Metal Clay Comparison Chart

Precious Metals											
Clay Name	**Metal type**	**Manufacturer**	**Available forms**	**Firing temp - lowest**	**Firing temp- Highest**	**Firing Time - Shortest**	**Firing Time - Longest**	**Carbon required**	**Shrinkage**	**Torch fireable**	**Firing Notes**
ArtClay Paper	Fine Silver	AIDA Chemical Industries	Paper type	1472F / 800C		30 minutes		No	10%	No	Place the piece into a cold kiln and raise the temperature to 800℃/1472℉ for 30 minutes or 850℃ /1562℉ for 20 minutes. Please take at least 10 minutes to reach those temperature.
ArtClay Paper Plus+	Fine Silver	AIDA Chemical Industries	Paper type	1472F / 800C		30 minutes		No	10%	No	Place the piece into a cold kiln and raise the temperature to 800℃/1472℉ for 30 minutes or 850℃ /1562℉ for 20 minutes. Please take at least 10 minutes to reach those temperature.
ArtClay Silver	Fine Silver	AIDA Chemical Industries	Lump, Paste, syringe	1200F / 650C	1600F / 870C	5 minutes	120 minutes	No	8-10%	Yes	Increase firing time for lower temperature firing schedules. Ex- 1200°F / 650°C for 30 minutes
ArtClay Silver 950	Enriched Sterling	AIDA Chemical Industries	Lump	1598F / 870C		90 minutes		No	10-13%	No	Kiln Fire: 2 Stage - Open Shelf 932°F / 500°C - 30 minutes 1598°F / 870°C - 1 hour
ArtClay Silver Overlay paste	Fine Silver	AIDA Chemical Industries	Paste	1200F / 650C		30 minutes		No		No	Firing times and temperature is varied depending on the surface paste is applied to
ArtClay Silver ST (Slow Tarnish)	Fine Silver	AIDA Chemical Industries	Lump, Paste, syringe	1472F / 800C		30 minutes		No	8-9%	Yes	Kiln firing suggested
ArtClay Silver Lite	Fine Silver and Glass	AIDA Chemical Industries	Lump								half the weight after firing. 93% silver, 7% glass
Art Clay Gold Paste 22K	Gold	AIDA Chemical Industries	Paste	1292F / 700C	1472F / 800C	30 minutes		No	8-10%	No	Firing time depends on medium applied to. COE90 glass recommended. Test pieces recommended for other COE.
Art Clay Gold 22K	Gold	AIDA Chemical Industries	Lump	1814F / 990C		60 minutes		No	8-10%	No	You may take out the piece when the kiln temperature falls below 600℃/1110℉
Aussie .999 Silver Standard	Fine Silver	Aussie Metal Clay	Lump	1292F / 700C	1562F / 830C	20 minutes	180 minutes	No	10-15%	Yes	Firing temp and time will depend on thickness of clay. Test strips recommended. Standard ramp speed of 4 or 1526F/830C. 700C/1292F–750C/1382F 30 minutes 3 cards 750C/1382F-800C/1492F 20 minutes 4 cards 800C/1492F-830C/1562F 30 min.– 2+ hrs 5+ cards
Aussie .999 Silver Flex	Fine Silver	Aussie Metal Clay	Lump	1292F / 700C	1562F / 830C	20 minutes	180 minutes	No	10-15%	Yes	Firing temp and time will depend on thickness of clay. Test strips recommended. Standard ramp speed of 4 or 1526F/830C. 700C/1292F–750C/1382F 30 minutes 3 cards 750C/1382F-800C/1492F 20 minutes 4 cards 800C/1492F-830C/1562F 30 min.– 2+ hrs 5+ cards
Aussie .999 Silver Origami	Fine Silver	Aussie Metal Clay	Lump	1292F / 700C	1562F / 830C	20 minutes	180 minutes	No	10-15%	Yes	Firing temp and time will depend on thickness of clay. Test strips recommended. Standard ramp speed of 4 or 1526F/830C. 700C/1292F–750C/1382F 30 minutes 3 cards 750C/1382F-800C/1492F 20 minutes 4 cards 800C/1492F-830C/1562F 30 min.– 2+ hrs 5+ cards
Aussie SS2 960 Sterling	Enriched Sterling / Britannia Silver	Aussie Metal Clay	Lump	1472F / 800C	1472F / 800C	20 minutes	180 minutes	No	12-15%	Yes	Firing temp and time will depend on thickness of clay. Test strips recommended. Standard ramp speed of 4 or 1526F/830C. 800C/1472F 30 minutes 3 cards thick 800C/1472F 45 minutes 4 cards thick 800C/1472F 1 hour .– 2+ hrs 5+ cards thick
Aussie Metal Clay 960 Argentium	Argentium	Aussie Metal Clay	Powder	1508F / 820C	1508F / 820C	30 minutes	120 minutes	No		Yes	Place pieces in cold kiln. Ramp speed 3. Test strips recommended. Heat hardening recommended. Do not quench. Firing temp and time will depend on thickness of clay. Test strips recommended. Standard ramp speed of 4 or 1526F/830C. 820C/1508F 30 minutes 3 cards thick 820C/1508F 45 minutes 4 cards thick 820C/1508F 1 hour .– 2+ hrs 5+ cards thick. Can be torch-fired in 8-9 minutes and OPEN SHELF kiln fired in 30 min (3 cards thick)
Project X .925 Sterling Silver Clay	Sterling Silver	Clay Revolution	Lump	1500F / 815C	1500F / 815C	75 minutes	85 minutes	Yes	24-28%	No	Recommended 2 Phase Firing: Phase 1 place on steel mesh in kiln, Ramp 1500°F/815 °C, Target 1000 °F/537 °C, Hold 15 minutes. Phase 2 place in carbon container in kiln, Ramp 1500 °F/815 °C, Target 1500 °F/815 °C, Hold 1 hour
Project X .960	Enriched Sterling / Britannia Silver	Clay Revolution	Lump	1600F / 871C	1600F / 871C	60 minutes	60 minutes	No	22-26%	No	Suggested firing schedule on ceramic or fiber board shelf in kiln: Ramp – Full, Target Temperature – 1,600°F/871°C, Hold time – 1 hour
Project X .960 Flex	Enriched Sterling / Britannia Silver	Clay Revolution	Lump	1600F / 871C	1600F / 871C	60 minutes	60 minutes	No	22-26%	No	Suggested firing schedule on ceramic or fiber board shelf in kiln: Ramp – Full, Target Temperature – 1,600°F/871°C, Hold time – 1 hour To sand or carve Flex, it is necessary to dry the object by heang it to approximately 300° F/150°C for approximately 30 minutes.
Project X .999 Oil Paste	Fine Silver	Clay Revolution	Paste	1110F / 600C	1650F / 900C	30 minutes	120 minutes	No	24-28%	Yes	Firing options: 1,650°F/900°C for 30 minutes to achieve highest hardness and maximum durability; or for low temperature options 1,110°F/600°C for 45 minutes; or torch fire at high temperature for 2 minutes or longer.
