.04	3.39	3.38	3.33	3.32	3.42	3.32	3.03	2.79
CarTech Micro-Melt® A11	2.21	2.27	2.36	2.40	2.22	2.03	1.99	1.93	1.91	1.87	1.68	1.55
CarTech Micro-Melt® A11HC	3.32	3.59	3.90	3.73	3.06	2.93	2.93	2.88	2.95	2.88	2.52	2.26
CarTech Micro-Melt® A11LVC	2.15	2.22	2.31	2.34	2.15	1.98	1.93	1.88	1.87	1.82	1.64	1.51
CarTech Micro-Melt® A11-VP	2.34	2.40	2.50	2.51	2.32	2.13	2.09	2.03	2.04	1.99	1.79	1.66
CarTech Micro-Melt® Aermet®100	3.98	3.41	2.90	2.75	2.48	1.95	2.12	2.66	2.56	2.04	2.11	2.03
CarTech Micro-Melt® AISI8740	0.32	0.36	0.38	0.39	0.37	0.37	0.33	0.33	0.34	0.34	0.30	0.30
CarTech Micro-Melt® AM400Plus	2.36	2.44	2.41	2.15	1.99	1.94	1.86	1.84	1.86	1.80	1.66	1.56
CarTech Micro-Melt® APM 2370	2.57	2.79	2.92	2.63	2.21	2.21	2.17	2.16	2.24	2.15	1.84	1.62
CarTech Micro-Melt® CD#1	1.07	1.17	1.24	1.18	1.01	1.00	0.97	0.96	0.98	0.95	0.82	0.75
CarTech Micro-Melt® D2	0.88	0.93	0.95	0.96	0.87	0.84	0.81	0.82	0.83	0.78	0.69	0.64
CarTech Micro-Melt® D7	1.42	1.49	1.56	1.56	1.43	1.36	1.31	1.28	1.28	1.24	1.09	1.00
CarTech Micro-Melt® Duplex 22	2.35	2.54	2.66	2.40	2.03	2.03	1.99	1.97	2.04	1.97	1.68	1.49
CarTech Micro-Melt® F22	0.56	0.65	0.71	0.68	0.55	0.56	0.54	0.54	0.57	0.56	0.49	0.46
CarTech Micro-Melt® FeSi	0.24	0.26	0.27	0.30	0.31	0.30	0.25	0.24	0.24	0.24	0.21	0.21
CarTech Micro-Melt® FeSi 600	0.24	0.26	0.27	0.30	0.31	0.30	0.25	0.24	0.24	0.24	0.21	0.21
CarTech Micro-Melt® Grade 92	0.84	0.90	0.95	0.97	0.92	0.94	0.90	0.91	0.92	0.91	0.84	0.81
CarTech Micro-Melt® H13	1.01	1.12	1.19	1.15	0.97	0.96	0.93	0.93	0.94	0.93	0.83	0.78
CarTech Micro-Melt® H163	3.18	3.47	3.82	3.62	2.97	3.03	3.05	3.07	3.17	3.15	2.85	2.66

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**Raw Material and Energy Powder Surcharges 2023**  
**USD/LB (applicable at time of shipment)**



Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech Micro-Melt® HS-30	3.77	3.80	3.95	3.79	3.06	2.94	3.09	3.36	3.40	3.19	3.01	2.84
CarTech Micro-Melt® M300	6.00	5.84	5.64	5.11	4.42	4.04	4.16	4.53	4.57	4.14	3.91	3.64
CarTech Micro-Melt® M4	3.08	3.37	3.71	3.52	2.89	2.94	2.96	2.98	3.07	3.05	2.77	2.58
CarTech Micro-Melt® M4 HCS	3.35	3.69	4.06	3.82	3.11	3.19	3.22	3.24	3.39	3.37	3.08	2.89
CarTech Micro-Melt® M42	3.71	4.03	4.39	3.95	2.67	2.65	2.86	3.12	3.28	3.04	2.67	2.38
CarTech Micro-Melt® M48	4.51	4.53	4.71	4.55	3.79	3.70	3.85	4.16	4.20	3.99	3.81	3.64
CarTech Micro-Melt® M48 LS	4.54	4.57	4.76	4.60	3.82	3.73	3.88	4.19	4.23	4.02	3.84	3.66
