

# Raw Material and Energy Powder Surcharges 2020

- 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.

## Chrome-based (powder products)

Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech Micro-Melt® NiCr49Nb1	2.94	2.82	2.61									
UltraFine® 17Cr-4Ni MA 3X	1.54	1.46	1.38									
CarTech UltraFine® 316 MA	3.08	3.00	2.88									
CarTech UltraFine® 420 MA	0.66	0.60	0.60									

## Cobalt-based (powder products)

Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech Micro-Melt® 1	3.04	3.36	4.26									
CarTech Micro-Melt® 12	2.81	3.18	4.23									
CarTech Micro-Melt® 188	3.91	4.14	4.75									
CarTech Micro-Melt® 188B	3.91	4.14	4.75									
CarTech Micro-Melt® 1B	3.13	3.48	4.45									
CarTech Micro-Melt® 21	2.36	2.81	3.97									
CarTech Micro-Melt® 50Nb	2.34	2.73	3.76									
CarTech Micro-Melt® 6	1.86	2.15	2.97									
CarTech Micro-Melt® 6LF	2.40	2.83	4.00									
CarTech Micro-Melt® 9810	2.44	2.86	4.00									
CarTech Micro-Melt® A4783	2.76	3.08	3.93									
CarTech Micro-Melt® BioDur® CCM®	8.11	8.55	9.77									
CarTech Micro-Melt® CCM	2.27	2.72	3.89									
CarTech Micro-Melt CCM® GADS	2.27	2.72	3.89									
CarTech Micro-Melt® CCM PLUS®	2.27	2.72	3.89									
CarTech Micro-Melt® F	3.64	3.82	4.34									
CarTech Micro-Melt® F75	2.34	2.81	4.03									
CarTech Micro-Melt® G155	3.64	4.26	5.57									
CarTech Micro-Melt® G185	3.02	3.39	4.37									
CarTech Micro-Melt® G190	3.51	4.05	5.18									
CarTech Micro-Melt® G195	2.84	3.05	3.60									
CarTech Micro-Melt® HS31	3.02	3.38	4.36									
CarTech Micro-Melt® Merl72	3.81	4.17	4.89									
CarTech Micro-Melt® Mo1	3.02	3.37	4.34									
CarTech Micro-Melt® P1316	2.99	3.36	4.36									
CarTech Micro-Melt® P1318	2.99	3.36	4.36									
CarTech Micro-Melt® P694	3.95	4.25	5.11									
CarTech Micro-Melt® R31233	2.43	2.88	3.93									
CarTech Micro-Melt® TDCA	2.80	2.99	3.52									
CarTech Micro-Melt® WearCorr™	2.65	3.04	4.02									

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.

# Raw Material and Energy Powder Surcharges 2020

- USD/lb.



(applicable at time of shipment)