Project X .999 Silver Clay	Fine Silver	Clay Revolution	Lump	1110F / 600C	1650F / 900C	30 minutes	120 minutes	No	24-28%	Yes	Firing options: 1,650°F/900°C for 30 minutes to achieve highest hardness and maximum durability; or for low temperature options 1,110°F/600°C for 45 minutes; or torch fire at high temperature for 2 minutes or longer.
Project X .999 Silver Clay Flex	Fine Silver	Clay Revolution	Lump	1110F / 600C	1650F / 900C	30 minutes	120 minutes	No	24-28%	Yes	Firing options: 1,650°F/900°C for 30 minutes to achieve highest hardness and maximum durability; or for low temperature options 1,110°F/600°C for 45 minutes; or torch fire at high temperature for 2 minutes or longer. To sand or carve Flex, it is necessary to dry the object by heang it to approximately 300° F/150°C for approximately 30 minutes.
Project X .999 Water Paste	Fine Silver	Clay Revolution	Paste	1110F / 600C	1650F / 900C	30 minutes	120 minutes	No	24-28%	Yes	Firing options: 1,650°F/900°C for 30 minutes to achieve highest hardness and maximum durability; or for low temperature options 1,110°F/600°C for 45 minutes; or torch fire at high temperature for 2 minutes or longer.
EZ 960	Enriched Sterling / Britannia Silver	CoolTools	Lump, paste, syringe	1600F / 871C	1675F / 913C	15 minutes	8 hours	No	10-11%	No	Fire open shelf on a raised hard ceramic kiln shelf. Fire at full ramp speed at any of the times and temperatures below: 1675°F / 913°C 2 hours, 1700°F / 927°C 1 hour, 1725°F / 941°C 15 minutes For low temperature kilns: 1650°F / 899°C 4 hours, 1625°F /885°C 4 hours, 1600°F / 871°C 8 hours
EZ 999	Fine Silver	CoolTools	Lump, paste, syringe	1400F / 760C	1650F / 900C	30 minutes	6 hours	No	13%	No	Fire open shelf on a raised ceramic kiln shelf. Fire at full ramp speed at any of the times and temperatures below: 1650°F / 900°C 30 minutes – 2 hours (*depending on piece size), 1600°F / 871°C 1 hour, 1550°F / 843°C 3 hours, 1450°F / 788°C 4 hours, 1400°F / 760°C 6 hours
Phoenix Torch-Fireable Fine Silver	Fine Silver	CoolTools	Lump, paste, syringe	1100F / 593C	1650F / 900C	5 minutes	120 minutes	No	15-20%	Yes	This Clay may be successfully fired on a ceramic fiber board or on a hard ceramic kiln shelf. For firings that require support, vermiculite (superfine or standard) or alumina hydrate in a silica dish may be used. Superwool fiber blanket can also be used. 1100°F / 593°C for 45 minutes, 1200°F / 649°C for 30 minutes, 1290°F / 699°C for 15 minutes, 1380°F / 749°C for 10 minutes, 1475°F / 802°C for 5 minutes, 1650°F / 899°C for 5 minutes minimum, 2 hours for optimal sintering/maximum strength
FYI fine silver clay	Fine Silver	MetalClays	Lump, Syringe	1550F / 843C	1650F / 900C	30 minutes	120 minutes	No	28-30%	No	Place in cold kiln, can be quenched or air cooled after firing completes. Fire at full ramp. Time to fire depends on size of piece
FYI fine silver clay - Low Shrinkage	Fine Silver	MetalClays	Powder	1600F / 871C	1650F / 900C	60 minutes	60 minutes	No	13%	Yes	
Metal Magic 960	Enriched Sterling / Britannia Silver	MetalClays	Lump	1600F / 871C	1600F / 871C	30 minutes	90 minutes	No	10%	No	Do not exceed 250F/120C for drying, allow to cool to 250F/120C before removing from kiln
Metal Magic Fine Silver clay	Fine Silver	MetalClays	Lump	1600F / 871C	1600F / 871C	30 minutes	90 minutes	No	15%	Yes	Do not exceed 250F/120C for drying, good for cutting with computerized cutters

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Meteor .999 Classic	Fine Silver	Meteor	Lump	1650F / 900C	1650F / 900C	60 minutes	60 minutes	No			Start with a cold kiln.
Meteor .999 Ultrafine	Fine Silver	Meteor	Lump	1650F / 900C	1650F / 900C	50 minutes	60 minutes	No			Start with a cold kiln.
PMC +	Fine Silver	Mitsubishi Materials	Lump	1470F / 800C	1652F / 900C	10 minutes (at 1652)	30 minutes	No	12-15%	No	for low temp firing, increase time. 1470F/800C should be fired minimum 30 minutes
PMC 3	Fine Silver	Mitsubishi Materials	Lump, paste, syringe	1112F / 600C	1650F / 900C	10 minutes	120 minutes	No	10-15%	Yes	Firing ranges: 1290F for 10 minutes, 1200F for 20 minutes, 1110F for 45 minutes. 1112F for 30 minutes recommended on package
PMC 925 Sterling	Sterling Silver	Mitsubishi Materials	Lump	1500F / 815C	1500F / 815C	30 minutes	60 minutes	Yes	15-20%	No	2 part firing recommended- part 1: 1004F/540C 30 min, part 2 (in carbon): 1500F/815C 30 min. Single firing is 1500 F/815C 30 minutes in carbon
PMC 950 one-fire sterling	Enriched Sterling	Mitsubishi Materials	Lump	1600F / 871C	1600F / 871C	60 minutes	60 minutes	No	15-20%	No	
PMC Classic	Fine Silver	Mitsubishi Materials	Lump	1650F / 900C	1650F / 900C	120 minutes	120 minutes	No	30%	No	
PMC Flex	Fine Silver	Mitsubishi Materials	Lump	1112F / 600C	1650F / 900C	10 minutes	120 minutes	No	10-15%	Yes	Firing ranges: 1290F for 10 minutes, 1200F for 20 minutes, 1110F for 45 minutes. 1112F for 30 minutes recommended on package
PMC Pro	Constitutional Silver / Coin Silver	Mitsubishi Materials	Lump	1400F / 760C	1400F / 760C	60 minutes	120 minutes	Yes	10-20%	No	
PMC sheet (PMC+)	Fine Silver	Mitsubishi Materials	Paper type	1472F / 800C	1650F / 900C	10 minutes (at 1650)	30 minutes	No	10-12%	No	for low temp firing, increase time. 1472F/800C should be fired minimum 30 minutes
PMC Aura 22	Gold	Mitsubishi Materials	Paste					No		Yes	For application on sintered or milled silver, glass or glazed china.
