

Katz Matte- Δ 10

Lab 2-Flux Capacity

Katz Matte

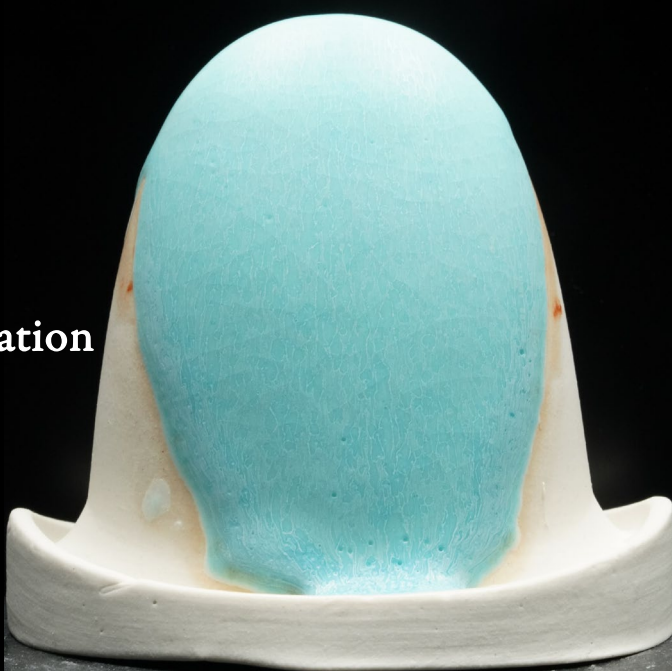
Original

062522-1

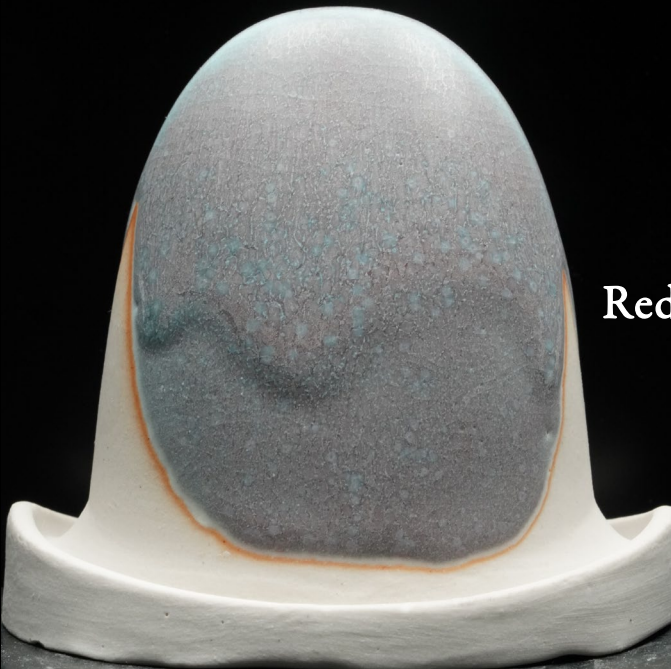
Neph Sy	42.84
Strontium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips

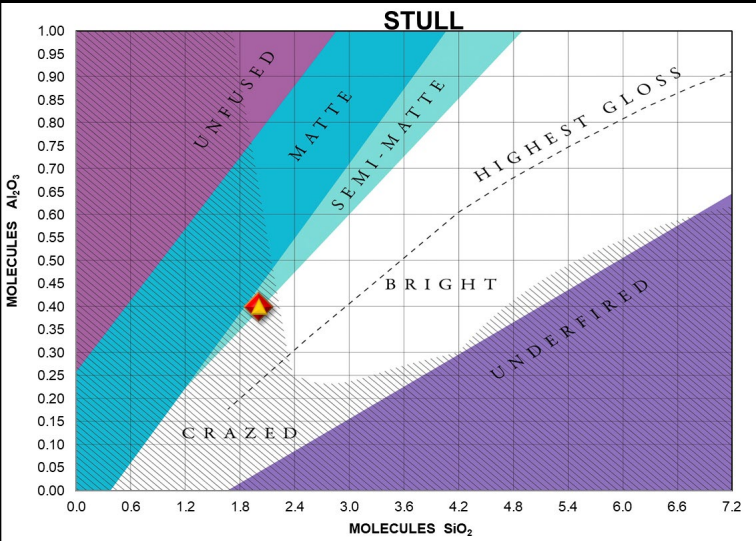


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 2.01	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.21	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO 0.02	SrO 0.69	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 : 1		Alkali Metals 0.27		Alkaline Earths 0.73	
SiO ₂ 2.06	Collective "Al ₂ O ₃ " 0.41	Na ₂ O 0.21	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.41	Li ₂ O	CuO	SrO 0.71	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Lab 2-Alkali Metals-Oxidation



062522-1



062522-7



062522-8

1-3 Second Dip



062522-9



062522-10



062522-11



Original (NS)



w/Mahavir



w/Custer

2-3 Second Dips



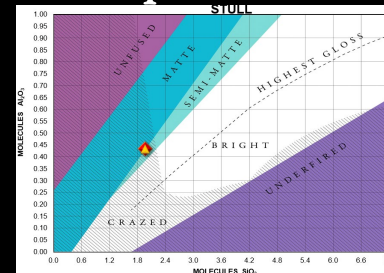
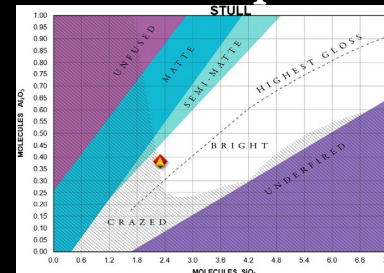
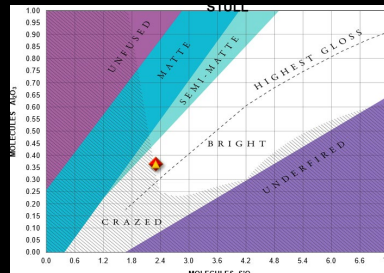
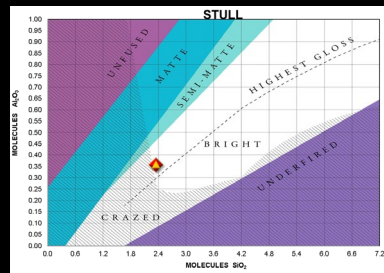
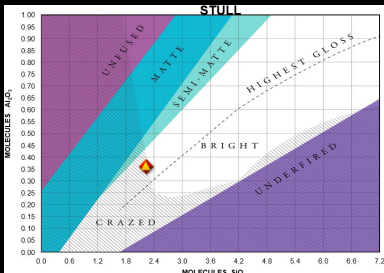
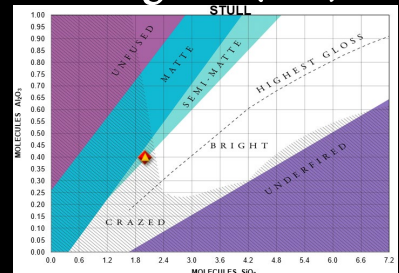
w/G200EU



w/Minspar



w/Spodumene



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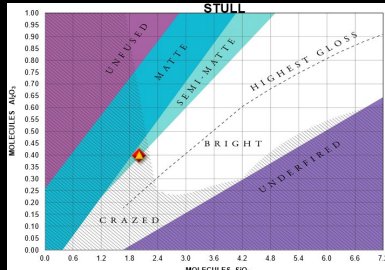
Lab 2-Alkali Metals-Oxidation



062522-1



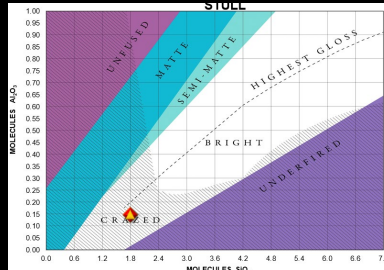
Original (NS)



062522-13



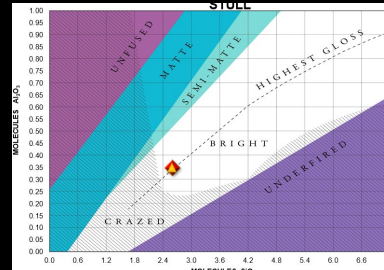
w/Frit 3110



062522-14



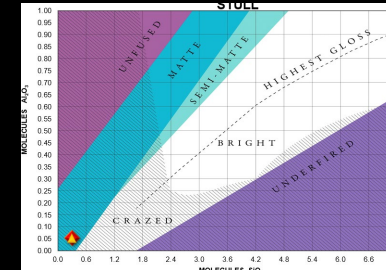
w/Cornwall



062522-15



w/Lithium Carbonate



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Lab 2-Alkali Metals-Reduction



062522-1



062522-7



062522-8



062522-9



062522-10



062522-11

1-3 Second Dip

2-3 Second Dips



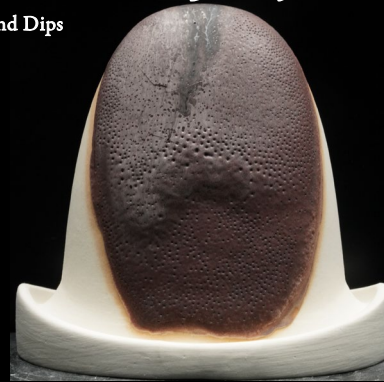
Original (NS)



w/Mahavir



w/Custer



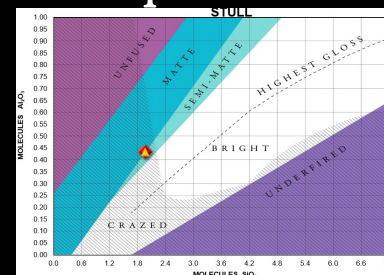
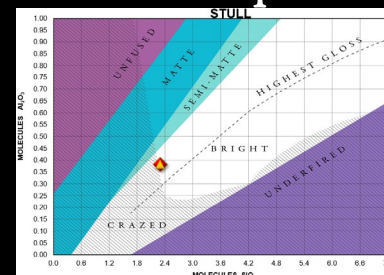
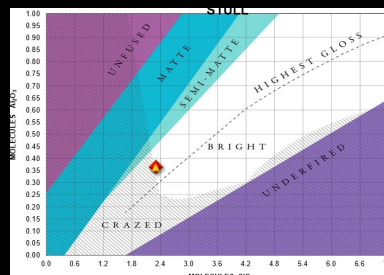
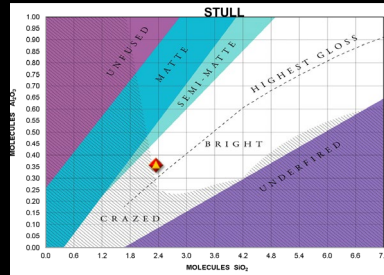
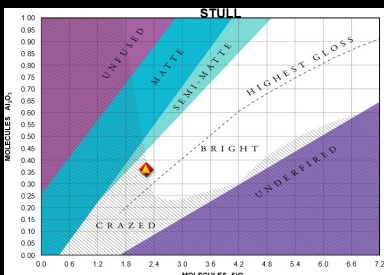
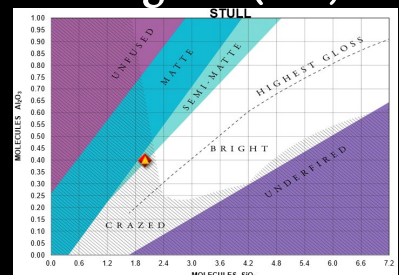
w/G200EU