CarTech Micro-Melt® Maxamet®	4.41	4.07	3.98	4.15	4.02	3.76	3.84	4.16	4.06	3.85	3.88	3.84
CarTech Micro-Melt® MV 11K	1.72	1.78	1.84	1.83	1.71	1.64	1.58	1.54	1.54	1.48	1.29	1.17
CarTech Micro-Melt® NOREM 02	0.96	1.02	1.04	0.93	0.83	0.81	0.78	0.77	0.80	0.77	0.68	0.63
CarTech Micro-Melt® O6	0.16	0.19	0.20	0.24	0.25	0.25	0.21	0.21	0.21	0.21	0.19	0.20
CarTech Micro-Melt® P-28	4.17	4.45	4.58	4.03	3.38	3.38	3.32	3.32	3.42	3.32	3.02	2.79
CarTech Micro-Melt® PD#1	1.32	1.43	1.54	1.50	1.30	1.29	1.26	1.26	1.28	1.25	1.11	1.03
CarTech Micro-Melt® PD#5	1.78	1.87	1.97	1.94	1.75	1.71	1.68	1.67	1.69	1.68	1.57	1.50
CarTech Micro-Melt® SA508	0.41	0.47	0.50	0.49	0.44	0.44	0.41	0.41	0.42	0.42	0.36	0.35
Micro-Melt® Sanicro 15-5PH	1.31	1.33	1.29	1.23	1.26	1.21	1.13	1.11	1.11	1.06	0.95	0.89
CarTech Micro-Melt® 15-5PH	1.31	1.33	1.29	1.23	1.26	1.21	1.13	1.11	1.11	1.06	0.95	0.89
CarTech Micro-Melt® T15	3.68	3.52	3.54	3.67	3.58	3.46	3.48	3.66	3.60	3.51	3.49	3.45
CarTech Micro-Melt® T15 Plus	4.11	3.96	4.00	4.04	3.68	3.51	3.59	3.86	3.82	3.64	3.57	3.47
CarTech Micro-Melt® TD#1	1.46	1.63	1.80	1.69	1.34	1.38	1.38	1.41	1.46	1.44	1.27	1.18
CarTech Micro-Melt® TF1	1.49	1.59	1.69	1.58	1.18	1.14	1.18	1.26	1.31	1.21	1.06	0.95
CarTech Micro-Melt® TF6	6.14	6.23	6.56	6.46	5.73	5.70	5.80	6.04	6.08	5.97	5.74	5.54
CarTech Micro-Melt® TMM	1.24	1.37	1.47	1.37	1.14	1.13	1.11	1.10	1.15	1.11	0.95	0.86
CarTech Micro-Melt® VA176	2.81	2.87	2.94	2.92	2.72	2.51	2.46	2.39	2.39	2.34	2.18	2.05
CarTech Micro-Melt® W4841Nb	3.90	3.83	3.63	3.26	3.34	3.14	2.96	2.90	2.87	2.73	2.46	2.25
CarTech Micro-Melt® X245	2.29	2.35	2.44	2.48	2.29	2.10	2.05	1.99	1.97	1.93	1.74	1.60
Micro-Melt® X4CrNiMo 16-5-1	1.27	1.28	1.23	1.17	1.21	1.16	1.08	1.07	1.04	1.00	0.89	0.83
CarTech UltraFine® 1.2709	5.42	5.26	5.06	4.51	3.82	3.45	3.56	3.93	3.96	3.52	3.29	3.01
CarTech UltraFine® 1.4435	4.28	4.51	4.57	4.03	3.48	3.44	3.37	3.36	3.44	3.33	3.04	2.81
CarTech UltraFine® 17Cr-4Ni	1.49	1.51	1.44	1.36	1.37	1.32	1.25	1.24	1.22	1.19	1.16	1.15
CarTech UltraFine® 304L	1.94	1.92	1.84	1.71	1.75	1.67	1.57	1.54	1.51	1.44	1.30	1.20
CarTech UltraFine® 316L	2.77	2.89	2.92	2.61	2.36	2.30	2.22	2.20	2.24	2.15	1.88	1.69
CarTech UltraFine® 410L	0.49	0.51	0.51	0.55	0.57	0.56	0.51	0.50	0.50	0.48	0.41	0.39
CarTech UltraFine® 430L	0.76	0.78	0.74	0.74	0.75	0.75	0.70	0.70	0.68	0.67	0.68	0.70
CarTech UltraFine® 4340	0.45	0.47	0.47	0.46	0.48	0.47	0.42	0.41	0.41	0.40	0.36	0.36
CarTech UltraFine® 4340 MA 3X	0.45	0.47	0.47	0.46	0.48	0.47	0.42	0.42	0.41	0.40	0.36	0.36