CarTech UltraFine CCM®	2.27	2.72	3.89										
CarTech UltraFine® CCM PLUS®	2.27	2.72	3.89										
CarTech UltraFine® CoCr	2.37	2.86	4.10										
CarTech UltraFine® F-75HP	2.35	2.82	4.04										
CarTech UltraFine® H25	3.68	4.02	4.95										
Micro-Melt® Maraging 509B	3.62	4.03	4.86										
CarTech Micro-Melt® CTS	1.96	2.40	3.59										
Micro-Melt Biodur CCM® LS	2.32	2.80	4.04										
Micro-Melt CCM® A764 Mod	2.33	2.82	4.06										
CarTech Micro-Melt® CoWCr	2.24	2.77	4.14										
CarTech UltraFine® FeCo50	1.28	1.65	2.57										
CarTech Micro-Melt® CCM MC	2.19	2.70	3.92										
<b>Cobalt/Nickel-based (powder products)</b>													
<b>Alloy Description</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	
CarTech UltraFine® MP35N®	3.46	3.73	4.28										
<b>Copper-based (powder products)</b>													
<b>Alloy Description</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	
CarTech Micro-Melt® C18200	2.51	2.51	2.29										
CarTech Micro-Melt® CuNiSiCr	2.65	2.64	2.40										
CarTech Micro-Melt® G72	3.32	3.27	2.96										
CarTech UltraFine® CuNiSnP	3.07	3.11	2.88										
CarTech UltraFine® C621	2.86	2.88	2.65										
CarTech UltraFine® Cu15SnP	3.03	3.08	2.84										
CarTech UltraFine® Cu-Electr.	2.51	2.51	2.29										
CarTech UltraFine® Copper-MIM	2.53	2.53	2.30										
UltraFine® C18000	2.54	2.54	2.31										
<b>Iron-based (powder products)</b>													
<b>Alloy Description</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	
CarTech Micro-Melt® 5506	1.56	1.53	1.49										
CarTech Micro-Melt® 654SMO	1.68	1.71	1.68										
CarTech Micro-Melt® 904L	1.82	1.82	1.74										
CarTech Micro-Melt® BS2766	0.49	0.54	0.65										
CarTech Micro-Melt® Fe LC	0.12	0.13	0.14										
CarTech Micro-Melt® Fe Powder	0.12	0.13	0.15										
CarTech Micro-Melt® LAW 100X	0.12	0.13	0.14										
CarTech Micro-Melt® Sanicro 28	2.04	2.03	1.91										
CarTech Micro-Melt® 28	2.04	2.03	1.91										
CarTech Micro-Melt NCORR®	1.34	1.30	1.25										
CarTech Micro-Melt® FeCoTa	9.60	10.58	10.20										
CarTech Micro-Melt® FeCoCrNi	2.23	2.36	2.74										
CarTech Micro-Melt® FeCoTaMo	7.56	8.44	8.76										

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.

# Raw Material and Energy Powder Surcharges 2020

- USD/lb.

(applicable at time of shipment)



CarTech Micro-Melt® AFA25	2.03	1.99	1.94										
CarTech Micromelt® AFA25	2.03	1.99	1.94										
CarTech Micro-Melt Ferrium®M41	6.18	6.75	7.37										
CarTech Micro-Melt® 2507 SDplx	0.93	0.91	0.91										
CarTech Micro-Melt® VeKo25Cr	0.98	1.02	1.20										
CarTech Micro-Melt® 1.4313	0.49	0.49	0.48										
Micro-Melt Aermet-for-tooling®	1.07	1.16	1.36										
CarTech Micro-Melt® A-286	1.71	1.67	1.60										

## Iron/Cobalt-based (powder products)

Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech Micro-Melt Hiperco® 50	1.42	1.79	2.74									
CarTech UltraFine Hiperco® 50	1.41	1.78	2.72									
Micro-Melt Hiperco® 50 HS	1.78	2.16	3.23									

## Iron/Nickel (powder products)

Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech UltraFine® GHS 4	2.70	2.69	2.57									

## Nickel-based (powder products)

Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech IN100	4.01	3.97	3.77									
CarTech Micro-Melt® 230	4.68	4.63	4.48									
CarTech Micro-Melt® 247LC	5.25	5.29	5.10									
CarTech Micro-Melt®247LC Mod 1	5.25	5.30	5.11									
CarTech Micro-Melt® 282	3.98	4.01	3.99									
CarTech Micro-Melt® 50/50	3.12	2.99	2.74									
CarTech Micro-Melt® 600	4.01	3.88	3.52									
CarTech Micro-Melt® 622	4.42	4.39	4.22									
CarTech Micro-Melt® 622 AWS	4.44	4.41	4.24									
CarTech Micro-Melt® 625	3.50	3.46	3.34									
CarTech Micro-Melt® 625+W	4.33	4.27	4.09									
CarTech Micro-Melt® 625AM	4.62	4.56	4.37									
CarTech Micro-Melt® 625Ar	4.62	4.56	4.37									
CarTech Micro-Melt® 625LF	4.60	4.54	4.35									
CarTech Micro-Melt® 625M	4.71	4.65	4.48									
CarTech Micro-Melt® 713C	4.21	4.12	3.79									
CarTech Micro-Melt® 718	3.66	3.59	3.45									
CarTech Micro-Melt® 80/20	4.20	4.07	3.69									
CarTech Micro-Melt® 825	2.91	2.86	2.65									
CarTech Micro-Melt® A4777	4.25	4.12	3.73									
CarTech Micro-Melt® A4778	4.65	4.52	4.08									
CarTech Micro-Melt® A4779	4.75	4.62	4.17									
CarTech Micro-Melt® A4782	3.79	3.66	3.32									

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.