w/Minspar



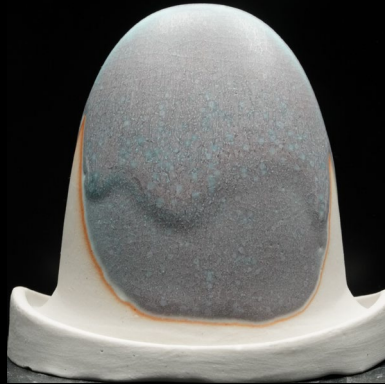
w/Spodumene



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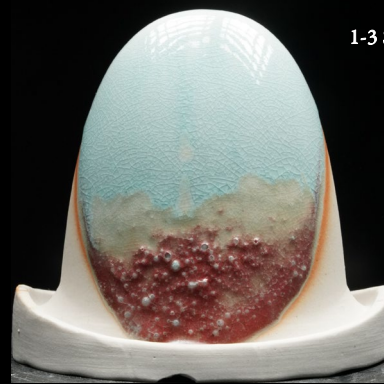
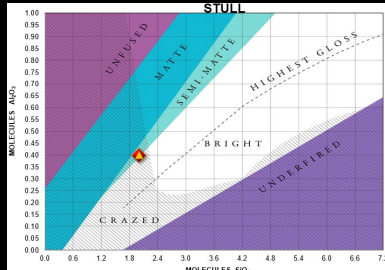
Lab 2-Alkali Metals-Reduction



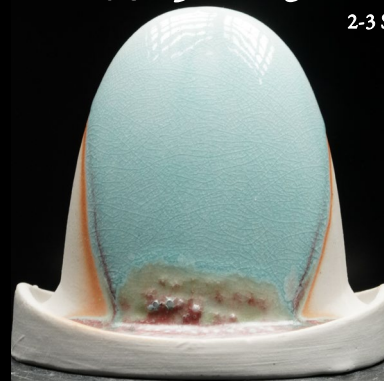
062522-1



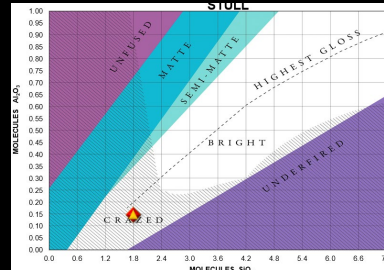
Original (NS)



062522-13



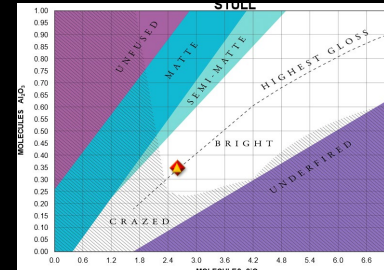
w/Frit 3110



062522-14



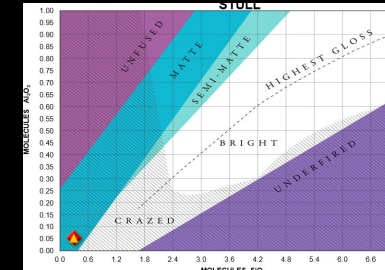
w/Cornwall



062522-15



w/Lithium Carbonate



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Lab 2-Alkaline Earth-Oxidation



062522-1



062522-16



062522-17

1-3 Second Dip



062522-18



062522-19



062522-20



Original (Strontium)



w/Talc



w/Mag Carb

2-3 Second Dips



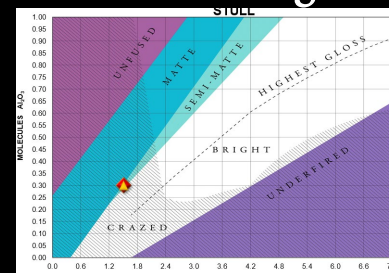
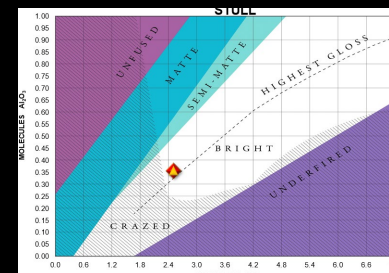
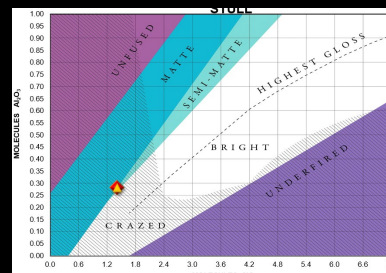
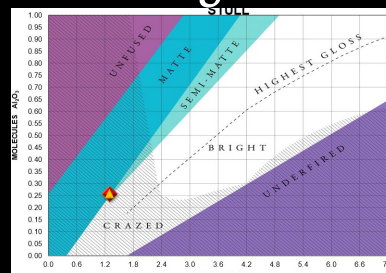
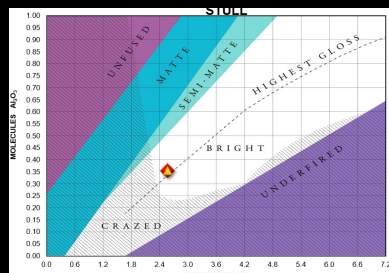
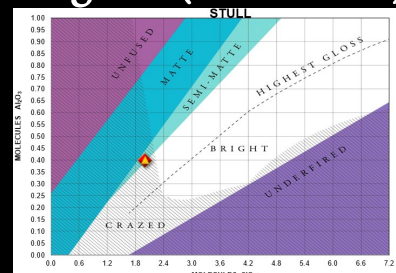
w/Dolomite



w/Wollastonite



w/Whiting



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Lab 2-Alkaline Earth-Oxidation



062522-1



062522-21



062522-22



062522-23

1-3 Second Dip



Original (Strontium)



w/Barium Carb

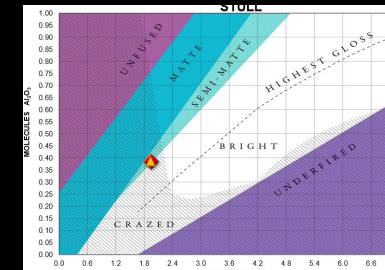
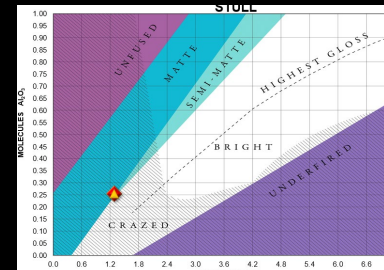
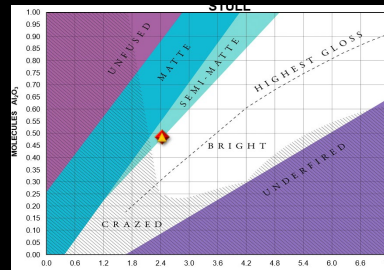
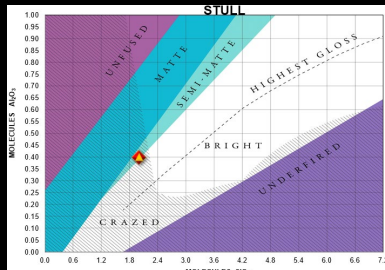


w/Zinc Oxide



w/Bone Ash

2-3 Second Dips



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Lab 2-Alkaline Earth-Reduction



062522-1



062522-16

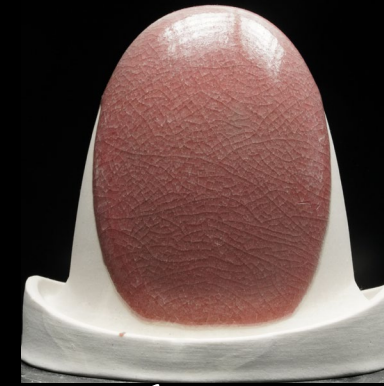


062522-17

1-3 Second Dip



062522-18



062522-19



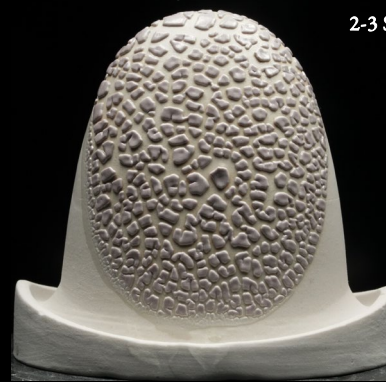
062522-20



Original (Strontium)



w/Talc



w/Mag Carb

2-3 Second Dips



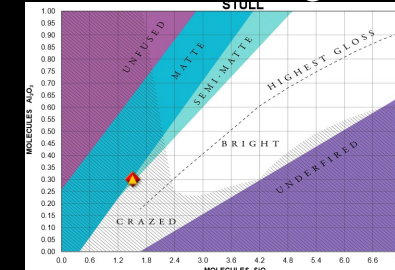
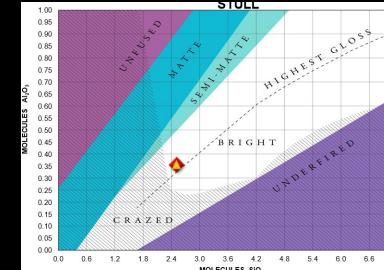
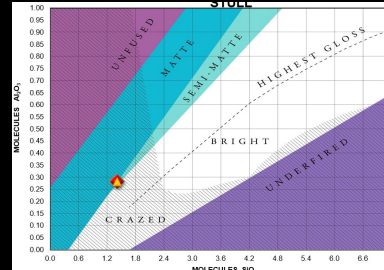
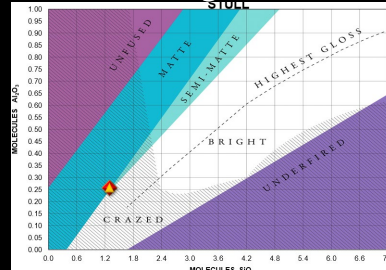
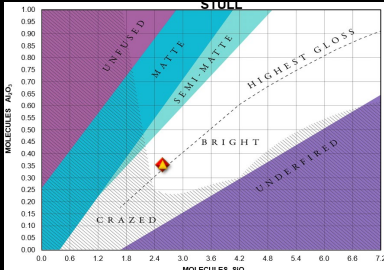
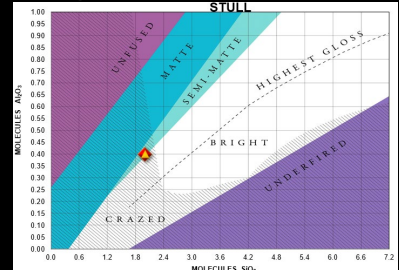
w/Dolomite



w/Wollastonite



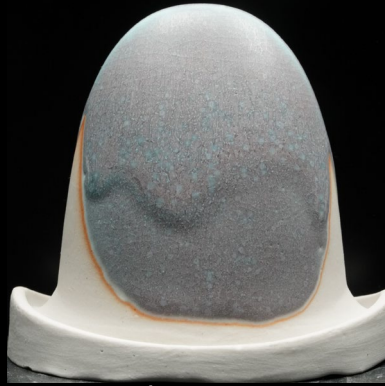
w/Whiting



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Lab 2-Alkaline Earth-Reduction



