

Absence- Δ 10

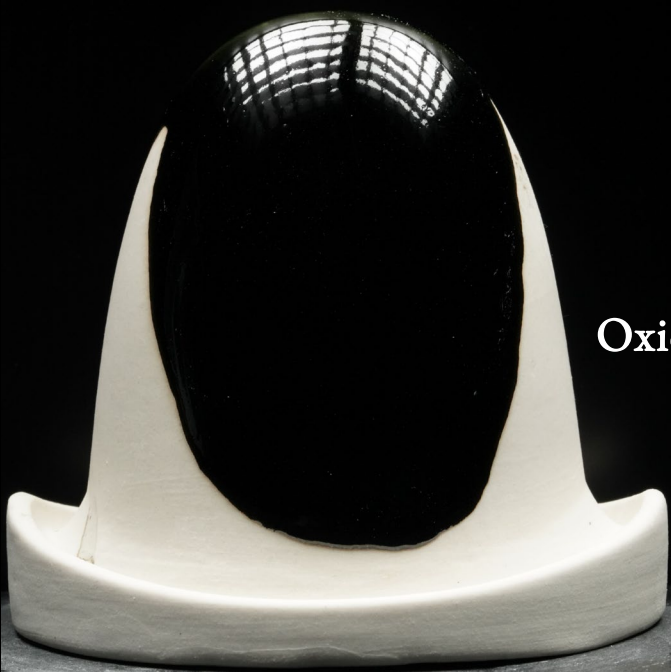
Lab 5a-Color Wheel

Absence

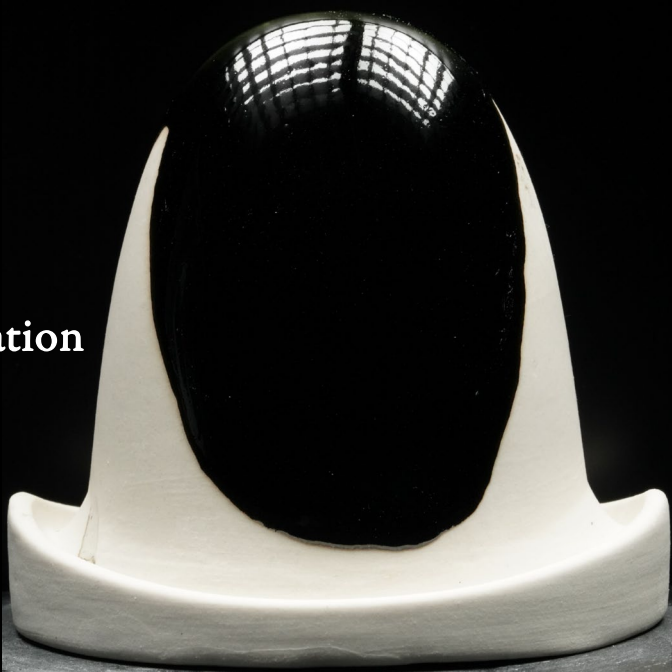
Original

062422-1

G200 EU	59.37
Whiting	18.04
EPK	3.55
Flint	19.05
Red Iron Oxide	7.68
Cobalt Carbonate	1.97
Water	60