# Raw Material and Energy Powder Surcharges 2020

- USD/lb.



(applicable at time of shipment)

CarTech Micro-Melt® B27	4.79	4.65	4.20
CarTech Micro-Melt® B40	4.30	4.17	3.77
CarTech Micro-Melt® B56	3.99	3.87	3.51
CarTech Micro-Melt® B60+	3.88	3.75	3.40
CarTech Micro-Melt® C-276	4.74	4.75	4.58
CarTech Micro-Melt® C-901	4.18	4.15	3.95
CarTech Micro-Melt® G142	3.91	3.78	3.43
CarTech Micro-Melt® G173	4.52	4.55	4.35
CarTech Micro-Melt® G183	4.16	4.15	4.07
CarTech Micro-Melt® G186	3.80	3.83	3.86
CarTech Micro-Melt® G192	3.75	3.63	3.29
CarTech Micro-Melt® G202	3.66	3.58	3.44
CarTech Micro-Melt® G207	4.27	4.14	3.75
CarTech Micro-Melt® G81	3.79	3.66	3.32
CarTech Micro-Melt® GHS-4	2.76	2.74	2.63
CarTech Micro-Melt® HX	3.35	3.32	3.17
CarTech Micro-Melt® HyMu 800	4.43	4.35	4.00
CarTech Micro-Melt® IN738	4.25	4.26	4.12
CarTech Micro-Melt® MAR-M-247	5.36	5.41	5.24
CarTech Micro-Melt® N5A	3.41	3.42	3.42
CarTech Micro-Melt® N5A/N5B	3.35	3.35	3.37
CarTech Micro-Melt® N5B	3.20	3.21	3.24
CarTech Micro-Melt® NFM 24	3.57	3.61	3.67
CarTech Micro-Melt® NiCoCrMo	3.81	3.87	3.94
CarTech Micro-Melt® NiCrMoAl	4.27	4.19	3.87
CarTech Micro-Melt® NiCrMoB	4.68	4.66	4.43
CarTech Micro-Melt® TDCA/TDCB	2.81	2.97	3.41
CarTech Micro-Melt® TDCB	2.84	2.94	3.19
CarTech UltraFine® 713C	4.20	4.10	3.78
CarTech UltraFine® 718	3.13	3.05	2.82
CarTech UltraFine® Alloy X	2.89	2.87	2.73
CarTech UltraFine® HX	3.49	3.47	3.33
CarTech UltraFine® K500	6.42	6.32	6.52
CarTech UltraFine® NiCoCrAlY	3.04	3.13	3.32
CarTech Micro-Melt® BRB	3.99	3.94	3.77
CarTech Micro-Melt® G204	4.28	4.15	3.75
CarTech Micro-Melt® Waspaloy	3.84	3.86	3.85
CarTech Micro-Melt® A914	4.17	4.21	4.22
CarTech Micro-Melt® 5 Fe	3.14	3.36	3.89
CarTech Micro-Melt® 725	4.35	4.29	4.10
CarTech UltraFine® 625	4.62	4.56	4.37

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.

## Raw Material and Energy Powder Surcharges 2020

- USD/lb.