062522-1



062522-21



062522-22



062522-23

1-3 Second Dip



Original (Strontium)



w/Barium Carb

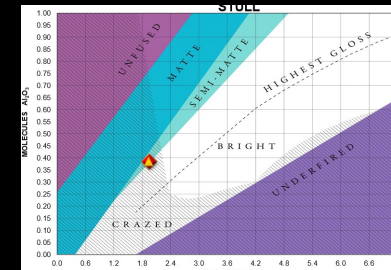
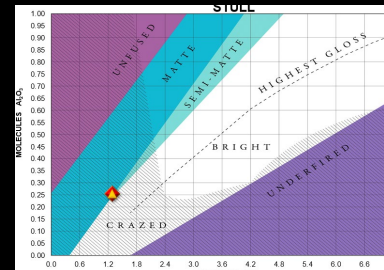
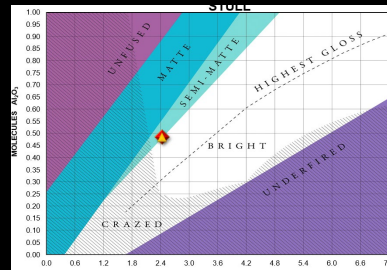
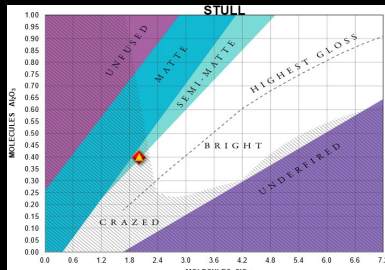


w/Zinc Oxide



w/Bone Ash

2-3 Second Dips



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Katz Matte

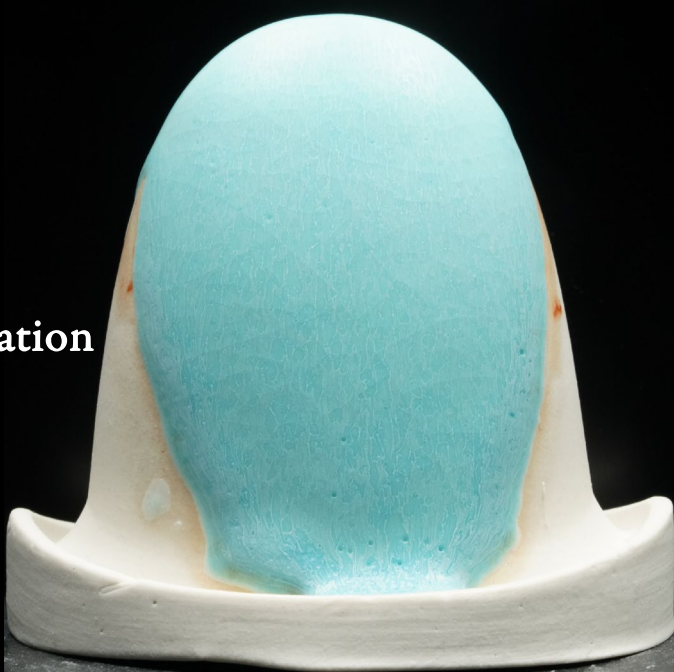
Original

062522-1

Neph Sy	42.84
Strontium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips



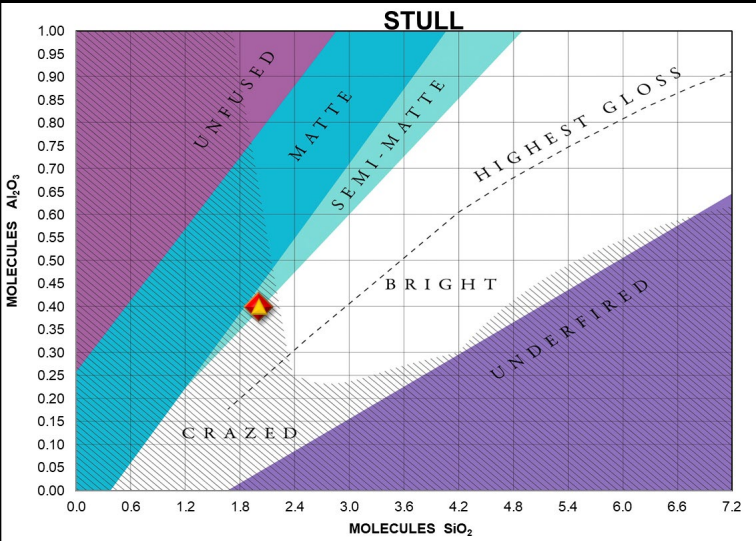
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 2.01	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.21	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO 0.02	SrO 0.69	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 : 1		Alkali Metals 0.27		Alkaline Earths 0.73	
SiO ₂ 2.06	Collective "Al ₂ O ₃ " 0.41	Na ₂ O 0.21	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.41	Li ₂ O	CuO	SrO 0.71	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Katz Matte

Weight Substitution
Mahavir Feldspar
062522-7

Mahavir Strontium Carb	42.84
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips



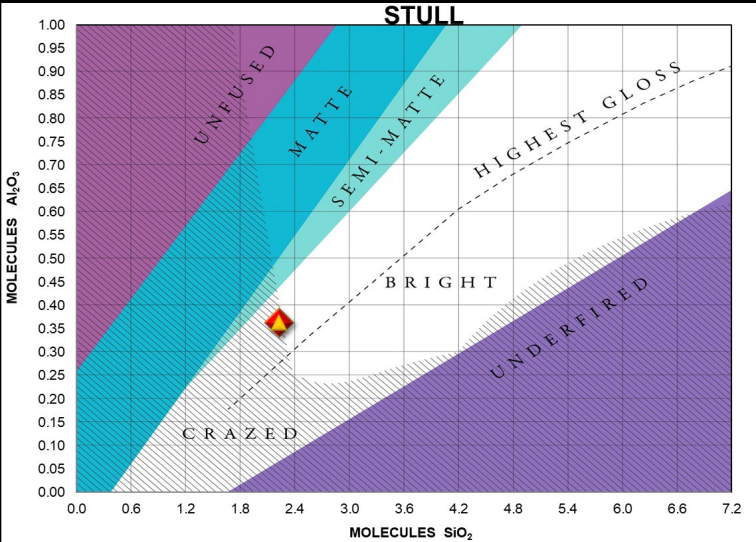
Reduction



Reduction

UMF

SiO ₂ :Al ₂ O ₃ Ratio 6.11 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 2.29	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.06	K ₂ O 0.17	MgO 0.01	CaO 0.00
B ₂ O ₃	Al ₂ O ₃ 0.37	Li ₂ O	CuO	SrO 0.75	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 6.11 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.23	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.06	K ₂ O 0.16	MgO 0.01	CaO 0.00
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO 0.03	SrO 0.73	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
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Katz Matte

Weight Substitution
Custer Feldspar
062522-8

Custer	42.84
Strontium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips



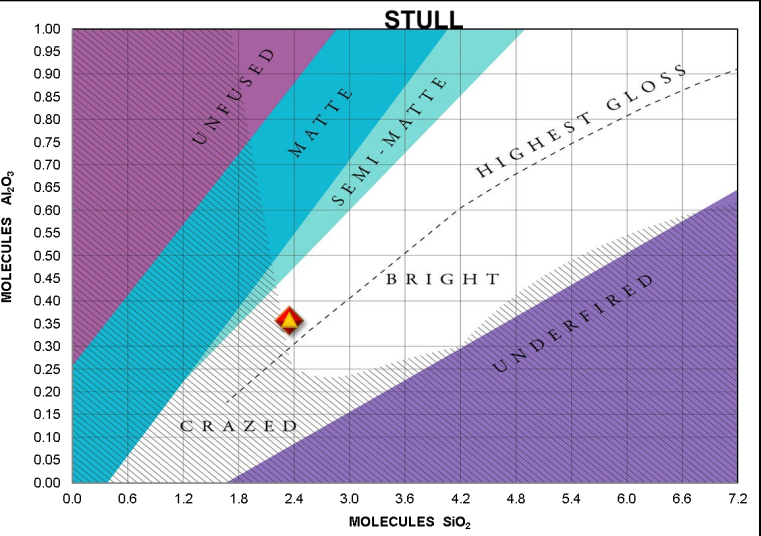
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 6.52 :1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.41	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.05	K ₂ O 0.15	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.37	Li ₂ O	CuO	SrO 0.77	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 6.52 :1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.35	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.05	K ₂ O 0.15	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO 0.03	SrO 0.75	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



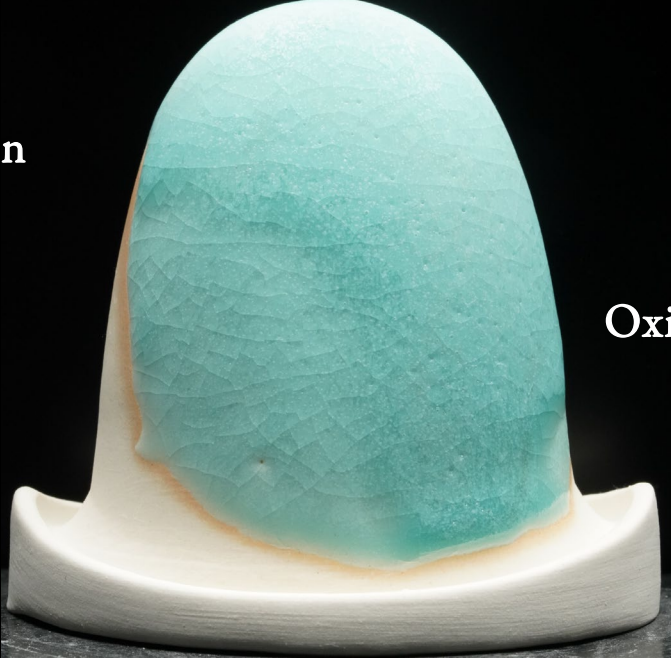
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Katz Matte