PMC 22K gold	Gold	Mitsubishi Materials	Lump	1290F / 700C	1650F / 900C	10 minutes	90 minutes	No	12-19%	Yes	Firing temperatures: 1,290°F (700°C) for 90 mins.; 1,380°F (750°C) for 60 mins.; 1,560°F (850°C) for 30 mins.; or 1,650°F (900°C) for 10 mins.
Prometheus 950 Silver	Enriched Sterling	Prometheus Craft & Hobby	Lump, paste, syringe	1470F / 800C	1470F / 800C	60 minutes	60 minutes	No	15%	No	Load kiln room temp and fire full ramp. Can be removed from kiln hot
Prometheus 999 Silver	Fine Silver	Prometheus Craft & Hobby	Lump, paste, syringe	1058F / 570C	1295F / 700C	60 minutes	60 minutes	No	12-13%	No	Load kiln room temp and fire full ramp. Can be removed from kiln hot. Higher temp provides slightly more shrinkage, more flexibility after firing.

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If you find incorrect information on this resource or are a manufacturer and wish to provide additional information, please email brandy@bmb-designs.com for corrections

Base Metals											
Clay Name	Metal Type	Manufacturer	Available forms	Firing temp - lowest	Firing temp- Highest	Firing Time - Shortest	Firing Time - Longest	Carbon required	Shrinkage	Torch fireable	Firing Notes
ArtClay Copper	Copper	AIDA Chemical Industries	Lump	1778F / 970C		30 minutes		No	10%		Quenching recommended to remove oxidation
ArtClay Bronze	Bronze	AIDA Chemical Industries	Lump	1508F / 820C		140 minutes		Yes	10-13%	No	2 part firing in activated Carbon required. Ramp up : Make sure to place the box in far side of firing chamber in the cold kiln, ramp up to 820℃/1508℉ using more than 20 mins of ramp up time. Holding : Hold at 820℃/1508℉ for 2hrs. Cooling : Turn off the kiln, and take out the metal box after cooling down to a room temperature.
Five Star Light Bronze	Bronze	Clay Revolution	Lump	1400F / 760C		30 minutes	60 minutes	Yes		No	Kiln Only. 2 options Stage1: on mesh, hot or cold kiln. Fire to 1000F/537C for 5 minutes. let cool Stage 2: Standard- SS container with lid in activated coconut carbon, hot or cold kiln. Fire 1 hour at the temp in Firing Temp - Lowest. let cool. Stage 2: Fast Fire - SS Container with NO lid in activated carbon, hot or cold kiln. Fire 30 minutes at the temp in Firing Temp - Lowest. Let cool or quench.
Five Star Bronze	Bronze	Clay Revolution	Lump	1500F / 815C		5 minutes	60 minutes	No		Yes	Torch or Kiln. 2 options for Kiln: Stage1: on mesh, hot or cold kiln. Fire to 1000F/537C for 5 minutes. let cool Stage 2: Standard- SS container with lid in activated coconut carbon, hot or cold kiln. Fire 1 hour at the temp in Firing Temp - Lowest. let cool. Stage 2: Fast Fire - SS Container with NO lid in activated carbon, hot or cold kiln. Fire 30 minutes at the temp in Firing Temp - Lowest. Let cool or quench.
Five Star Copper	Copper	Clay Revolution	Lump	1700F / 926C		5 minutes	60 minutes	No	12-15%	Yes	Torch or Kiln. 2 options for Kiln: Stage1: on mesh, hot or cold kiln. Fire to 1000F/537C for 5 minutes. let cool Stage 2: Standard- SS container with lid in activated coconut carbon, hot or cold kiln. Fire 1 hour at the temp in Firing Temp - Lowest. let cool. Stage 2: Fast Fire - SS Container with NO lid in activated carbon, hot or cold kiln. Fire 30 minutes at the temp in Firing Temp - Lowest. Let cool or quench.
Five Star White Bronze	Bronze	Clay Revolution	Lump	1300F / 704C		30 minutes	60 minutes	Yes		No	Kiln Only. 2 options Stage1: on mesh, hot or cold kiln. Fire to 1000F/537C for 5 minutes. let cool Stage 2: Standard- SS container with lid in activated coconut carbon, hot or cold kiln. Fire 1 hour at the temp in Firing Temp - Lowest. let cool. Stage 2: Fast Fire - SS Container with NO lid in activated carbon, hot or cold kiln. Fire 30 minutes at the temp in Firing Temp - Lowest. Let cool or quench.
Five Star Red Bronze	Bronze	Clay Revolution	Lump	1600F / 871C		5 minutes	60 minutes	No		Yes	Torch or Kiln. 2 options for Kiln: Stage1: on mesh, hot or cold kiln. Fire to 1000F/537C for 5 minutes. let cool Stage 2: Standard- SS container with lid in activated coconut carbon, hot or cold kiln. Fire 1 hour at the temp in Firing Temp - Lowest. let cool. Stage 2: Fast Fire - SS Container with NO lid in activated carbon, hot or cold kiln. Fire 30 minutes at the temp in Firing Temp - Lowest. Let cool or quench.
Prometheus Jeweller's Sterling White Bronze	Bronze	Prometheus	Lump, Syringe	1420F / 770C		135 minutes		Yes	6-10%	No	Step.1 Place the dried pieces on a stainless steel mesh and put it into a cold kiln, let it raise to 500°C/932°F and fire for 15 minutes. Take it out on to a fireproof surface and let it cool down. Step.2 Put approximately 3 cm. of activated carbon to the bottom of a steel container. Place the pieces with at least 1.5 cm space between each other and fill the container with activated carbon, close it and put it into the preheated kiln to 770°C / 1420°F. Let the kiln raise to the target temperature again and fire it for 2 hours. When the firing is completed, either leave it to cool down in the kiln or, carefully take it out and leave it on a heat isolated surface until it is cold enough to take your pieces out.
Prometheus Troy Bronze Clay	Bronze	Prometheus	Lump, Syringe	1500F / 850C		105 minutes		Yes	5%	No	Step.1 Place the dried piece (or pieces) on a stainless steel mesh and put it in to the cold kiln and let it raise to 500°C/ 932°F or put it on a kitchen stove. Fire it for 15 minutes, take it on to a fire proof surface and let it cool down. Step.2 Put approximately 3 cm. of activated carbon to the bottom of a steel container. Place the pieces with at least 1.5 cm space between each other and fill the container with activated carbon, close it and put it into the preheated kiln to 850°C/1500°F. Let the kiln raise to the target temperature again and fire it for 90 minutes. When the firing is completed, either leave it to cool down in the kiln or, carefully take it out and leave it on a heat isolated surface until it is cold enough to take your pieces out.