(applicable at time of shipment)

CarTech UltraFine® Fe-50Ni	2.59	2.52	2.29
CarTech Micro-Melt® L1	4.65	4.58	4.41
CarTech Micro-Melt® Ni-24.5Cr	5.05	4.91	4.43
CarTech Micro-Melt® HX-1LC	3.49	3.47	3.34
CarTech Micro-Melt® R95	4.53	4.51	4.44
CarTech Micro-Melt® R125-1	5.16	5.23	5.06
CarTech Micro-Melt® C263	3.78	3.86	4.02
CarTech Micro-Melt® 718 AM	3.64	3.57	3.42
CarTech Micro-Melt® 690	3.42	3.29	3.01
CarTech Micro-Melt® 82	4.27	4.14	3.83
Micro-Melt® STAL18SILAY	4.94	4.96	4.66
CarTech Micro-Melt® 738 LC	4.44	4.44	4.29
CarTech Micro-Melt® 263	3.90	3.99	4.15
CarTech Micro-Melt® HX LC	3.49	3.47	3.33
CarTech Micro-Melt® HX-4	3.48	3.46	3.32
CarTech Micro-Melt® R77	3.84	3.88	3.90
CarTech Micro-Melt® 109 Mod	3.84	3.91	4.01
CarTech Micro-Melt® Ni60H	3.90	3.78	3.42
CarTech Micro-Melt® 625F-1	4.44	4.38	4.21
CarTech Micro-Melt® 792	4.96	5.02	4.82
CarTech Micro-Melt® NiCrAlY	3.66	3.54	3.21
CarTech Micro-Melt® 720	3.79	3.82	3.85
CarTech UltraFine® Ni20Cr	4.30	4.16	3.77
CarTech UltraFine® NiCrMo	2.83	2.80	2.69
CarTech UltraFine® 90	3.65	3.68	3.72
CarTech UltraFine® M400	4.21	4.11	3.72
CarTech UltraFine® R77	3.83	3.86	3.89
UltraFine® Maraging 247	5.24	5.28	5.11
CarTech UltraFine® HyMu 800	4.43	4.35	4.00
CarTech Micro-Melt® 75	4.12	4.01	3.64

### Tool Steel (powder products)

Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech Micro-Melt Custom 470®	0.79	0.79	0.76									
CarTech Micro-Melt® 100	0.85	0.87	0.88									
CarTech Micro-Melt® 100Cr6	0.13	0.14	0.15									
CarTech Micro-Melt® 1045	0.12	0.13	0.15									
CarTech Micro-Melt® 15Cr-5Ni	0.57	0.55	0.53									
CarTech Micro-Melt® 16MnCr5	0.13	0.14	0.15									
CarTech Micro-Melt® 17Cr-4Ni	0.50	0.50	0.49									
CarTech Micro-Melt® 20-4	0.68	0.71	0.84									
CarTech Micro-Melt®2205 Duplex	0.71	0.73	0.74									

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.

# Raw Material and Energy Powder Surcharges 2020

- USD/lb.



(applicable at time of shipment)