Weight Substitution
G200EU Feldspar

062522-9

G200 EU	42.84
Strontium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



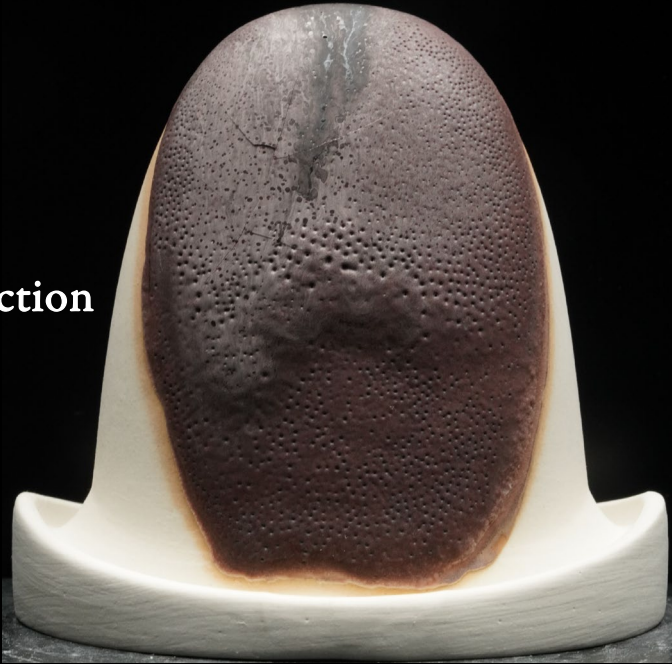
1-3 Second Dip



2-3 Second Dips



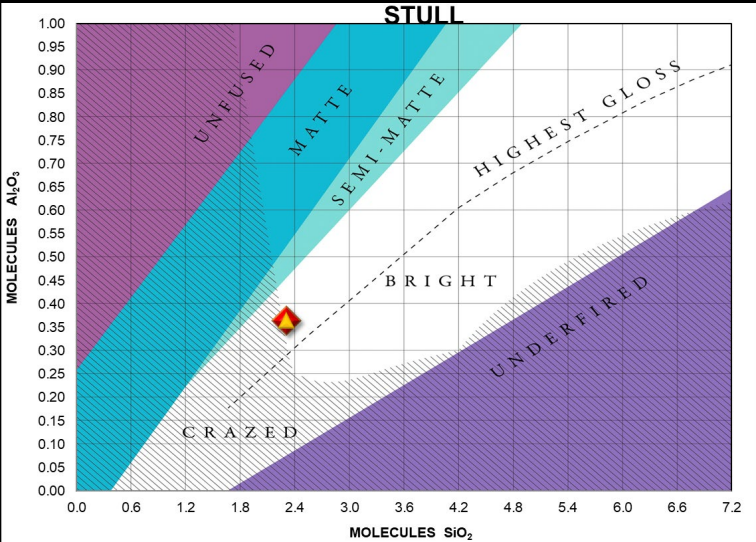
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 6.32 : 1		Alkali Metals 0.21		Alkaline Earths 0.79	
SiO ₂ 2.37	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.05	K ₂ O 0.16	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.37	Li ₂ O	CuO	SrO 0.77	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 6.32 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 2.31	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.05	K ₂ O 0.16	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO 0.03	SrO 0.75	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



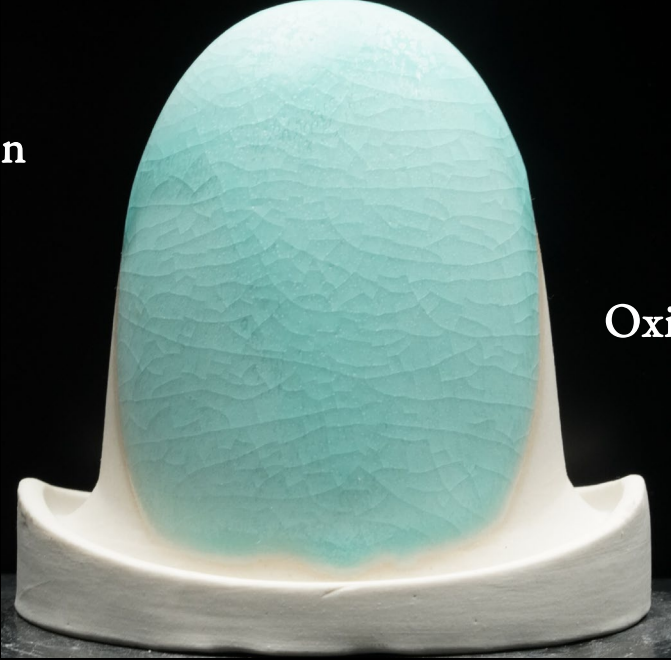
Ceramic
Materials
Workshop

Katz Matte

Weight Substitution
Minspar Feldspar

062522-10

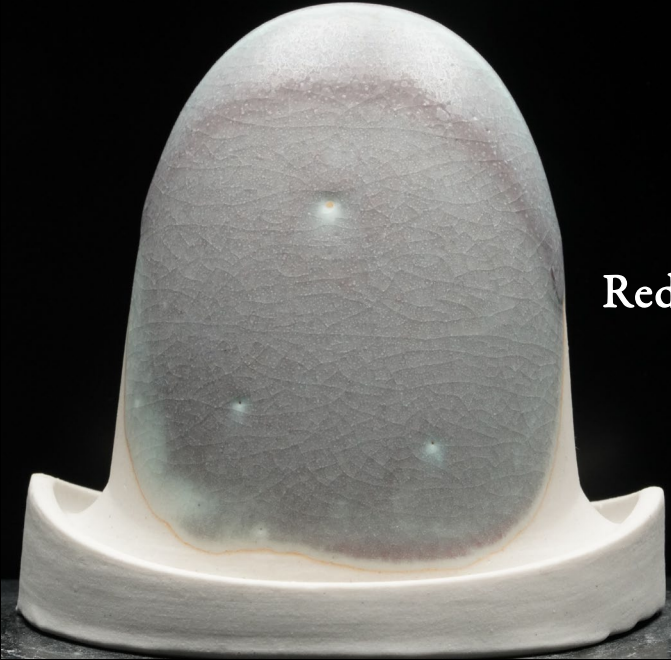
Minspar	42.84
Strontium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips



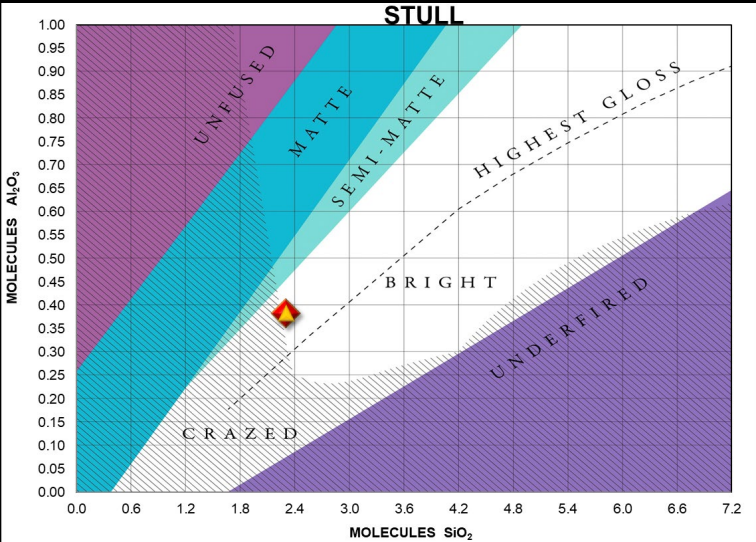
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.99 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.36	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.14	K ₂ O 0.06	MgO 0.00	CaO 0.03
B ₂ O ₃	Al ₂ O ₃ 0.39	Li ₂ O	CuO	SrO 0.76	BaO 0.00
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.99 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.30	Collective "Al ₂ O ₃ " 0.38	Na ₂ O 0.13	K ₂ O 0.06	MgO 0.00	CaO 0.03
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO 0.03	SrO 0.74	BaO 0.00
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