Prometheus Bronze Clay	Bronze	Prometheus	Lump, Syringe	1500F / 850C	1700F / 920C	30 minutes	105 minutes	No	6-10%	Yes	3 options- carbon recommended by manufacturer CARBON METHOD: This is a 2-step-method. Step.1 Place the dried piece (or pieces) on a stainless steel mesh and put it in to the cold kiln and let it raise to 500°C/ 932°F or put it on a kitchen stove. Fire it for 15 minutes, take it on to a fire proof surface and let it cool down. Step.2 Put approximately 3 cm. of activated carbon to the bottom of a steel container. Place the pieces with at least 1.5 cm space between each other and fill the container with activated carbon, close it and put it into the preheated kiln to 850°C/1570°F. Let the kiln raise to the target temperature again and fire it for 90 minutes. When the firing is completed, either leave it to cool down in the kiln or, carefully take it out and leave it on a heat isolated surface until it is cold enough to take your pieces out. OPEN SHELF FIRING Place the dried piece (or pieces) on a stainless steel mesh and put it in to the pre-heated kiln to 920°C/1700°F.* Wait for the kiln to raise up to its target temperature again, then start timing your firing for 30 minutes. When the firing is completed, take out the piece, put it on a heat proof surface and wait for it to cool down or much better, quench it in water while it is hot.** Most of the fire scale will fall of the piece. If any left, leave it in hot pickling solution for some time then rinse with water. * Most kilns are cooler near the front door, so put them close to the back of the heating chamber. ** Beware of water vapour. TORCH FIRING Place the dried piece on a stainless steel mesh. Put the mesh on a fiber brick or a thick construction brick. First start heating the piece very slowly until you see it producing a flame like candle and smoke which means that the binder is burning. Once the flame and smoke disappear, start heating the piece with full power until you achieve light-orange colour and continue firing at least 5-10 minutes carefully observing that the piece keeps this light-orange colour during whole time. Avoid melting. After firing is completed, either leave it to cool down or quench in water. Leave the fired piece in hot Picklean® solution to get rid of any fire scale if any left."

Base Metals											
Clay Name	Metal Type	Manufacturer	Available forms	Firing temp - lowest	Firing temp- Highest	Firing Time - Shortest	Firing Time - Longest	Carbon required	Shrinkage	Torch fireable	Firing Notes
Prometheus Copper Clay	Copper	Prometheus	Lump, Syringe	1500F / 850C	1700F / 920C	30 minutes	105 minutes	No	6-10%	Yes	3 options- carbon recommended by manufacturer CARBON METHOD: This is a 2-step-method. Step.1 Place the dried piece (or pieces) on a stainless steel mesh and put it in to the cold kiln and let it raise to 500°C/ 932°F or put it on a kitchen stove. Fire it for 15 minutes, take it on to a fire proof surface and let it cool down. Step.2 Put approximately 3 cm. of activated carbon to the bottom of a steel container. Place the pieces with at least 1.5 cm space between each other and fill the container with activated carbon, close it and put it into the preheated kiln to 850°C/1570°F. Let the kiln raise to the target temperature again and fire it for 90 minutes. When the firing is completed, either leave it to cool down in the kiln or, carefully take it out and leave it on a heat isolated surface until it is cold enough to take your pieces out. OPEN SHELF FIRING Place the dried piece (or pieces) on a stainless steel mesh and put it in to the pre-heated kiln to 920°C/1700°F.* Wait for the kiln to raise up to its target temperature again, then start timing your firing for 30 minutes. When the firing is completed, take out the piece, put it on a heat proof surface and wait for it to cool down or much better, quench it in water while it is hot.** Most of the fire scale will fall of the piece. If any left, leave it in hot pickling solution for some time then rinse with water. * Most kilns are cooler near the front door, so put them close to the back of the heating chamber. ** Beware of water vapour. TORCH FIRING Place the dried piece on a stainless steel mesh. Put the mesh on a fiber brick or a thick construction brick. First start heating the piece very slowly until you see it producing a flame like candle and smoke which means that the binder is burning. Once the flame and smoke disappear, start heating the piece with full power until you achieve light-orange colour and continue firing at least 5-10 minutes carefully observing that the piece keeps this light-orange colour during whole time. Avoid melting. After firing is completed, either leave it to cool down or quench in water. Leave the fired piece in hot Picklean® solution to get rid of any fire scale if any left.
Prometheus Sunny Bronze Clay	Bronze	Prometheus	Lump, Syringe	1500F / 850C	1500F / 850C		75 minutes	No	6-10%	Yes	3 options- carbon recommended by manufacturer CARBON METHOD: This is a 2-step-method. Step.1 Place the dried piece (or pieces) on a stainless steel mesh and put it in to the cold kiln and let it raise to 500°C/ 932°F or put it on a kitchen stove. Fire it for 15 minutes, take it on to a fire proof surface and let it cool down. Step.2 Put approximately 3 cm. of activated carbon to the bottom of a steel container. Place the pieces with at least 1.5 cm space between each other and fill the container with activated carbon, close it and put it into the preheated kiln to 820°C/1500°F. Let the kiln raise to the target temperature again and fire it for 60 minutes. When the firing is completed, either leave it to cool down in the kiln or, carefully take it out and leave it on a heat isolated surface until it is cold enough to take your pieces out. OPEN SHELF FIRING Place the dried piece (or pieces) on a stainless steel mesh and put it in to the pre-heated kiln to 820°C/1500°F.* Wait for the kiln to raise up to its target temperature again, then start timing your firing for 30 minutes. When the firing is completed, take out the piece, put it on a heat proof surface and wait for it to cool down or much better, quench it in water while it is hot.** Most of the fire scale will fall of the piece. If any left, leave it in hot pickling solution for some time then rinse with water. * Most kilns are cooler near the front door, so put them close to the back of the heating chamber. ** Beware of water vapour. TORCH FIRING Place the dried piece on a stainless steel mesh. Put the mesh on a fiber brick or a thick construction brick. First start heating the piece very slowly until you see it producing a flame like candle and smoke which means that the binder is burning. Once the flame and smoke disappear, start heating the piece with full power until you achieve orange-red colour and continue firing at least 5-10 minutes carefully observing that the piece keeps this orange-red colour during whole time. Avoid melting. After firing is completed, either leave it to cool down or quench in water. Leave the fired piece in hot Picklean® solution to get rid of any fire scale if any left.
Prometheus White Bronze	Bronze	Prometheus	Lump, Syringe	1420F / 770C		135 minutes		Yes	6-10%	No	Step.1 Place the dried pieces on a stainless steel mesh and put it into a cold kiln, let it raise to 500°C/932°F and fire for 15 minutes. Take it out on to a fireproof surface and let it cool down. Step.2 Put approximately 3 cm. of activated carbon to the bottom of a steel container. Place the pieces with at least 1.5 cm space between each other and fill the container with activated carbon, close it and put it into the preheated kiln to 770°C / 1420°F. Let the kiln raise to the target temperature again and fire it for 2 hours. When the firing is completed, either leave it to cool down in the kiln or, carefully take it out and leave it on a heat isolated surface until it is cold enough to take your pieces out.