CarTech Micro-Melt®2505 SDplx	0.76	0.78	0.78
CarTech Micro-Melt® 2205M	0.71	0.73	0.75
CarTech Micro-Melt® 23	1.32	1.37	1.50
CarTech Micro-Melt® 2357	0.97	0.98	0.96
CarTech Micro-Melt® 23S	1.31	1.36	1.49
CarTech Micro-Melt® 25-10-10	1.46	1.50	1.59
CarTech Micro-Melt® 253	0.64	0.64	0.61
CarTech Micro-Melt® 254SMO	1.42	1.44	1.42
CarTech Micro-Melt® 25-7-4	0.89	0.91	0.92
CarTech Micro-Melt® 2739	1.77	1.84	2.10
CarTech Micro-Melt® 2888	1.14	1.23	1.44
CarTech Micro-Melt® 2906	0.78	0.79	0.79
CarTech Micro-Melt® 30	1.45	1.54	1.77
CarTech Micro-Melt® 304	0.64	0.63	0.60
CarTech Micro-Melt® 304B4	0.99	0.96	0.90
CarTech Micro-Melt® 304B6	0.99	0.96	0.90
CarTech Micro-Melt® 304B7	1.00	0.97	0.91
CarTech Micro-Melt® 304L	0.79	0.76	0.73
CarTech Micro-Melt® 308L Mod	0.72	0.72	0.68
CarTech Micro-Melt® 309L	1.05	1.01	0.96
CarTech Micro-Melt® 30LS	1.63	1.74	2.03
CarTech Micro-Melt® 30Nb	1.61	1.73	2.02
CarTech Micro-Melt® 312	0.74	0.73	0.70
CarTech Micro-Melt® 316L	0.79	0.80	0.78
CarTech Micro-Melt® 316L AWS	0.88	0.89	0.87
CarTech Micro-Melt® 316L+S	0.88	0.89	0.87
CarTech Micro-Melt® 316LHSi	1.11	1.09	1.06
CarTech Micro-Melt® 316LN	1.10	1.09	1.05
CarTech Micro-Melt® 316Lx1.5	1.21	1.22	1.18
CarTech Micro-Melt® 347H	0.75	0.74	0.70
CarTech Micro-Melt® 410	0.16	0.17	0.20
CarTech Micro-Melt® 410L	0.25	0.25	0.26
CarTech Micro-Melt® 4112	0.29	0.31	0.33
CarTech Micro-Melt® 4130	0.16	0.17	0.19
CarTech Micro-Melt® 4140	0.13	0.14	0.16
CarTech Micro-Melt® 416R	0.23	0.24	0.26
CarTech Micro-Melt® 420	0.27	0.26	0.27
CarTech Micro-Melt® 420 LCM	0.27	0.26	0.27
CarTech Micro-Melt® 420-CW	0.96	1.00	1.26
CarTech Micro-Melt® 420LC	0.27	0.26	0.27
CarTech Micro-Melt® 422	0.49	0.49	0.50

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.

## Raw Material and Energy Powder Surcharges 2020

- USD/lb.



(applicable at time of shipment)

CarTech Micro-Melt® 431	0.40	0.38	0.38
CarTech Micro-Melt® 4340	0.21	0.22	0.23
CarTech Micro-Melt® 4370	0.73	0.70	0.68
CarTech Micro-Melt® 440	0.75	0.78	0.97
CarTech Micro-Melt® 440C	0.34	0.34	0.35
CarTech Micro-Melt® 440-XH	0.42	0.42	0.45
CarTech Micro-Melt® 4848	1.41	1.35	1.26
CarTech Micro-Melt® 53	1.38	1.43	1.68
CarTech Micro-Melt® 5499	0.36	0.39	0.43
CarTech Micro-Melt® 60	1.92	2.04	2.41
CarTech Micro-Melt® 6126Ni-free	0.55	0.55	0.60
CarTech Micro-Melt® 7339	0.17	0.18	0.20
CarTech Micro-Melt® 736A	0.66	0.63	0.62
CarTech Micro-Melt® 80	2.61	2.79	3.31
CarTech Micro-Melt® 800	1.59	1.62	2.06
CarTech Micro-Melt® 9038	0.74	0.78	0.89
CarTech Micro-Melt® 9040	1.14	1.20	1.35
CarTech Micro-Melt® 9055	1.45	1.54	1.78
CarTech Micro-Melt® 9078	1.01	1.07	1.33
CarTech Micro-Melt® 9098	0.62	0.64	0.77
CarTech Micro-Melt® 9655	1.20	1.23	1.22
CarTech Micro-Melt® 9659	1.33	1.32	1.31
CarTech Micro-Melt® 9660	1.33	1.32	1.31
CarTech Micro-Melt® A11	1.00	1.05	1.32
CarTech Micro-Melt® A11HC	1.35	1.42	1.75
CarTech Micro-Melt® A11LVC	0.97	1.01	1.28
CarTech Micro-Melt® A11-VP	1.06	1.11	1.40
CarTech Micro-Melt® Aermet®100	1.10	1.19	1.40
CarTech Micro-Melt® AISI8740	0.17	0.18	0.19
CarTech Micro-Melt® AM400Plus	0.81	0.80	0.78
CarTech Micro-Melt® APM 2370	0.78	0.80	0.81
CarTech Micro-Melt® CD#1	0.39	0.41	0.46
CarTech Micro-Melt® D2	0.33	0.35	0.41
CarTech Micro-Melt® D7	0.58	0.61	0.74
CarTech Micro-Melt® Duplex 22	0.72	0.74	0.75
CarTech Micro-Melt® F22	0.24	0.25	0.27
CarTech Micro-Melt® FeSi	0.12	0.14	0.15
CarTech Micro-Melt® FeSi 600	0.13	0.14	0.15
CarTech Micro-Melt® Grade 92	0.39	0.40	0.42
CarTech Micro-Melt® H13	0.43	0.45	0.52
CarTech Micro-Melt® H163	1.37	1.42	1.58

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.