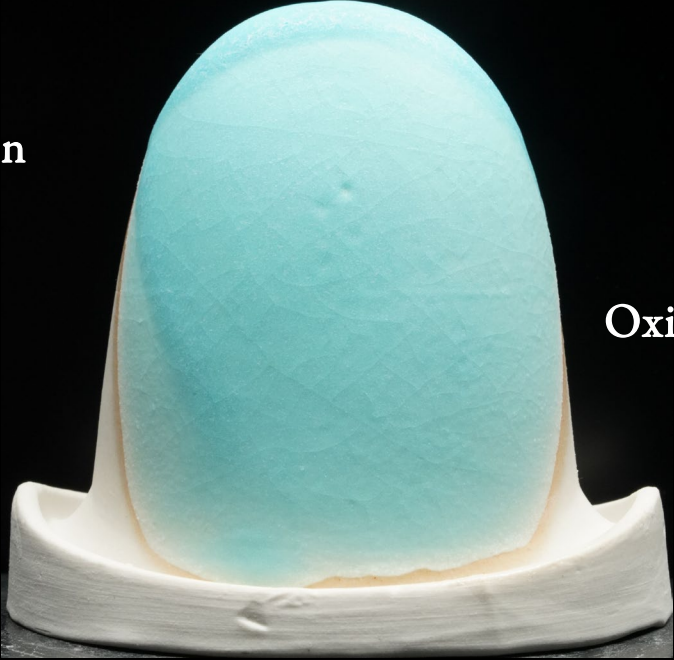
Ceramic
Materials
Workshop

Katz Matte

Weight Substitution
Spodumene

062522-11

Spodumene	42.84
Strontium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



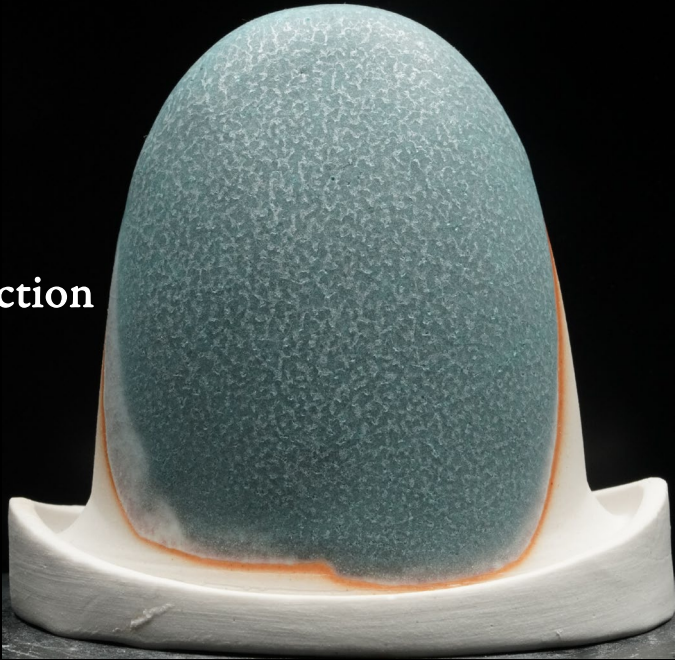
1-3 Second Dip



2-3 Second Dips



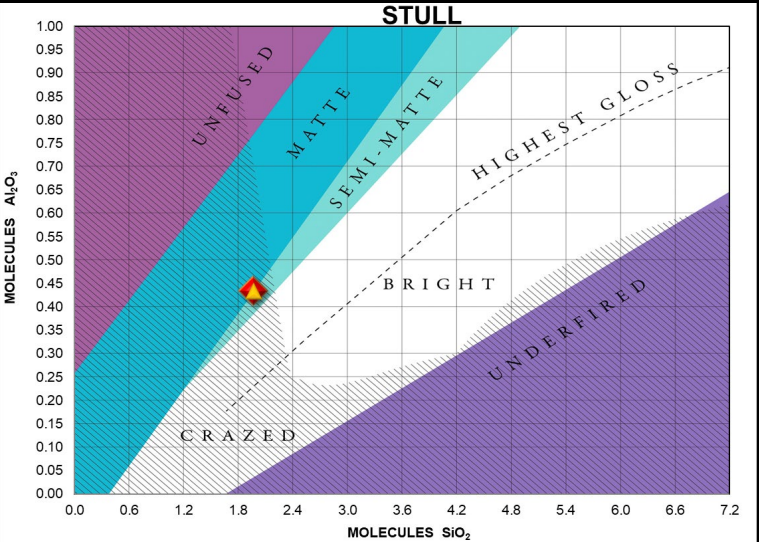
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 4.53 : 1		Alkali Metals 0.31		Alkaline Earths 0.69	
SiO ₂ 2.01	Collective "Al ₂ O ₃ " 0.45	Na ₂ O 0.00	K ₂ O 0.00	MgO 0.00	CaO 0.00
B ₂ O ₃	Al ₂ O ₃ 0.44	Li ₂ O 0.31	CuO	SrO 0.68	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 4.53 : 1		Alkali Metals 0.33		Alkaline Earths 0.67	
SiO ₂ 1.97	Collective "Al ₂ O ₃ " 0.44	Na ₂ O 0.00	K ₂ O 0.00	MgO 0.00	CaO 0.00
B ₂ O ₃	Al ₂ O ₃ 0.43	Li ₂ O 0.30	CuO 0.02	SrO 0.66	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



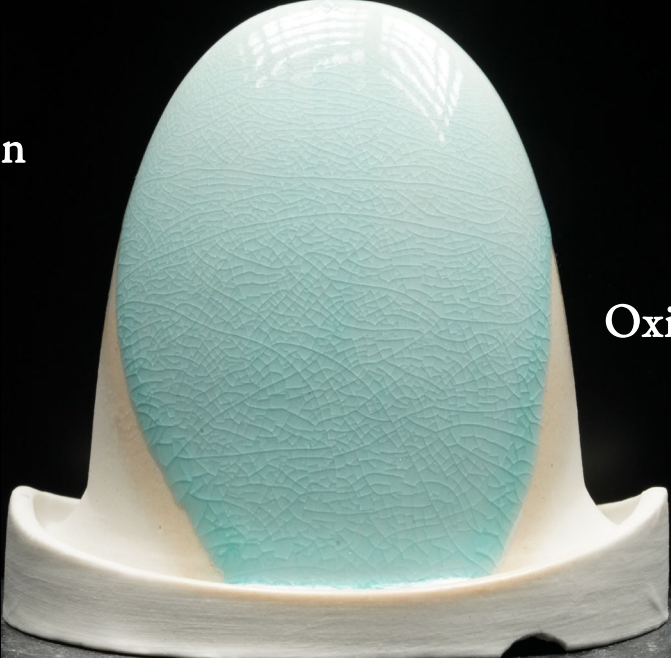
Ceramic
Materials
Workshop

Katz Matte

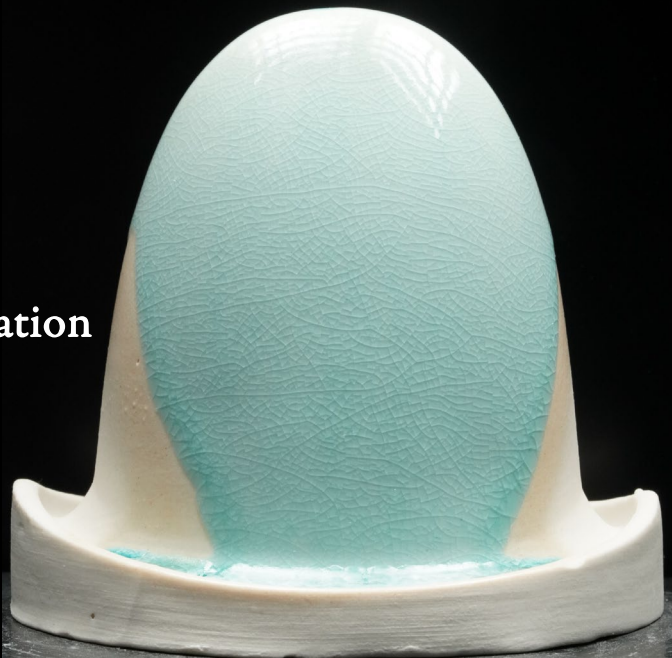
Weight Substitution
Frit 3110

062522-13

3110	42.84
Strontium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



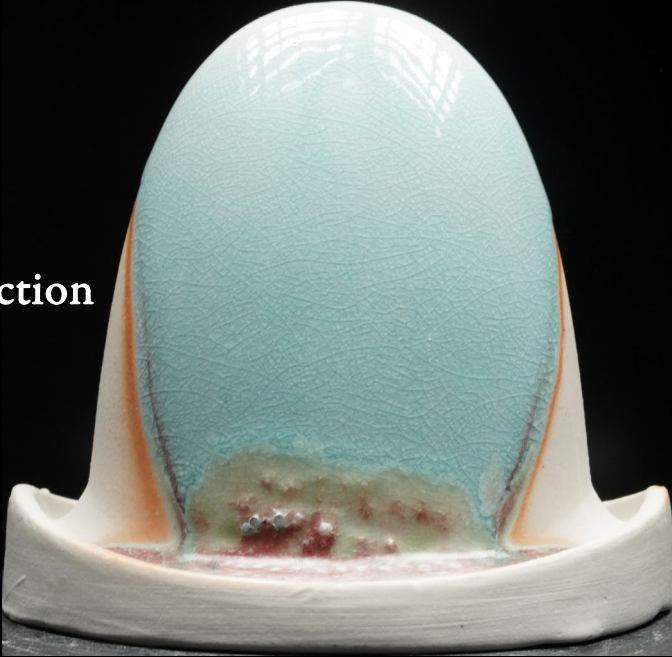
1-3 Second Dip



2-3 Second Dips



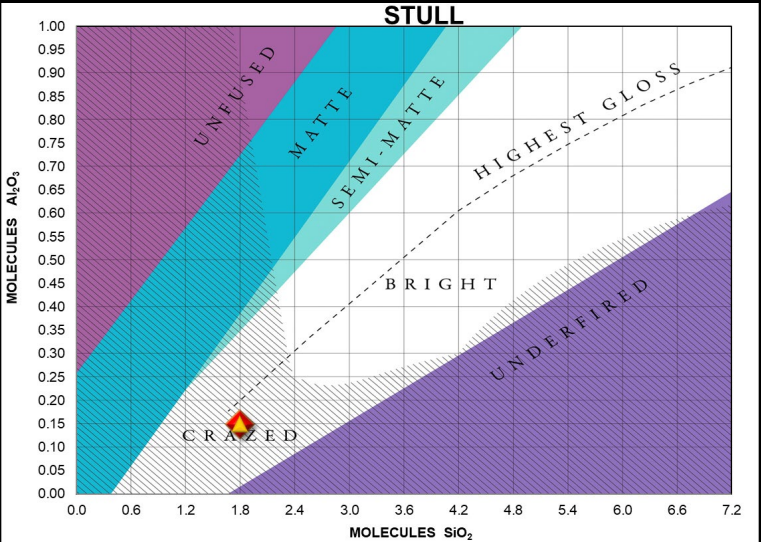
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 11.98 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 1.83	Collective "Al ₂ O ₃ " 0.15	Na ₂ O 0.26	K ₂ O 0.03	MgO 0.00	CaO 0.12
B ₂ O ₃ 0.04	Al ₂ O ₃ 0.15	Li ₂ O	CuO	SrO 0.59	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 11.98 : 1		Alkali Metals 0.30		Alkaline Earths 0.70	
SiO ₂ 1.80	Collective "Al ₂ O ₃ " 0.15	Na ₂ O 0.26	K ₂ O 0.03	MgO 0.00	CaO 0.12
B ₂ O ₃ 0.04	Al ₂ O ₃ 0.15	Li ₂ O	CuO 0.02	SrO 0.58	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