CarTech UltraFine® 440C+1.5Nb	1.00	1.02	1.01	1.02	1.02	1.01	1.00	0.98	0.97	0.94	0.96	0.98
CarTech UltraFine® D2	0.82	0.87	0.90	0.90	0.82	0.80	0.77	0.77	0.77	0.73	0.64	0.59
CarTech UltraFine® Fe14MnC	0.23	0.23	0.23	0.26	0.27	0.27	0.23	0.23	0.24	0.24	0.22	0.23
UltraFine® Fe17Cr11Mn3Mo	1.69	1.89	2.04	1.84	1.40	1.46	1.46	1.47	1.55	1.52	1.37	1.28

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CarTech UltraFine® FeCrMnMo	1.69	1.89	2.04	1.84	1.40	1.46	1.46	1.47	1.55	1.52	1.37	1.28
CarTech UltraFine® Fe-30Cr	1.23	1.24	1.16	1.14	1.15	1.15	1.07	1.07	1.04	1.03	1.06	1.08
CarTech UltraFine® Fe30Ni	4.71	4.63	4.36	3.79	3.88	3.61	3.40	3.35	3.32	3.16	2.90	2.68
CarTech UltraFine® Fe8Ni	1.36	1.37	1.30	1.18	1.21	1.14	1.06	1.04	1.04	1.00	0.91	0.86
CarTech UltraFine® FeCrAlY	0.79	0.82	0.81	0.83	0.86	0.84	0.78	0.76	0.75	0.72	0.62	0.57
CarTech UltraFine® FeSiAl	0.35	0.36	0.37	0.39	0.39	0.37	0.31	0.29	0.28	0.30	0.26	0.25
CarTech UltraFine® H13	0.83	0.95	1.04	1.00	0.82	0.82	0.80	0.79	0.83	0.81	0.69	0.63
CarTech UltraFine® M2	2.84	3.15	3.50	3.28	2.62	2.71	2.74	2.78	2.88	2.87	2.61	2.44
CarTech UltraFine® Mod FeSiAl	0.36	0.37	0.37	0.39	0.40	0.37	0.31	0.29	0.29	0.30	0.27	0.26
CarTech UltraFine® S7	0.64	0.76	0.84	0.79	0.61	0.63	0.61	0.62	0.66	0.65	0.56	0.53
CarTech UltraFine® SCM415	0.18	0.21	0.22	0.26	0.27	0.27	0.23	0.23	0.23	0.23	0.20	0.21
UltraFine® X2NiCoMo 18-9-5	5.29	5.15	4.95	4.42	3.71	3.34	3.46	3.81	3.85	3.43	3.19	2.92
CarTech UltraFine® X65Cr13	0.67	0.69	0.66	0.67	0.67	0.67	0.61	0.61	0.60	0.59	0.59	0.61
CarTech Micro-Melt® 65Fe35Co	4.65	3.03	1.79	2.13	1.75	0.56	1.21	2.65	2.32	1.14	1.74	1.84
CarTech Micro-Melt® 255N	2.84	3.02	3.08	2.77	2.38	2.38	2.33	2.33	2.38	2.32	2.15	2.03
CarTech Micro-Melt® 431 FM	1.08	1.09	1.03	0.99	1.00	0.98	0.91	0.91	0.89	0.87	0.85	0.85
CarTech Micro-Melt® 21-6-9	2.02	2.00	1.89	1.74	1.73	1.65	1.56	1.54	1.51	1.46	1.42	1.39
CarTech Micro-Melt® 9310	0.73	0.76	0.74	0.70	0.70	0.67	0.62	0.61	0.61	0.60	0.54	0.52
CarTech UltraFine® Fe-3Si	0.19	0.22	0.23	0.26	0.27	0.27	0.22	0.22	0.22	0.22	0.19	0.20
CarTech UltraFine® SKH57	5.05	4.81	4.79	4.74	4.11	3.87	4.08	4.54	4.56	4.24	4.20	4.09
CarTech UltraFine® Fe-6Si	0.25	0.27	0.27	0.30	0.30	0.29	0.25	0.24	0.24	0.23	0.21	0.21
CarTech UltraFine® F15	6.75	5.86	5.00	4.59	4.49	3.65	3.78	4.44	4.24	3.52	3.57	3.40
CarTech UltraFine® 347	2.47	2.44	2.30	2.08	2.12	2.02	1.90	1.88	1.85	1.78	1.71	1.64
CarTech UltraFine® Fe-18Cr	0.79	0.81	0.77	0.78	0.79	0.79	0.73	0.73	0.71	0.70	0.71	0.73