# Raw Material and Energy Powder Surcharges 2020

- USD/lb.



(applicable at time of shipment)

CarTech Micro-Melt® HS-30	1.42	1.51	1.75
CarTech Micro-Melt® M300	2.04	2.12	2.24
CarTech Micro-Melt® M4	1.32	1.38	1.53
CarTech Micro-Melt® M4 HCS	1.45	1.50	1.65
CarTech Micro-Melt® M42	1.13	1.25	1.45
CarTech Micro-Melt® M48	1.81	1.90	2.14
CarTech Micro-Melt® M48 LS	1.82	1.91	2.16
CarTech Micro-Melt® Maxamet®	2.01	2.09	2.39
CarTech Micro-Melt® MV 11K	0.62	0.65	0.77
CarTech Micro-Melt® NOREM 02	0.35	0.36	0.36
CarTech Micro-Melt® O6	0.12	0.13	0.15
CarTech Micro-Melt® P-28	1.33	1.31	1.31
CarTech Micro-Melt® PD#1	0.56	0.58	0.67
CarTech Micro-Melt® PD#5	0.81	0.83	0.96
CarTech Micro-Melt® SA508	0.20	0.21	0.23
Micro-Melt® Sanicro 15-5PH	0.49	0.49	0.48
CarTech Micro-Melt® 15-5PH	0.49	0.49	0.48
CarTech Micro-Melt® T15	1.80	1.85	2.06
CarTech Micro-Melt® T15 Plus	1.80	1.87	2.13
CarTech Micro-Melt® TD#1	0.58	0.61	0.67
CarTech Micro-Melt® TF1	0.48	0.53	0.63
CarTech Micro-Melt® TF6	2.80	2.88	3.17
CarTech Micro-Melt® TMM	0.45	0.47	0.52
CarTech Micro-Melt® VA176	1.24	1.27	1.57
CarTech Micro-Melt® W4841Nb	1.24	1.22	1.14
CarTech Micro-Melt® X245	1.03	1.08	1.37
Micro-Melt® X4CrNiMo 16-5-1	0.42	0.42	0.41
CarTech UltraFine® 1.2709	1.59	1.68	1.80
CarTech UltraFine® 1.4435	1.38	1.36	1.33
CarTech UltraFine® 17Cr-4Ni	0.59	0.57	0.55
CarTech UltraFine® 304L	0.61	0.61	0.58
CarTech UltraFine® 316L	0.88	0.89	0.87
CarTech UltraFine® 410L	0.19	0.20	0.21
CarTech UltraFine® 430L	0.30	0.29	0.30
CarTech UltraFine® 4340	0.21	0.22	0.23
CarTech UltraFine® 4340 MA 3X	0.21	0.22	0.23
CarTech UltraFine® 440C+1.5Nb	0.46	0.45	0.48
CarTech UltraFine® D2	0.31	0.33	0.38
CarTech UltraFine® Fe14MnC	0.15	0.15	0.16
UltraFine® Fe17Cr11Mn3Mo	0.56	0.57	0.60
CarTech UltraFine® FeCrMnMo	0.56	0.57	0.60

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.



# Raw Material and Energy Powder Surcharges 2020

- USD/lb.