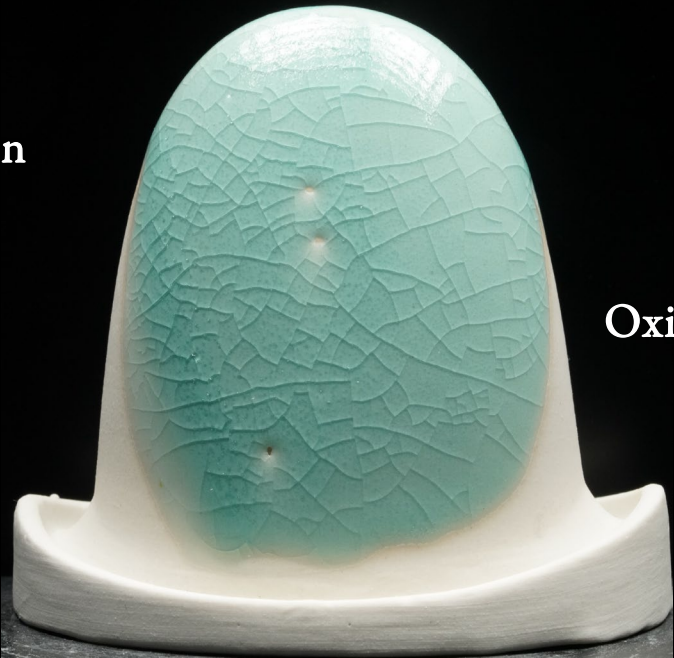
Ceramic
Materials
Workshop

Katz Matte

Weight Substitution
Cornwall Stone

062522-14

Cornwall	42.84
Strontium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips

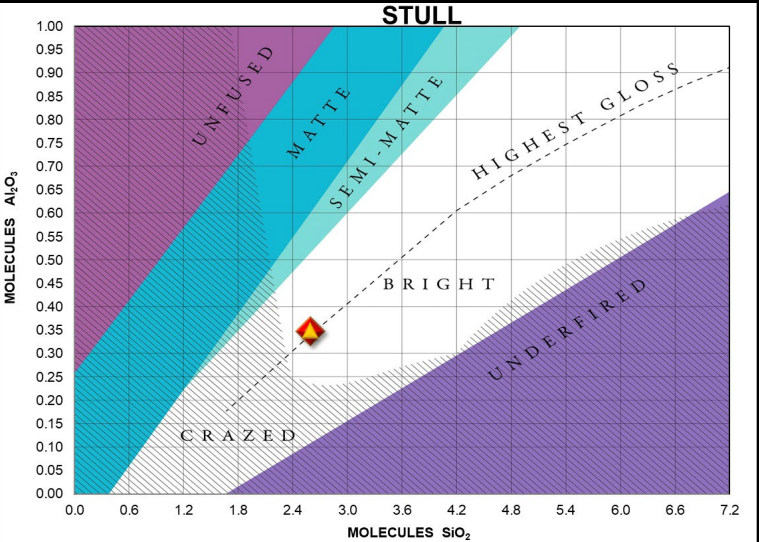


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.40 :1		Alkali Metals 0.13		Alkaline Earths 0.87	
SiO ₂ 2.66	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.07	K ₂ O 0.06	MgO 0.01	CaO 0.04
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO 0.81	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 7.40 :1		Alkali Metals 0.15		Alkaline Earths 0.85	
SiO ₂ 2.59	Collective "Al ₂ O ₃ " 0.35	Na ₂ O 0.07	K ₂ O 0.06	MgO 0.01	CaO 0.04
B ₂ O ₃	Al ₂ O ₃ 0.35	Li ₂ O	CuO 0.03	SrO 0.79	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Katz Matte

Weight Substitution
Lithium Carbonate

062522-15

Lithium Carb	42.84
Strontium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips



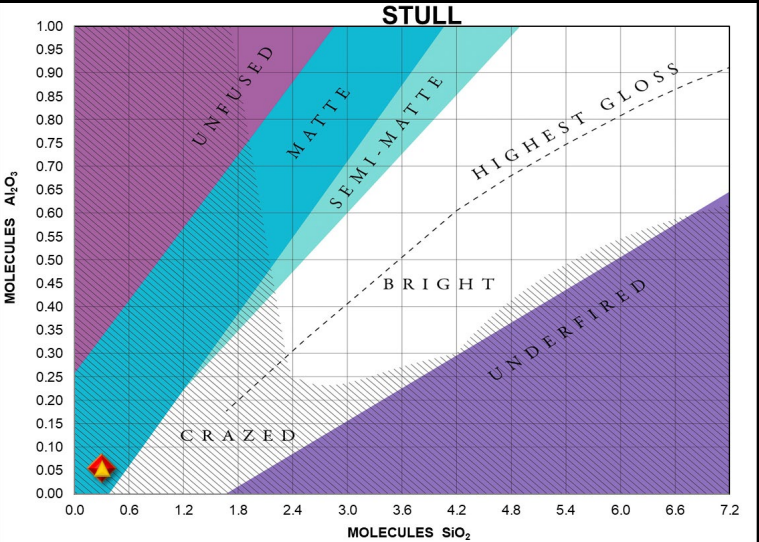
Reduction



Reduction

UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.49 : 1		Alkali Metals 0.71		Alkaline Earths 0.29	
SiO ₂ 0.31	Collective "Al ₂ O ₃ " 0.06	Na ₂ O	K ₂ O	MgO	CaO
B ₂ O ₃	Al ₂ O ₃ 0.06	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.49 : 1		Alkali Metals 0.71		Alkaline Earths 0.29	
SiO ₂ 0.30	Collective "Al ₂ O ₃ " 0.06	Na ₂ O	K ₂ O	MgO	CaO
B ₂ O ₃	Al ₂ O ₃ 0.05	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



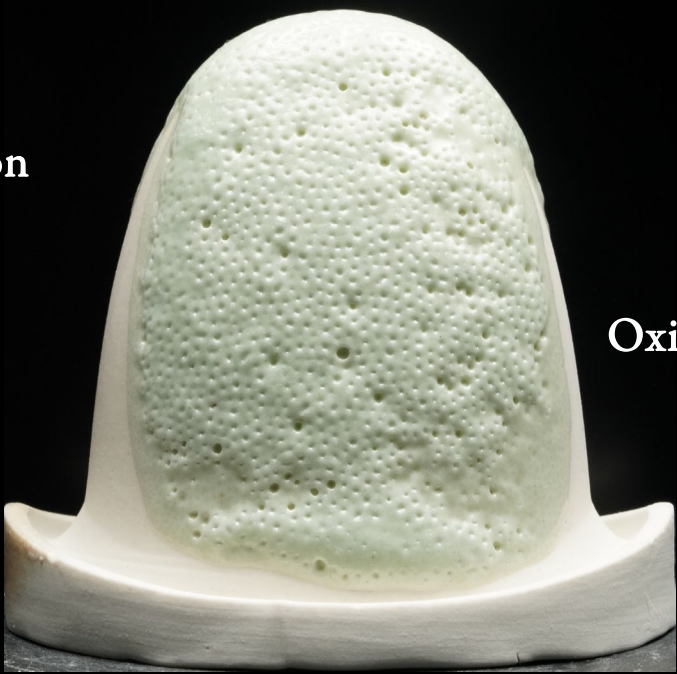
Ceramic
Materials
Workshop

Katz Matte

Weight Substitution
Talc

062522-16

Neph Sy	42.84
Talc	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips



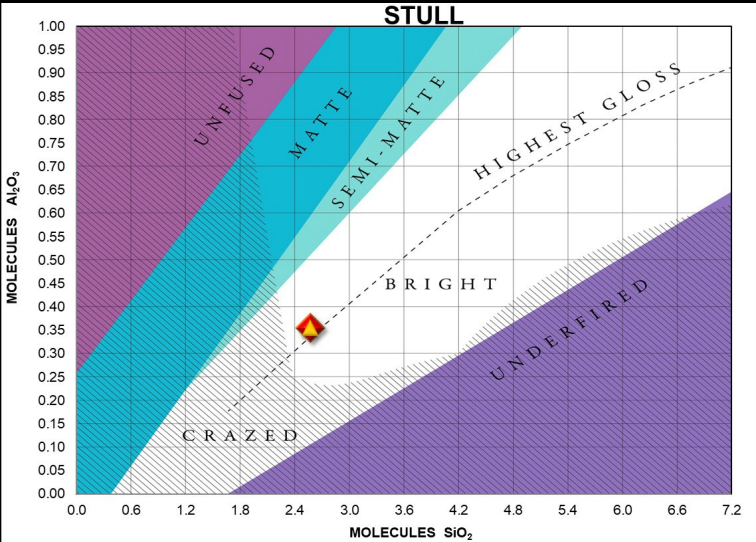
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.20 :1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.63	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.68	CaO 0.06
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 7.20 :1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 2.57	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.18	K ₂ O 0.06	MgO 0.66	CaO 0.06
B ₂ O ₃	Al ₂ O ₃ 0.35	Li ₂ O	CuO 0.02	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



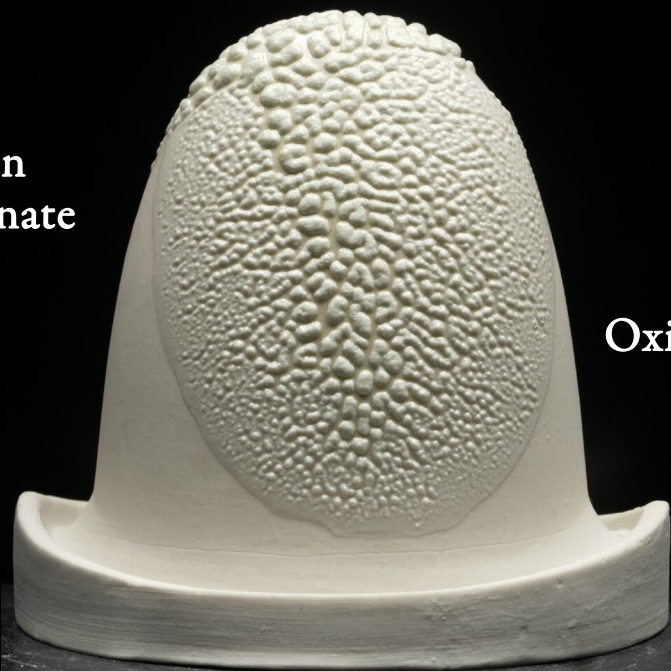
Ceramic
Materials
Workshop

Katz Matte

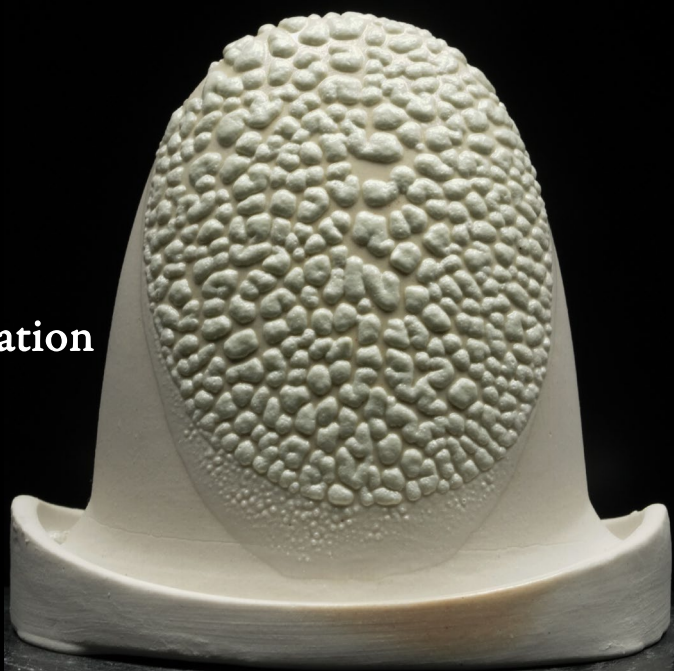
Weight Substitution
Magnesium Carbonate

062522-17

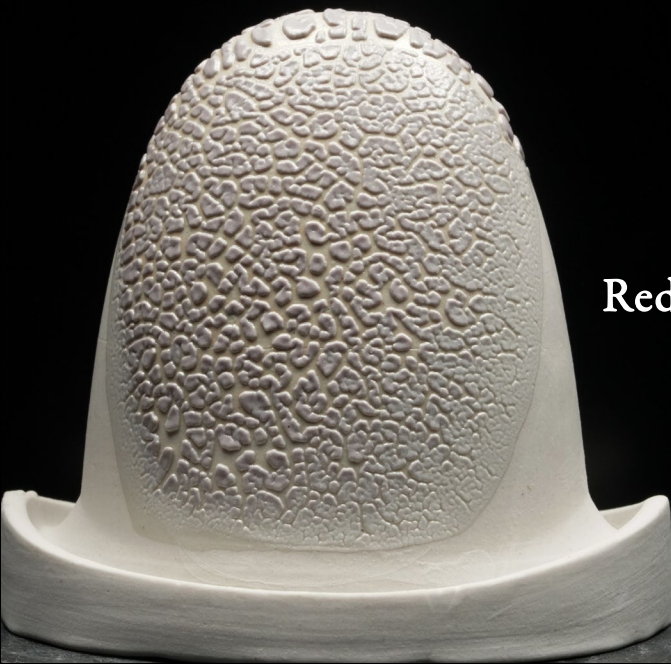
Neph Sy	42.41
Mag Carbonate	35.02
EPK	12.77
Flint	8.80
Copper Carbonate	1.01
Water	180