Prometheus Jeweller's Greenish Yellow Bronze	Bronze	Prometheus	Lump, Syringe	1470F / 800C				Yes	6-10%	No	Step.1 Place the dried pieces on a stainless steel mesh and put it into a cold kiln, let it raise to 500°C/932°F and fire for 15 minutes. Take it out on to a fireproof surface and let it cool down. Step.2 Put approximately 3 cm. of activated carbon to the bottom of a steel container. Place the pieces with at least 1.5 cm space between each other and fill the container with activated carbon, close it and put it into the preheated kiln to 800°C / 1470°F. Let the kiln raise to the target temperature again and fire it for 1 hour. When the firing is completed, either leave it to cool down in the kiln or, carefully take it out and leave it on a heat isolated surface until it is cold enough to take your pieces out.
Prometheus Jeweller's Light Yellow Bronze	Bronze	Prometheus	Lump, Syringe	1436F / 780C		75 minutes		Yes	6-10%	No	Step.1 Place the dried pieces on a stainless steel mesh and put it into a cold kiln, let it raise to 500°C/932°F and fire for 15 minutes. Take it out on to a fireproof surface and let it cool down. Step.2 Put approximately 3 cm. of activated carbon to the bottom of a steel container. Place the pieces with at least 1.5 cm space between each other and fill the container with activated carbon, close it and put it into the preheated kiln to 780°C / 1436°F. Let the kiln raise to the target temperature again and fire it for 1 hour. When the firing is completed, either leave it to cool down in the kiln or, carefully take it out and leave it on a heat isolated surface until it is cold enough to take your pieces out.
Metal Adventures BronzClay	Bronze	Metal Adventures	Lump	1500F / 820C	1550F / 843C	2 hours	3 hours	Yes	17-20%	No	For pieces 1.7–1.75mm (6 cards) thick or less: Ramp at 500°F/hour (278°C/hour) to 1550°F (843°C) and hold for 2 hours (total firing time, including ramp-time, will be between 4 and 5 hours). For pieces thicker than 1.7–1.75mm (6 cards) and less than 10mm: Ramp at 250° F/hour (139°C/hour) to 1550°F (843°C) and hold for 3 hours (total firing time, including ramp-time, will be about 9 hours).
Metal Adventures CopprClay	Copper	Metal Adventures	Lump	1750F / 954C	1800F / 982C	30 minutes	3 hours	No	20-22%	No	Must fire in Coconut shell based carbon if firing in carbon. Will not sinter correctly in coal-based carbon. Two Phase firing schedule recommended for pieces to be enameled. Regardless of thickness (embedded in coconut shell–based activated carbon): Ramp at full speed to 1700°F–1800°F (927°C–982°C) and hold for 3 hours (total firing time, including ramp-time, will be about 4 hours). Most firings perform well at 1700°F. However, if you discover that your pieces are not sintering properly, try firing them at 1800°F. Please Note: Blistering may occur at 1800°F; if this occurs, slightly decrease the firing temperature.
Metal Adventures White CopprClay	Copper	Metal Adventures	Lump	1700F / 927C	1950F / 1066C	15 minutes	6 hours	Yes	20-25%	No	For best results, do not fire more than 100 grams of clay at once; overloading may cause poor sintering. Phase 1 (open-shelf fire)—Place dried piece(s) on a stainless steel mesh rack inside the kiln. Fire with a ramp of 500°F/hour (270°C/hour) to 600°F (320°C), and hold for 10 minutes. Phase 2 (sintering)—Regardless of thickness (embedded in activated carbon): Ramp at full speed to 1850°F (1010°C) and hold for 2 hours. Allow the pan to cool in the kiln
Metal Adventures FastFire BronzClay	Bronze	Metal Adventures	Lump	1525F / 930C		60 minutes		Yes	5-10%	No	Must fire in Coconut shell based carbon. Will not sinter correctly in coal-based carbon. Regardless of thickness (embedded in coconut shell–based activated carbon): Ramp at full speed to 1525°F (829°C) and hold for 1 hour (total firing time, including ramp-time, will be about 2 hours). If you discover that your pieces are not sintering properly, try raising the firing temperature by 50–100°F. IMPORTANT: Test fire a piece of FASTfire BRONZclay™ to ensure you have the optimal firing temperature before firing your designs. Please Note: Use a slotted lid on the firing pan.
Aussie Antarctic Moonlight	Bronze	Aussie Metal Clay	Lump	1425F / 775C		150 minutes	180 minutes	Yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.
Aussie Silver Bronze	Bronze	Aussie Metal Clay	Lump	1418F / 770C	1499F / 815C	150 minutes	180 minutes	Yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.

Base Metals											
Clay Name	Metal Type	Manufacturer	Available forms	Firing temp - lowest	Firing temp- Highest	Firing Time - Shortest	Firing Time - Longest	Carbon required	Shrinkage	Torch fireable	Firing Notes
Aussie Ruby Bronze / Origami	Bronze	Aussie Metal Clay	Lump	1490F / 810C	1562F / 850C	150 minutes	180 minutes	Yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.
Aussie Desert Sun / Origami	Bronze	Aussie Metal Clay	Lump	1652F / 900C	1724F / 940C	150 minutes	180 minutes	Yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.
Aussie Gold Bronze / Origami	Bronze	Aussie Metal Clay	Lump	1427F / 775C	1526F / 830C	150 minutes	180 minutes	Yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.
Aussie Antarctic Sand	Bronze	Aussie Metal Clay	Lump	1423F / 773C	1504F / 818C	150 minutes	180 minutes	Yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.
Aussie Ironbark	Bronze	Aussie Metal Clay	Powder	1427F / 775C	1508F / 820C	150 minutes	180 minutes	Yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.
Aussie Pink Brass	Bronze	Aussie Metal Clay	Powder	1778F / 970C	1814F / 990C	150 minutes	180 minutes	Yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.
Aussie Premium Copper / Origami	Copper	Aussie Metal Clay	Lump	1778F / 970C	1814F / 990C	150 minutes	180 minutes	Yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.
Aussie Premium Silver Copper / Origami	Copper	Aussie Metal Clay	Lump	1778F / 970C	1814F / 990C	150 minutes	180 minutes	Yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.
Aussie Snow White Copper	Copper	Aussie Metal Clay	Lump	1778F / 970C	1814F / 990C	150 minutes	180 minutes	yes	12-15%	No	2 part firing in coconut carbon. Stage 1: Ramp Speed 4 (1526F/830C) to 752F/400C - 842F/450C for 30 minutes. Allow to cool to 392F/200C before stage 2. Stage 2: Ramp speed 4 to firing temp and time in chart.