CarTech UltraFine® 4140	0.25	0.30	0.32	0.34	0.32	0.32	0.29	0.29	0.29	0.29	0.26	0.26
CarTech UltraFine® VeKo25Cr	2.95	3.14	3.42	3.30	2.86	2.85	2.90	2.89	2.97	2.96	2.75	2.61
CarTech UltraFine® 4140 MA	0.46	0.52	0.56	0.55	0.47	0.47	0.44	0.44	0.46	0.45	0.40	0.40
CarTech UltraFine® HK30	4.40	4.33	4.11	3.67	3.73	3.54	3.39	3.34	3.29	3.16	3.03	2.89
CarTech UltraFine® Fe-42Ni	6.57	6.43	6.06	5.23	5.36	4.98	4.70	4.63	4.58	4.37	4.01	3.69
CarTech UltraFine® 218	3.50	3.61	3.58	3.19	2.90	2.82	2.74	2.72	2.74	2.65	2.46	2.31
CarTech Micro-Melt® 7570	4.66	5.31	5.93	5.34	3.96	4.21	4.31	4.38	4.66	4.62	4.16	3.84
CarTech Micro-Melt Invar 36®	5.62	5.51	5.19	4.49	4.60	4.27	4.03	3.97	3.93	3.75	3.44	3.17
CarTech Micro-Melt® Alloy 1	2.35	2.43	2.41	2.15	1.99	1.94	1.85	1.84	1.86	1.80	1.66	1.56
CarTech Micro-Melt® EN25	0.72	0.78	0.80	0.74	0.68	0.67	0.63	0.62	0.64	0.62	0.55	0.52
CarTech Micro-Melt® PWC7	4.10	4.22	4.39	4.26	3.87	3.65	3.68	3.57	3.59	3.51	3.27	3.08
CarTech Micro-Melt® 4304-2	2.43	2.40	2.27	2.05	2.09	1.99	1.87	1.86	1.83	1.76	1.69	1.63
CarTech Micro-Melt® BSEC510	0.43	0.49	0.52	0.51	0.46	0.45	0.42	0.42	0.43	0.42	0.37	0.36
CarTech Micro-Melt® P21 Mod	0.83	0.85	0.82	0.77	0.79	0.75	0.69	0.68	0.68	0.66	0.60	0.57
CarTech Micro-Melt® 177-1	1.85	1.84	1.74	1.60	1.62	1.56	1.46	1.45	1.42	1.38	1.33	1.29
CarTech Micro-Melt® FeCoMo	6.99	7.11	7.26	6.45	4.57	4.24	4.64	5.29	5.51	4.87	4.42	3.95

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CarTech Micro-Melt® 13Cr-8Ni	2.40	2.54	2.57	2.29	2.01	1.99	1.92	1.92	1.96	1.90	1.73	1.61
CarTech Micro-Melt® FeCrWTi	1.16	1.18	1.20	1.23	1.24	1.27	1.22	1.24	1.24	1.25	1.24	1.26
CarTech Micro-Melt® 316L Mod-1	2.95	2.92	2.75	2.46	2.50	2.37	2.23	2.21	2.17	2.09	1.99	1.90
CarTech Micro-Melt® 316L Mod-2	2.95	2.91	2.74	2.45	2.49	2.36	2.23	2.20	2.17	2.09	1.98	1.89
CarTech Micro-Melt® 316L Mod-3	4.19	4.12	3.87	3.44	3.50	3.31	3.12	3.09	3.04	2.92	2.78	2.64
CarTech Micro-Melt® C300	5.32	5.17	4.98	4.44	3.75	3.38	3.50	3.86	3.89	3.46	3.23	2.96
CarTech Micro-Melt® 420-CW Mod	2.58	2.63	2.68	2.67	2.50	2.32	2.26	2.20	2.19	2.15	2.01	1.91
Micro-Melt Ferrium® PH48S	3.27	3.02	2.75	2.55	2.29	2.00	2.06	2.36	2.32	2.01	1.99	1.90
CarTech Micro-Melt® Fe-10Ni	1.71	1.70	1.62	1.46	1.49	1.40	1.30	1.28	1.28	1.22	1.12	1.05
Micro-Melt Ferrium® C64	13.59	12.69	11.56	10.20	9.97	8.82	8.72	9.28	9.10	8.17	7.80	7.25
CarTech Micro-Melt® SA508 Gr4N	0.92	0.97	0.97	0.90	0.85	0.82	0.77	0.77	0.78	0.75	0.68	0.64