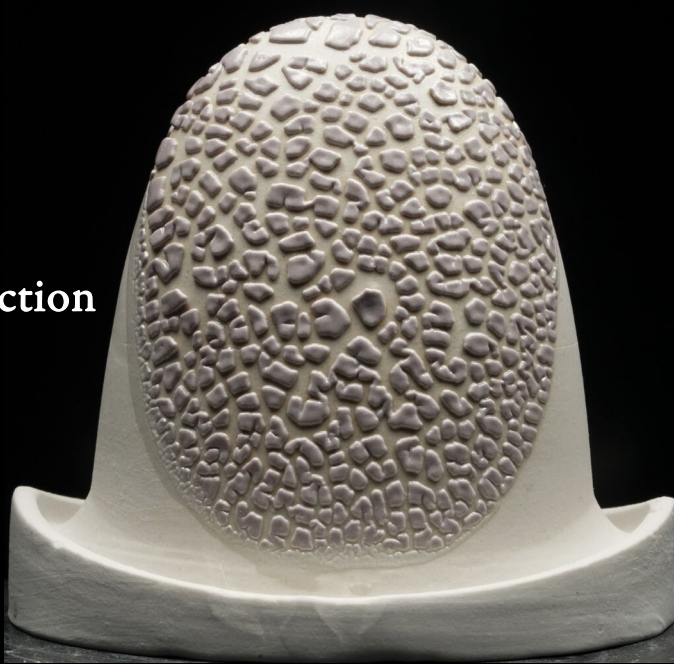
1-3 Second Dip



2-3 Second Dips



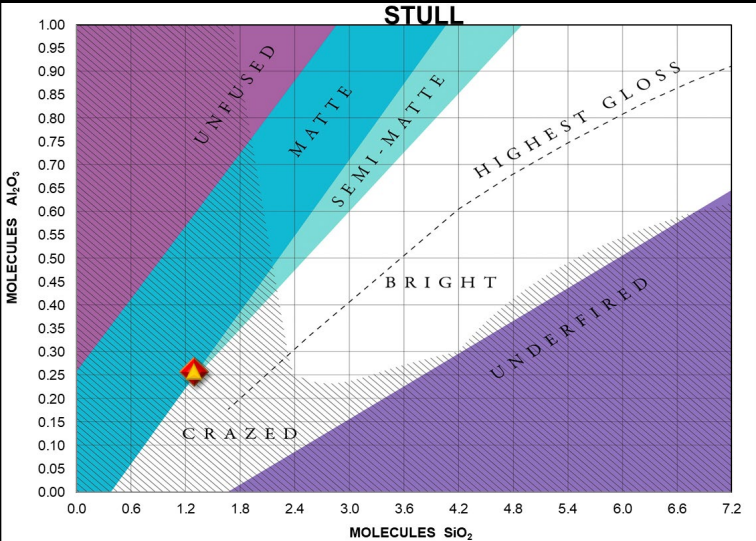
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 4.98 : 1		Alkali Metals 0.17		Alkaline Earths 0.83	
SiO ₂ 1.31	Collective "Al ₂ O ₃ " 0.26	Na ₂ O 0.13	K ₂ O 0.04	MgO 0.82	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 4.98 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 1.29	Collective "Al ₂ O ₃ " 0.26	Na ₂ O 0.13	K ₂ O 0.04	MgO 0.80	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO 0.02	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



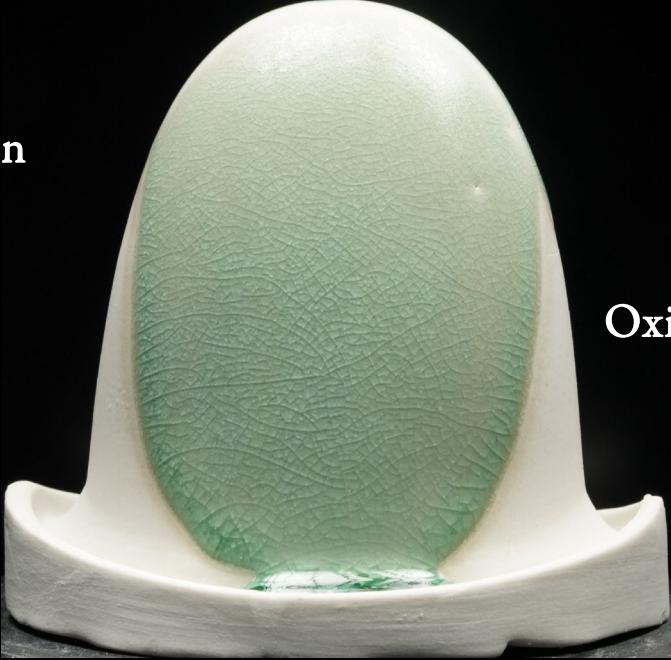
Ceramic
Materials
Workshop

Katz Matte

Weight Substitution
Dolomite

062522-18

Neph Sy	42.84
Dolomite	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips



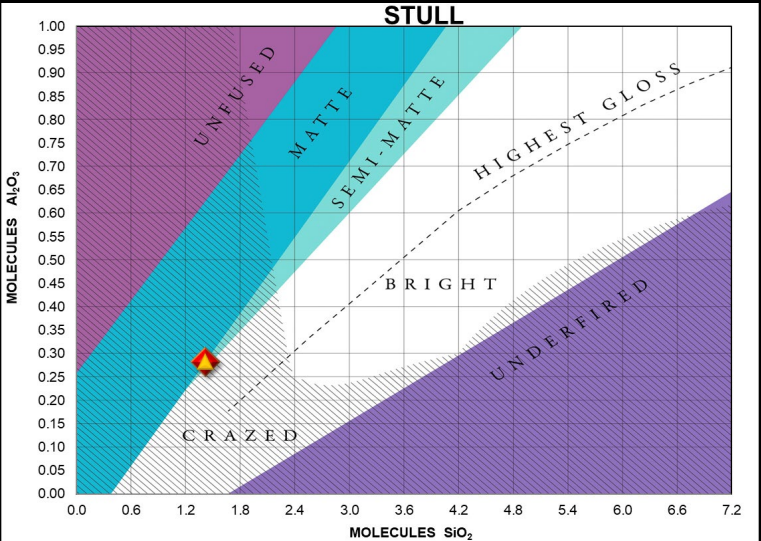
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 1.44	Collective "Al ₂ O ₃ " 0.29	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.40	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.29	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 1.42	Collective "Al ₂ O ₃ " 0.28	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.39	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO 0.02	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Katz Matte

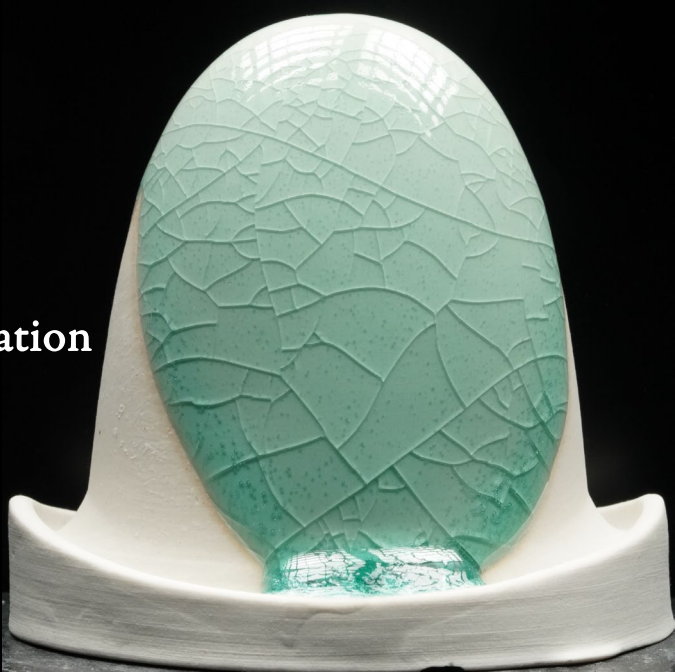
Weight Substitution
Wollastonite

062522-19

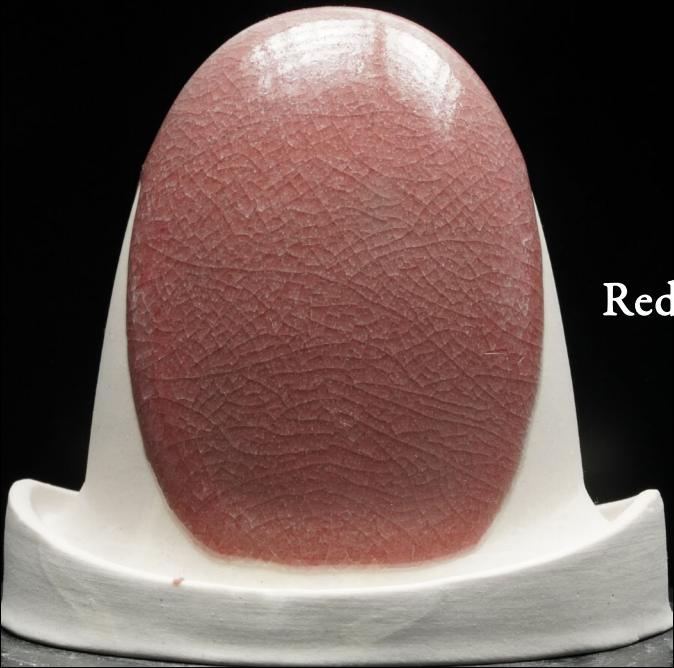
Neph Sy	42.84
Wollastonite	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips



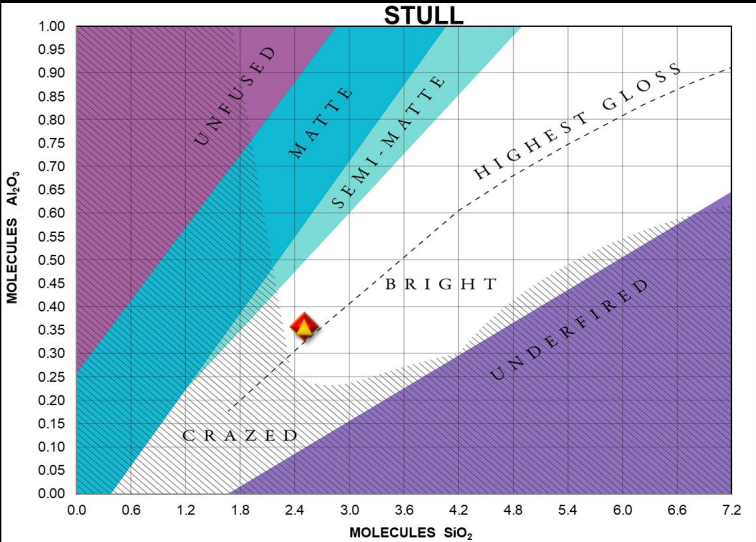
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 6.99 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.56	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.19	K ₂ O 0.05	MgO 0.03	CaO 0.72
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 6.99 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 2.51	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.18	K ₂ O 0.05	MgO 0.03	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO 0.02	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



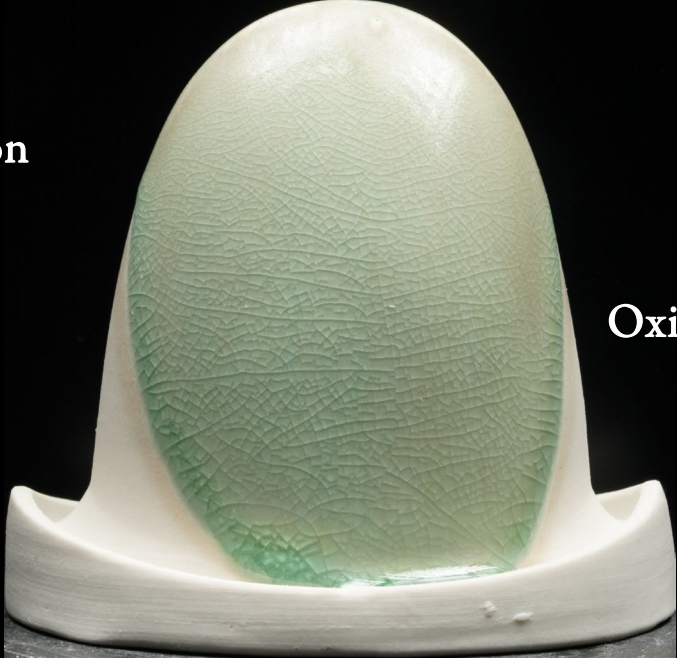
Ceramic
Materials
Workshop

Katz Matte

Weight Substitution
Whiting

062522-20

Neph Sy	42.84
Strontium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips

Oxidation

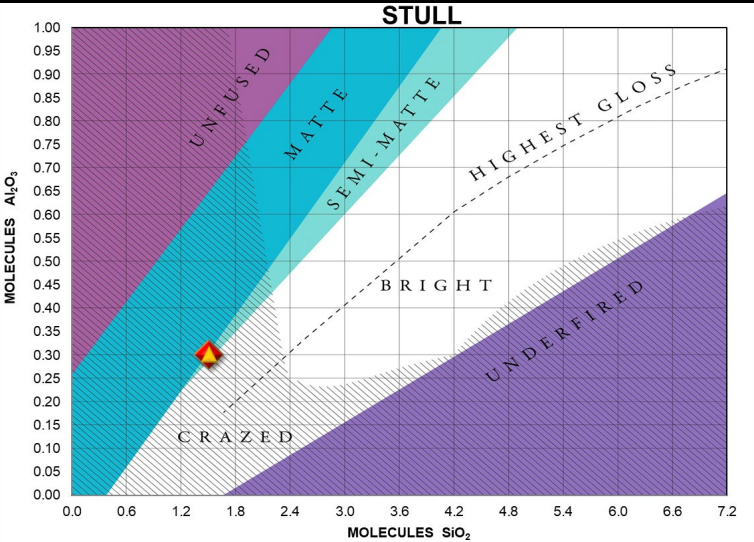


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 1.54	Collective "Al ₂ O ₃ " 0.31	Na ₂ O 0.16	K ₂ O 0.05	MgO 0.00	CaO 0.79
B ₂ O ₃	Al ₂ O ₃ 0.31	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 1.51	Collective "Al ₂ O ₃ " 0.30	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.00	CaO 0.78
B ₂ O ₃	Al ₂ O ₃ 0.30	Li ₂ O	CuO 0.02	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Katz Matte

Weight Substitution
Barium Carbonate

062522-21

Neph Sy	42.84
Barium Carb	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	60



1-3 Second Dip



2-3 Second Dips

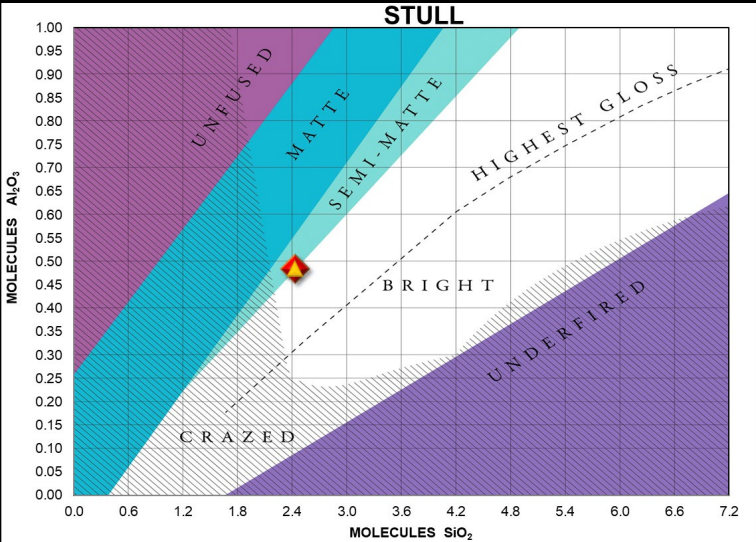


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 :1		Alkali Metals 0.33		Alkaline Earths 0.67	
SiO ₂ 2.50	Collective "Al ₂ O ₃ " 0.50	Na ₂ O 0.26	K ₂ O 0.07	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.50	Li ₂ O	CuO	SrO	BaO 0.65
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 :1		Alkali Metals 0.35		Alkaline Earths 0.65	
SiO ₂ 2.43	Collective "Al ₂ O ₃ " 0.49	Na ₂ O 0.25	K ₂ O 0.07	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.48	Li ₂ O	CuO 0.03	SrO	BaO 0.63
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Katz Matte

Weight Substitution
Zinc Oxide

062522-22

Neph Sy	42.84
Zinc Oxide	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	80



1-3 Second Dip



2-3 Second Dips

Oxidation

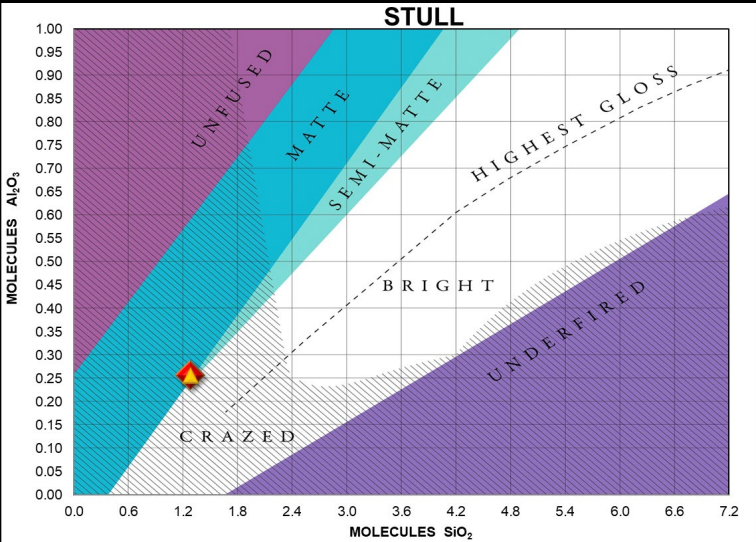


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 :1		Alkali Metals 0.17		Cone 0.83	
SiO ₂ 1.30	Collective "Al ₂ O ₃ " 0.26	Na ₂ O 0.13	K ₂ O 0.04	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.82	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.00 :1		Alkali Metals 0.18		Alkaline Earths 0.82	
SiO ₂ 1.28	Collective "Al ₂ O ₃ " 0.26	Na ₂ O 0.13	K ₂ O 0.04	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO 0.02	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.80	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Katz Matte

Weight Substitution
Bone Ash

062522-23

Neph Sy	42.84
Bone Ash	35.37
EPK	12.90
Flint	8.89
Copper Carbonate	1.01
Water	80



1-3 Second Dip



2-3 Second Dips

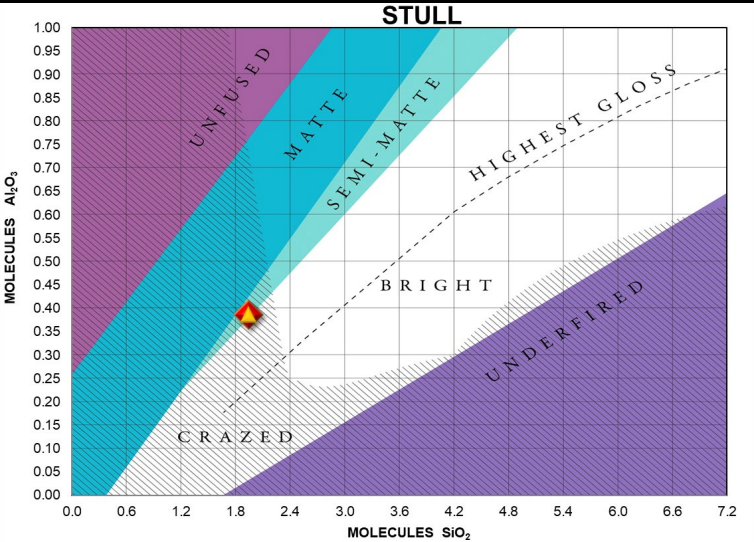


Reduction

Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.02 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 1.99	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.73
B ₂ O ₃	Al ₂ O ₃ 0.39	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅ 0.40		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.02 : 1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 1.94	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.71
B ₂ O ₃	Al ₂ O ₃ 0.39	Li ₂ O	CuO 0.02	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅ 0.39		MnO ₂	CoO



Ceramic
Materials
Workshop