Cyprus Copper	Copper	Cool Tools	Lump	1600F / 871C	1600F / 871C	210 minutes	210 minutes	Yes	20%	No	Full ramp to 650°F/343°C and hold for 30 minutes. Full ramp to 1600°F / 871°C and hold for 3 hours. At least 1" of activated carbon spread on the bottom. Arrange the pieces with at least 1/2" of space between them. Cover all pieces with at least 1" of activated carbon. Lid should be ajar. Coconut carbon recommended. Magic Carbon not recommended.
Aureus Bright Bronze	Bronze	Cool Tools	Lump	1400F / 760C	1400F/ 760C	150 minutes	150 minutes	Yes	10-11%	No	Full ramp to 650°F/ 343°C and hold for 30 minutes. Full ramp to 1400°F/ 760°C and hold for 2 hours. At least 1" of activated carbon spread on the bottom. Arrange the pieces with at least 1/2" of space between them. Cover all pieces with at least 1" of activated carbon. Lid should be ajar Coconut carbon recommended. Magic Carbon not recommended.
Goldie Bronze Hard	Bronze	Goldie	Powder	1510F / 820C		60 minutes	90 minutes	Yes	8-11%	No	Lay the pieces in a stainless steel firing container on a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") under the pieces. Make sure the pieces are at least 1 cm (1/2") apart. Place the open container into a cold kiln and fire at full ramp to 350°C (670°F) and hold for 30 minutes. You can use a steel net during the first stage, so the air access during the binder firing is better, so the first stage can be reduced to 20 minutes. The practice has proven this to be a more secure method, the whole binder might burn up if we put the element in the coal too deep. During the first stage, for safety reasons, you should wait for the elements to cool down, and then gently put the fired elements in a container with activated coconut shell carbon. Carefully remove the container from the kiln and place on a heatproof surface. Fill the container with a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") over the pieces. Cover with a stainless steel lid and place back into the kiln. Full ramp to 820°C (1510°F) and hold for 40 minute. In case of large elements, the time should be properly extended to 1 hour. Fired pieces can be removed from the kiln hot or cold
Goldie Bronze Mid	Bronze	Goldie	Powder	1508F / 820C		70 minutes		Yes	8-11%	No	Lay the pieces in a stainless steel firing container on a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") under the pieces. Make sure the pieces are at least 1 cm (1/2") apart. Place the open container into a cold kiln and fire at full ramp to 350°C (670°F) and hold for 30 minutes. You can use a steel net during the first stage, so the air access during the binder firing is better, so the first stage can be reduced to 20 minutes. The practice has proven this to be a more secure method, the whole binder might burn up if we put the element in the coal too deep. During the first stage, for safety reasons, you should wait for the elements to cool down, and then gently put the fired elements in a container with activated coconut shell carbon. Carefully remove the container from the kiln and place on a heatproof surface. Fill the container with a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") over the pieces. Cover with a stainless steel lid and place back into the kiln. Full ramp to 820°C (1510°F) and hold for 40 minute. In case of large elements, the time should be properly extended to 1 hour. Fired pieces can be removed from the kiln hot or cold
Goldie Bronze Soft	Bronze	Goldie	Powder	1508F / 820C		70 minutes		Yes	8-11%	No	Lay the pieces in a stainless steel firing container on a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") under the pieces. Make sure the pieces are at least 1 cm (1/2") apart. Place the open container into a cold kiln and fire at full ramp to 350°C (670°F) and hold for 30 minutes. You can use a steel net during the first stage, so the air access during the binder firing is better, so the first stage can be reduced to 20 minutes. The practice has proven this to be a more secure method, the whole binder might burn up if we put the element in the coal too deep. During the first stage, for safety reasons, you should wait for the elements to cool down, and then gently put the fired elements in a container with activated coconut shell carbon. Carefully remove the container from the kiln and place on a heatproof surface. Fill the container with a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") over the pieces. Cover with a stainless steel lid and place back into the kiln. Full ramp to 820°C (1510°F) and hold for 40 minute. In case of large elements, the time should be properly extended to 1 hour. Fired pieces can be removed from the kiln hot or cold
Goldie Copper	Copper	Goldie	Powder	1740F / 960C		140 minutes		Yes	14-20%	No	Lay the pieces in a stainless steel firing container on a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") under the pieces. Make sure the pieces are at least 1 cm (1/2") apart. Place the open container into a cold kiln and fire at full ramp to 580°C (1080°F) and hold for 30 minutes. Carefully remove the container from the kiln and place on a heatproof surface. Fill the container with a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") over the pieces, and place back into the kiln. Full ramp to 960°C (1740°F) and hold for 1h 50min (old formula 2 hours). Fired pieces can be removed from the kiln hot or cold.
Goldie Snow Bronze	Bronze	Goldie	Powder	1350F / 730C	1370F / 760C	140 minutes		Yes	16-30%	No	Shrinkage depends on the shape and size as well as the temperature fired. Ensure the clay is completely dry before firing. Any moisture will boil and ruin the piece. ·Lay the pieces in a stainless steel firing container on a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") under the pieces. Make sure the pieces are at least 1 cm (1/2") apart. Place the open container into a cold kiln and fire at full ramp to 350°C (670°F) and hold for 30 minutes. ·Carefully remove the container from the kiln and place on a heatproof surface. Fill the container with a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") over the pieces, and place back into the kiln. ·Full ramp to 730-760°C (1350-1370°F) and hold for 1h50 min.(The temperature depends on the thermal efficiency of the kiln. The smaller kilns – higher temperature). This period of time can be reduced even to an hour in case of small elements, we encourage you to experiment. ·Fired pieces can be removed from the kiln hot or cold.