(applicable at time of shipment)

CarTech UltraFine® Fe-30Cr	0.44	0.41	0.42
CarTech UltraFine® Fe30Ni	1.60	1.57	1.43
CarTech UltraFine® Fe8Ni	0.51	0.51	0.49
CarTech UltraFine® FeCrAlY	0.26	0.26	0.28
CarTech UltraFine® FeSiAl	0.15	0.16	0.17
CarTech UltraFine® H13	0.34	0.36	0.41
CarTech UltraFine® M2	1.15	1.19	1.30
CarTech UltraFine® Mod FeSiAl	0.15	0.16	0.17
CarTech UltraFine® S7	0.26	0.27	0.30
CarTech UltraFine® SCM415	0.13	0.14	0.15
UltraFine® X2NiCoMo 18-9-5	1.56	1.65	1.77
CarTech UltraFine® X65Cr13	0.27	0.26	0.27
CarTech Micro-Melt® 65Fe35Co	0.93	1.20	1.84
CarTech Micro-Melt® 255N	0.95	0.94	0.94
CarTech Micro-Melt® 431 FM	0.40	0.39	0.39
CarTech Micro-Melt® 21-6-9	0.69	0.66	0.65
CarTech Micro-Melt® 9310	0.30	0.31	0.31
CarTech UltraFine® Fe-3Si	0.12	0.13	0.14
CarTech UltraFine® SKH57	2.02	2.13	2.45
CarTech UltraFine® Fe-6Si	0.11	0.12	0.14
CarTech UltraFine® F15	1.94	2.04	2.21
CarTech UltraFine® 347	0.86	0.83	0.78
CarTech UltraFine® Fe-18Cr	0.31	0.30	0.31
CarTech UltraFine® 4140	0.15	0.16	0.17
CarTech UltraFine® VeKo25Cr	1.38	1.43	1.62
CarTech UltraFine® 4140 MA	0.20	0.21	0.23
CarTech UltraFine® HK30	1.54	1.48	1.41
CarTech UltraFine® Fe-42Ni	2.20	2.15	1.95
CarTech UltraFine® 218	1.16	1.14	1.12
CarTech Micro-Melt® 7570	1.70	1.75	1.83
CarTech Micro-Melt Invar 36®	1.89	1.85	1.68
CarTech Micro-Melt® Alloy 1	0.81	0.80	0.77
CarTech Micro-Melt® EN25	0.30	0.30	0.31
CarTech Micro-Melt® PWC7	1.79	1.82	2.20
CarTech Micro-Melt® 4304-2	0.84	0.81	0.77
CarTech Micro-Melt® BSEC510	0.21	0.22	0.23
CarTech Micro-Melt® P21 Mod	0.35	0.35	0.35
CarTech Micro-Melt® 177-1	0.66	0.63	0.61
CarTech Micro-Melt® FeCoMo	1.90	2.09	2.42
CarTech Micro-Melt® 13Cr-8Ni	0.81	0.81	0.80
CarTech Micro-Melt® FeCrWTi	0.57	0.57	0.58

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.

# Raw Material and Energy Powder Surcharges 2020

- USD/lb.



(applicable at time of shipment)