CarTech UltraFine® 17Cr-4Ni Ar	1.69	1.74	1.70	1.59	1.54	1.50	1.43	1.43	1.42	1.38	1.33	1.30
CarTech Micro-Melt® HTMO	1.64	1.69	1.65	1.53	1.48	1.44	1.37	1.37	1.36	1.33	1.27	1.25
CarTech Micro-Melt® 1.2709	5.44	5.29	5.10	4.55	3.84	3.47	3.58	3.94	3.98	3.55	3.30	3.03
CarTech Micro-Melt® NitroMaxx	2.34	2.45	2.46	2.23	1.96	1.94	1.88	1.88	1.90	1.85	1.74	1.65
CarTech Micro-Melt® M152	1.47	1.60	1.66	1.52	1.29	1.30	1.26	1.26	1.29	1.26	1.15	1.09
CarTech Micro-Melt® FeCrAlTi	0.92	0.94	0.89	0.88	0.90	0.90	0.84	0.84	0.82	0.80	0.82	0.84
CarTech Micro-Melt® SHS8000	2.26	2.48	2.72	2.52	2.07	2.12	2.23	2.19	2.27	2.21	2.08	1.99
CarTech UltraFine® 13Cr-8Ni	2.41	2.55	2.58	2.30	2.02	1.99	1.93	1.93	1.97	1.91	1.74	1.62
CarTech UltraFine® 42CrMo4	0.25	0.30	0.32	0.34	0.32	0.32	0.29	0.29	0.29	0.29	0.26	0.26
UltraFine® BioDur 108 low Ni	1.55	1.61	1.61	1.52	1.29	1.26	1.23	1.21	1.21	1.19	1.16	1.12
CarTech UltraFine® 420	0.85	0.88	0.89	0.90	0.90	0.89	0.89	0.87	0.86	0.84	0.84	0.86
CarTech UltraFine BioDur® 108	1.55	1.61	1.61	1.52	1.29	1.26	1.23	1.21	1.21	1.19	1.16	1.12
CarTech UltraFine Custom 465®	2.55	2.60	2.54	2.27	2.20	2.13	2.03	2.01	2.02	1.95	1.81	1.71
CarTech UltraFine® Fe10Mn3Si	0.37	0.38	0.39	0.41	0.37	0.34	0.31	0.30	0.30	0.29	0.26	0.26
CarTech UltraFine® 440A	0.76	0.78	0.74	0.74	0.75	0.75	0.70	0.70	0.68	0.67	0.68	0.70
CarTech UltraFine® 15Cr-5Ni	1.54	1.56	1.49	1.40	1.42	1.37	1.30	1.29	1.27	1.23	1.20	1.19
CarTech UltraFine® X20Cr13	0.66	0.68	0.66	0.66	0.67	0.67	0.61	0.61	0.60	0.59	0.59	0.61
CarTech UltraFine® S5	0.39	0.47	0.52	0.51	0.41	0.42	0.39	0.40	0.42	0.41	0.35	0.33
CarTech UltraFine® FeCoSiNbBCu	5.08	3.67	2.72	3.00	2.64	1.58	2.29	3.46	3.17	2.09	2.63	2.72
CarTech UltraFine® 18Ni300	5.36	5.22	5.03	4.48	3.78	3.42	3.53	3.89	3.92	3.50	3.26	2.98
CarTech UltraFine® Fe6.5Si5Cr	0.43	0.44	0.43	0.45	0.45	0.44	0.39	0.39	0.38	0.37	0.35	0.36
CarTech UltraFine Custom 455®	2.02	2.02	1.93	1.77	1.81	1.73	1.64	1.63	1.61	1.55	1.48	1.43
CarTech UltraFine Custom 475®	4.15	4.07	3.96	3.59	2.85	2.59	2.74	3.09	3.13	2.77	2.62	2.42
CarTech UltraFine® FeSiNbCuB	1.22	1.24	1.37	1.39	1.36	1.32	1.45	1.37	1.37	1.31	1.31	1.32
UltraFine Hi Permeability 49®	7.45	7.29	6.86	5.92	6.06	5.63	5.32	5.24	5.19	4.94	4.54	4.18
CarTech UltraFine® X25CrMo14	0.95	1.03	1.06	1.01	0.88	0.90	0.86	0.86	0.87	0.86	0.81	0.80
CarTech UltraFine® A2	0.71	0.81	0.88	0.83	0.68	0.70	0.67	0.67	0.70	0.69	0.62	0.59
CarTech UltraFine® 303	2.37	2.39	2.30	2.08	2.02	1.94	1.84	1.83	1.81	1.75	1.66	1.59