Base Metals											
Clay Name	Metal Type	Manufacturer	Available forms	Firing temp - lowest	Firing temp- Highest	Firing Time - Shortest	Firing Time - Longest	Carbon required	Shrinkage	Torch fireable	Firing Notes
Goldie Roman Bronze	Bronze	Goldie	Powder	1560F / 845C		120 minutes		Yes	10-12%	No	Lay the pieces in a stainless steel firing container on a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") under the pieces. Make sure the pieces are at least 1 cm (1/2") apart. Place the open container into a cold kiln and fire at full ramp to 350°C (670°F) and hold for 30 minutes. Carefully remove the container from the kiln and place on a heatproof surface. Fill the container with a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") over the pieces, and place back into the kiln. Full ramp to 845°C (1560°F) and hold for 1h30min. This period of time , can be reduced even to an hour in the case of small elements, we encourage you to experiment. Fired pieces can be removed from the kiln hot or cold
Goldie de la Rosa Bronze	Bronze	Goldie	Powder	1715F / 936C		110 minutes	140 minutes	Yes	14-19%	No	Lay the pieces in a stainless steel firing container on a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") under the pieces. Make sure the pieces are at least 1 cm (1/2") apart. Place the open container into a cold kiln and fire at full ramp to 350°C (670°F) and hold for 30 minutes. Carefully remove the container from the kiln and place on a heatproof surface. Fill the container with a layer of activated coconut shell carbon with a minimum depth 1 cm (1/2") over the pieces, and place back into the kiln. Full ramp to 935°C (1715°F) and hold for 1h20min, (old formula – 1h30min), for pieces above 100g, 1h 50min (old formula 2h). Fired pieces can be removed from the kiln hot or cold
Goldie White Iron	Iron	Goldie	Powder	1598F / 870C		150 minutes		Yes	5-11%	No	2 stage firing in activated coconut shell carbon. Stage 1: 752F/400C for 30 minutes Stage 2: 1598F/870C for 2 hours
Goldie Yellow Iron	Iron	Goldie	Powder	1598F / 870C		150 minutes		Yes	5-14%	No	2 stage firing in activated coconut shell carbon. Stage 1: 1076F/580C for 30 minutes Stage 2: 1598F/870C for 2 hours
Goldie Sunset Iron	Iron	Goldie	Powder	1598F / 870C		120 minutes		Yes	8-16%	No	2 stage firing in activated coconut shell carbon. Stage 1: 752F/400C for 30 minutes Stage 2: 1598F/870C for 1.5 hours
Goldie Lemon Brass	Brass	Goldie	Powder	1598F / 870C		150 minutes		Yes	9-15%	No	Lay the pieces in a stainless steel firing container on a layer of activated coconut shell carbon with a minimum depth 1/2" (1 cm) under the pieces. Do not cover with carbon for this step. Make sure the pieces are at least 1/2" (1 cm) apart. Place the open container into a cold kiln and fire at full ramp to 580°C(1076°F) and hold for 30 minutes for pieces up to 100g. Clay change color to dark brown. Carefully remove the container from the kiln and place on a heatproof surface. Fill the container with a layer of activated coconut shell carbon with a minimum depth 5 cm (2in) over the pieces, in order to reduce evaporation of tin, cover the container with a lid, and place back into the kiln. Do a full ramp to 870°C(1598°F) and hold for 2 hours. Fired pieces can be removed from the kiln hot or cold.
Goldie Red Iron	Iron	Goldie	Powder	1598F / 870C		150 minutes		Yes	12-18%	No	2 stage firing in activated coconut shell carbon. Stage 1: 752F/400C for 30 minutes Stage 2: 1598F/870C for 2 hours
Goldie Cherry Iron	Iron	Goldie	Powder	1598F / 870C		150 minutes		Yes	9-17%	No	2 stage firing in activated coconut shell carbon. Stage 1: 752F/400C for 30 minutes Stage 2: 1598F/870C for 2 hours
Goldie Sculptors Copper	Copper	Goldie	Powder	1760F / 960C		70 minutes	3 hours	Yes	15-23%	No	Lay the pieces in a stainless steel firing container on a layer of activated coconut shell carbon with a minimum depth 1/2" (1 cm) under the pieces. Do not cover with carbon for this step. Make sure the pieces are at least 1/2" (1 cm) apart. Place the open container into a cold kiln and fire at full ramp to 580°C(1076°F) and hold for 30 minutes for pieces up to 100g. Pieces larger than 100g hold for 45 minutes, larger than 200g – 45 minutes, larger than 200g – 1 hour, larger than 300g – 1.5 hours. Carefully remove the container from the kiln and place on a heatproof surface. Fill the container with a layer of activated coconut shell carbon with a minimum depth 1/2" (1 cm) over the pieces and place back into the kiln. Do a full ramp to 960°C(1760°F) and hold for 1 hour 10 min for pieces up to 100g. In the case of large elements, the time should be properly extended to 2h-30min for 100-200g. For elements over 300 grams fire for a minimum of 2 hours for more flat elements and a minimum of 3 hours for more rounded elements. Fired pieces can be removed from the kiln hot or cold
Goldie Sculptors Bronze	Bronze	Goldie	Powder	1525F / 930C		95 minutes	4.5 hours	Yes	9-14%	No	Lay the pieces in a stainless steel firing container on a layer of activated coconut shell carbon with a minimum depth 1/2" (1 cm) under the pieces. Do not cover with carbon for this step. Make sure the pieces are at least 1/2" (1 cm) apart. Place the open container into a cold kiln and fire at full ramp to 670ºF (350°C) and hold for 30 minutes for pieces up to 100g. Pieces larger than 100g hold for 45 minutes, larger than 200g – 45 minutes, larger than 200g – 1 hour, larger than 300g – 1.5 hours. Carefully remove the container from the kiln and place on a heatproof surface. Fill the container with a layer of activated coconut shell carbon with a minimum depth 1/2" (1 cm) over the pieces and place back into the kiln. Do a full ramp to 1525ºF (830°C) and hold for 1 hour for pieces up to 100g. In the case of large elements, the time should be properly extended to 1h-30min for 100-200g For elements over 300 grams fire for a minimum of 2 hours for more flat elements and a minimum of 3 hours for more rounded elements. Fired pieces can be removed from the kiln hot or cold.
Meteor Copper Ultrafine	Copper	Meteor	Powder	1700F / 920C	1750F / 950C	75 minutes		Yes	17%	No	2 step. Coconut carbon
Meteor Pink Bronze Ultrafine	Bronze	Meteor	Powder	1616F / 880C							
Meteor Gold Bronze Ultrafine	Bronze	Meteor	Powder	1525F / 830C							
Meteor Light Bronze Ultrafine	Bronze	Meteor	Powder	1345F / 730C	1380F / 750C						firing with new biocarbon only
Meteor White Bronze Ultrafine	Bronze	Meteor	Powder	1290F / 700C	1380F / 750C						firing with new biocarbon only
Meteor Gold Bronze Easy	Bronze	Meteor	Powder	1525F / 830C	1650F / 900C				11%		
Meteor Gold Bronze Fine	Bronze	Meteor	Powder	1525F / 830C							
Meteor Bronze Blanc (white) Classic	Bronze	Meteor	Powder	1290F / 700C	1380F / 750C			Yes		No	2 step. Coconut carbon- biocarbon only
Meteor Bronze Rose Classic	Bronze	Meteor	Powder	1616F / 880C				Yes		No	2 step. Coconut carbon
Meteor Bronze Dore (Gold) Classic	Bronze	Meteor	Powder	1525F / 830C				Yes		No	2 step. Coconut carbon
Meteor Bronze Clair (light) Classic	Bronze	Meteor	Powder	1345F / 730C	1380F / 750C			Yes		No	2 step. Coconut carbon- biocarbon only
Meteor Steel Premium	Steel	Meteor	Powder	1750F / 950C		55 minutes		Yes	15%	No	1 step. Activated coconut carbon. 30 minute step recommended, but not required.
Meteor Bronze Blanc (white) Premium	Bronze	Meteor	Powder	1700F / 920C		55 minutes		Yes		No	1 step. Activated coconut carbon. 30 minute step recommended, but not required.
Meteor Bronze Rose Premium	Bronze	Meteor	Powder	1700F / 920C		55 minutes		Yes		No	1 step. Activated coconut carbon. 30 minute step recommended, but not required.