CarTech Micro-Melt® 316L Mod-1	1.01	0.97	0.92
CarTech Micro-Melt® 316L Mod-2	1.01	0.97	0.92
CarTech Micro-Melt® 316L Mod-3	1.41	1.35	1.26
CarTech Micro-Melt® C300	1.57	1.65	1.77
CarTech Micro-Melt® 420-CW Mod	1.13	1.16	1.44
Micro-Melt Ferrium® PH48S	0.97	1.01	1.12
CarTech Micro-Melt® Fe-10Ni	0.63	0.63	0.59
Micro-Melt Ferrium® C64	1.05	1.18	1.46
CarTech Micro-Melt® SA508 Gr4N	0.36	0.37	0.37
CarTech UltraFine® 17Cr-4Ni Ar	0.66	0.64	0.63
CarTech Micro-Melt® HTMO	0.63	0.61	0.60
CarTech Micro-Melt® 1.2709	1.61	1.69	1.81
CarTech Micro-Melt® NitroMaxx	0.75	0.73	0.74
CarTech Micro-Melt® M152	0.53	0.53	0.55
CarTech Micro-Melt® FeCrAlTi	0.36	0.34	0.34
CarTech Micro-Melt® SHS8000	0.94	0.95	1.04
CarTech UltraFine® 13Cr-8Ni	0.82	0.81	0.80
CarTech UltraFine® 42CrMo4	0.15	0.16	0.17
UltraFine® BioDur 108 low Ni	0.49	0.47	0.52
CarTech UltraFine® 420	0.41	0.41	0.44
CarTech UltraFine BioDur® 108	0.49	0.47	0.52
CarTech UltraFine Custom 465®	0.87	0.86	0.82
CarTech UltraFine® Fe10Mn3Si	0.15	0.16	0.18
CarTech UltraFine® 440A	0.30	0.29	0.30
CarTech UltraFine® 15Cr-5Ni	0.62	0.60	0.58
CarTech UltraFine® X20Cr13	0.27	0.26	0.27
CarTech UltraFine® S5	0.18	0.19	0.21
CarTech UltraFine® FeCoSiNbBCu	1.41	1.63	2.28
CarTech UltraFine® 18Ni300	1.58	1.66	1.78
CarTech UltraFine® Fe6.5Si5Cr	0.17	0.17	0.18
CarTech UltraFine Custom 455®	0.75	0.73	0.70
CarTech UltraFine Custom 475®	1.19	1.27	1.43
CarTech UltraFine® FeSiNbCuB	0.72	0.73	0.83
UltraFine Hi Permeability 49®	2.49	2.43	2.20
CarTech UltraFine® X25CrMo14	0.35	0.35	0.37
CarTech UltraFine® A2	0.29	0.30	0.33
CarTech UltraFine® 303	0.81	0.78	0.75
CarTech UltraFine® FeCo35	0.93	1.20	1.84
CarTech UltraFine® 440C	0.30	0.29	0.30
CarTech UltraFine® 420Mod	1.06	1.08	1.35
CarTech Micro-Melt® 9043	1.33	1.38	1.51

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.

# Raw Material and Energy Powder Surcharges 2020

- USD/lb.



(applicable at time of shipment)

CarTech Micro-Melt® AF9628	0.25	0.27	0.28											
MS-1(N)	1.60	1.68	1.80											
CarTech Micro-Melt NiMark® 350	1.65	1.75	1.93											
CarTech UltraFine® 316L Mod	1.11	1.12	1.08											
CarTech Micro-Melt® 416	0.30	0.30	0.31											
CarTech Micro-Melt® 30CD12	0.18	0.20	0.21											
CarTech Micro-Melt® Wear 26	0.49	0.51	0.59											
CarTech Micro-Melt® Wear 20	0.62	0.65	0.79											

## Tungsten/Nickel-based (powder products)

Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech Micro-Melt® Amega NM	7.13	7.12	6.99									
CarTech Micro-Melt® NT-60	8.30	8.24	8.05									
CarTech Micro-Melt® NT-60KS	7.99	7.94	7.75									
CarTech Micro-Melt® NT-60SP	8.15	8.10	7.91									
CarTech Micro-Melt® NT-70SP	8.68	8.65	8.52									
CarTech Micro-Melt® NT-65	8.51	8.46	8.30									
CarTech Micro-Melt® NT-50 SPH	7.75	7.69	7.47									

## Other (powder products)

Alloy Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CarTech Micro-Melt®Pyrowear 53	0.50	0.53	0.56									
Micro-Melt® Glass Sealing 18	0.22	0.23	0.24									
CarTech UltraFine® 1.4923	0.61	0.62	0.72									
CarTech Micro-Melt® 901	2.62	2.61	2.45									
CarTech Micro-Melt® 5120	0.13	0.14	0.16									
CarTech UltraFine® 1.4848	1.38	1.33	1.24									

Unless otherwise noted, trademarks reg. U.S. Pat. & Tm. Off. to CRS Holdings, Inc., a subsidiary of Carpenter Technology Corporation.

Carpenter reserves the right to change base values and/or add producer premiums to accurately reflect the changes in raw material markets and prices.