CarTech UltraFine® FeCo35	4.65	3.04	1.79	2.14	1.75	0.56	1.21	2.66	2.32	1.14	1.74	1.84

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CarTech UltraFine® 440C	0.76	0.78	0.74	0.74	0.75	0.75	0.70	0.70	0.68	0.67	0.68	0.70
CarTech UltraFine® 420Mod	2.32	2.30	2.29	2.34	2.31	2.11	2.04	1.97	1.93	1.90	1.81	1.73
CarTech Micro-Melt® 9043	3.09	3.40	3.76	3.55	2.88	2.97	3.00	3.03	3.13	3.11	2.82	2.64
CarTech Micro-Melt® AF9628	0.63	0.72	0.78	0.73	0.62	0.63	0.60	0.59	0.62	0.61	0.52	0.48
MS-1(N)	5.42	5.28	5.09	4.53	3.83	3.46	3.57	3.93	3.97	3.54	3.29	3.01
CarTech Micro-Melt NiMark® 350	5.77	5.48	5.17	4.65	3.95	3.47	3.64	4.13	4.13	3.60	3.42	3.15
CarTech UltraFine® 316L Mod	3.50	3.66	3.70	3.28	2.93	2.86	2.77	2.74	2.81	2.69	2.36	2.11
CarTech Micro-Melt® 416	0.76	0.79	0.78	0.76	0.74	0.74	0.69	0.69	0.69	0.67	0.66	0.66
CarTech Micro-Melt® 30CD12	0.39	0.46	0.51	0.51	0.44	0.45	0.42	0.42	0.44	0.43	0.36	0.35
CarTech Micro-Melt® Wear 26	1.47	1.54	1.60	1.58	1.46	1.41	1.36	1.33	1.33	1.27	1.10	0.98
CarTech Micro-Melt® Wear 20	1.69	1.77	1.85	1.84	1.68	1.60	1.55	1.51	1.51	1.46	1.27	1.15
<b>Tungsten/Nickel-based (powder products)</b>												
CarTech Micro-Melt® Amega NM	16.45	16.81	17.42	16.28	15.14	15.36	15.23	15.45	15.74	15.68	14.99	14.43
CarTech Micro-Melt® NT-60	17.44	17.29	17.65	17.03	16.92	17.13	16.89	17.18	17.30	17.37	17.04	16.73
CarTech Micro-Melt® NT-60KS	16.86	16.71	17.04	16.43	16.33	16.52	16.28	16.56	16.67	16.73	16.41	16.10
CarTech Micro-Melt® NT-60SP	17.06	16.92	17.29	16.70	16.59	16.82	16.58	16.87	16.99	17.07	16.76	16.46
CarTech Micro-Melt® NT-70SP	17.32	17.22	17.81	17.48	17.30	17.72	17.56	17.93	18.09	18.27	18.05	17.84
CarTech Micro-Melt® NT-65	17.39	17.27	17.74	17.27	17.13	17.45	17.25	17.58	17.72	17.85	17.58	17.33
CarTech Micro-Melt® NT-50 SPH	16.81	16.64	16.85	16.10	16.03	16.12	15.84	16.08	16.17	16.17	15.80	15.46
<b>Other (powder products)</b>												
CarTech Micro-Melt® Pyrowear 53	1.41	1.65	1.83	1.63	1.20	1.24	1.24	1.25	1.34	1.31	1.11	0.99
Micro-Melt® Glass Sealing 18	0.67	0.69	0.68	0.71	0.75	0.74	0.68	0.67	0.66	0.63	0.54	0.50
CarTech UltraFine® 1.4923	1.46	1.53	1.57	1.53	1.39	1.34	1.30	1.28	1.29	1.26	1.18	1.13
CarTech Micro-Melt® 901	8.15	8.39	8.35	7.19	6.58	6.32	6.13	6.08	6.20	5.94	5.31	4.79
CarTech Micro-Melt® 5120	0.19	0.22	0.23	0.27	0.27	0.27	0.24	0.24	0.24	0.23	0.21	0.22
CarTech UltraFine® 1.4848	4.15	4.08	3.83	3.40	3.46	3.28	3.09	3.06	3.01	2.89	2.75	2.62

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