Meteor Bronze Clair (light) Premium	Bronze	Meteor	Powder	1700F / 920C		50 minutes		Yes		No	1 step. Activated coconut carbon. 30 minute step recommended, but not required.
Meteor Copper Premium	Copper	Meteor	Powder	1750F / 950C		55 minutes		Yes		No	1 step. Activated coconut carbon. 30 minute step recommended, but not required.
Hadar's One-Fire High Fire Copper / Flex	Copper	Hadar Jacobson	Powder	1900F (brick) / 1950F (muffle)	1750F (brick) / 1800F (muffle)	4 hours	4 hours	Yes	25%	No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with other high-fire clays

Base Metals

Clay Name	Metal Type	Manufacturer	Available forms	Firing temp - lowest	Firing temp- Highest	Firing Time - Shortest	Firing Time - Longest	Carbon required	Shrinkage	Torch fireable	Firing Notes
Hadar's One-Fire High Fire Champagne Bronze	Bronze	Hadar Jacobson	Powder	1720F (brick) / 1770F (muffle)	1750F (brick) / 1800F (muffle)	4 hours	4 hours	Yes	30%	No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with other high-fire clays
Hadar's One-Fire High Fire Dark Champagne Bronze / Flex	Bronze	Hadar Jacobson	Powder	1700F (brick) 1750F (muffle)	1750F (brick) / 1800F (muffle)	4 hours	4 hours	Yes	30%	No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with other high-fire clays
Hadar's One-Fire High Fire Rose Bronze / Flex	Bronze	Hadar Jacobson	Powder	1720F (brick) / 1770F (muffle)	1750F (brick) / 1800F (muffle)	4 hours	4 hours	Yes	25%	No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with other high-fire clays
Hadar's One-Fire High Fire White Satin / Flex	Bronze	Hadar Jacobson	Powder	1680F (brick) / 1730F (muffle)	1750F (brick) / 1800F (muffle)	4 hours	4 hours	Yes		No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with other high-fire clays
Hadar's One-Fire High Fire Low Shrink Steel XT / Flex	Steel	Hadar Jacobson	Powder	1900F (brick) / 1950F (muffle)	1750F (brick) / 1800F (muffle)	4 hours	4 hours	Yes		No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with other high-fire clays
Hadar's One-Fire High Fire Pearl Gray Steel / Flex	Steel	Hadar Jacobson	Powder	1750F (brick) / 1800F (muffle)	1750F (brick) / 1800F (muffle)	4 hours	4 hours	Yes	30%	No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with other high-fire clays
Hadar's One-Fire Mid Fire Bronze	Bronze	Hadar Jacobson	Powder	1510F (Brick) / 1560F (muffle)	1510F (Brick) / 1560F (muffle)	4 hours	4 hours	Yes	15%	No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with One Fire Copper, Bronze, Brilliant Bronze or Pearl Grey Steel
Hadar's One-Fire Mid Fire Brilliant Bronze / Flex	Bronze	Hadar Jacobson	Powder	1460F (brick) / 1510F (muffle)	1510F (Brick) / 1560F (muffle)	4 hours	4 hours	Yes	15%	No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with One Fire Copper, Bronze, Brilliant Bronze or Pearl Grey Steel
Hadar's One-Fire Mid Fire Smart Bronze	Bronze	Hadar Jacobson	Powder	1420F (brick) / 1470F (muffle)	N/A	4 hours	4 hours	Yes	24%	No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with One Fire Copper, Bronze, Brilliant Bronze or Pearl Grey Steel
Hadar's One-Fire Low Fire White Bronze / Flex	Bronze	Hadar Jacobson	Powder	1350F (brick) / 1400F (muffle)	1350F (brick) / 1400F (muffle)	4 hours	4 hours	Yes	Neg.	No	2 step firing in coconut shell carbon. Brick Kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours Muffle Kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold 2:00 hours Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold 2:00 hours. Hold temp in lowest temp column is on its own. Highest temp column is with other clays
Hadar's Quick-Fire Copper / Flex	Copper	Hadar Jacobson	Powder	1850F (brick) / 1900F (muffle)		3 hours	4 hours	Yes	25%	No	Quick-fire clays cannot be fired in combination with One-fire clays except for One-fire Low-shrinkage Steel XT, Pearl Grey Steel, and White Bronze. In any combination, a 2-phase firing schedule should be used. Brick kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C Hold between 1:00 to 2:00 hours Cool to 450°F/230°C or to room temperature. Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold for 2:00 hours. Muffle kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold between 1:00 to 2:00 hours Cool to 450°F/230°C or to room temperature. Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold for 2:00 hours.
Hadar's Quick-Fire Bronze / Flex	Bronze	Hadar Jacobson	Powder	1510F (brick) / 1560F (muffle)		3 hours	4 hours	Yes	15%	No	Quick-fire clays cannot be fired in combination with One-fire clays except for One-fire Low-shrinkage Steel XT, Pearl Grey Steel, and White Bronze. In any combination, a 2-phase firing schedule should be used. Brick kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C Hold between 1:00 to 2:00 hours Cool to 450°F/230°C or to room temperature. Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold for 2:00 hours. Muffle kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold between 1:00 to 2:00 hours Cool to 450°F/230°C or to room temperature. Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold for 2:00 hours.
Hadar's Quick-Fire Brilliant Bronze / Flex	Bronze	Hadar Jacobson	Powder	1460F (brick) / 1510F (muffle)		3 hours	4 hours	Yes	15%	No	Quick-fire clays cannot be fired in combination with One-fire clays except for One-fire Low-shrinkage Steel XT, Pearl Grey Steel, and White Bronze. In any combination, a 2-phase firing schedule should be used. Brick kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C Hold between 1:00 to 2:00 hours Cool to 450°F/230°C or to room temperature. Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold for 2:00 hours. Muffle kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold between 1:00 to 2:00 hours Cool to 450°F/230°C or to room temperature. Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold for 2:00 hours.
Hadar's Quick-Fire Rose Bronze / Flex	Bronze	Hadar Jacobson	Powder	1700F (brick) / 1750F (muffle)		3 hours	4 hours	Yes	25%	No	Quick-fire clays cannot be fired in combination with One-fire clays except for One-fire Low-shrinkage Steel XT, Pearl Grey Steel, and White Bronze. In any combination, a 2-phase firing schedule should be used. Brick kiln Ramp at 1800°F/1000°C per hour to 1000°F/538°C Hold between 1:00 to 2:00 hours Cool to 450°F/230°C or to room temperature. Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold for 2:00 hours. Muffle kiln Ramp at 1800°F/1000°C per hour to 1100°F/593°C (first hold temperature) Hold between 1:00 to 2:00 hours Cool to 450°F/230°C or to room temperature. Ramp at 1800°F/1000°C per hour per hour to second hold temperature Hold for 2:00 hours.