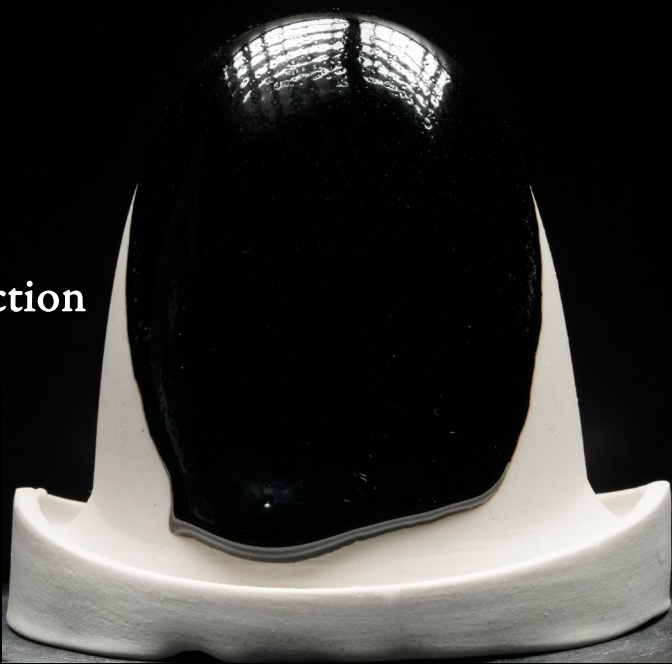
1-3 Second Dip



2-3 Second Dips



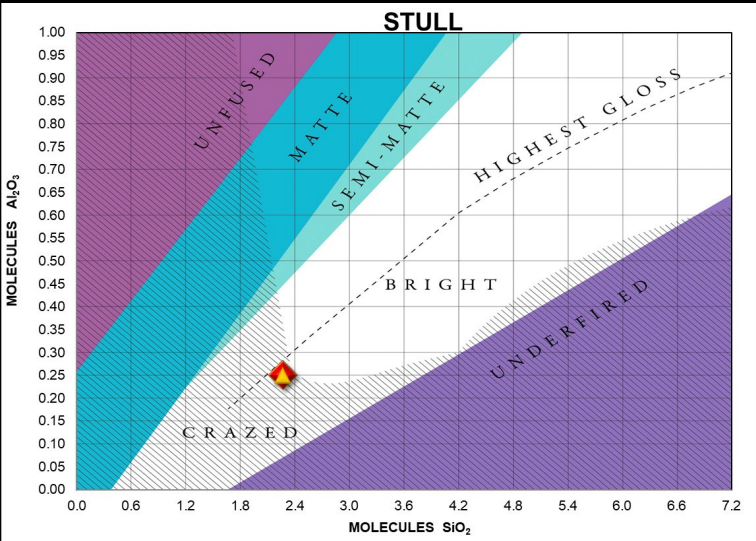
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.27	Collective "Al ₂ O ₃ " 0.25	Na ₂ O 0.04	K ₂ O 0.15	MgO 0.00	CaO 0.41
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.35
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.04



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Chrome Oxide

0.5%

Oxidation

Reduction



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

2%



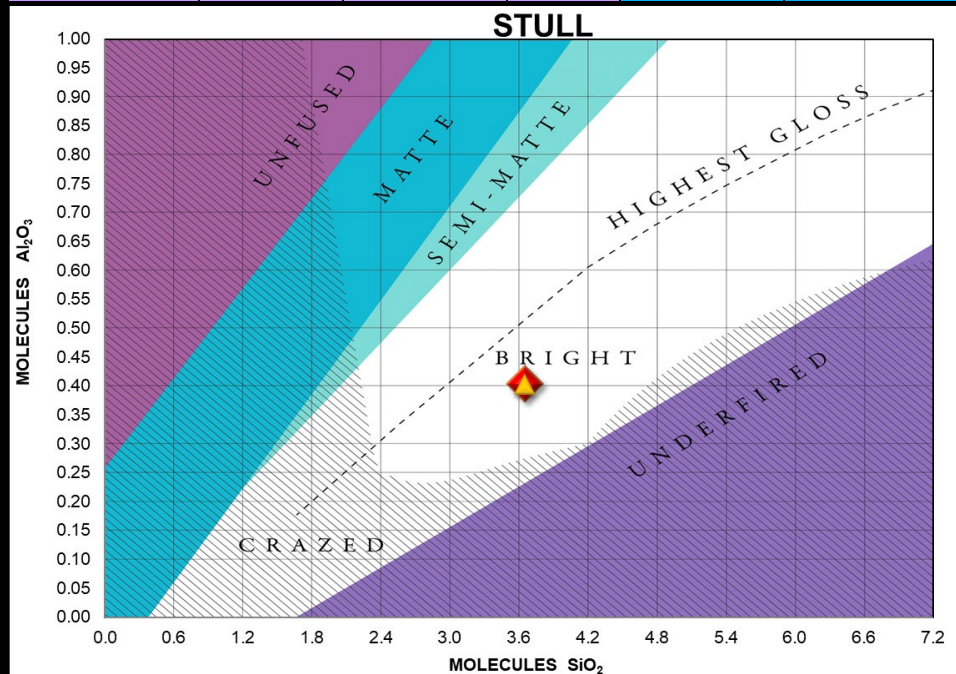
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Materials
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Chrome Oxide

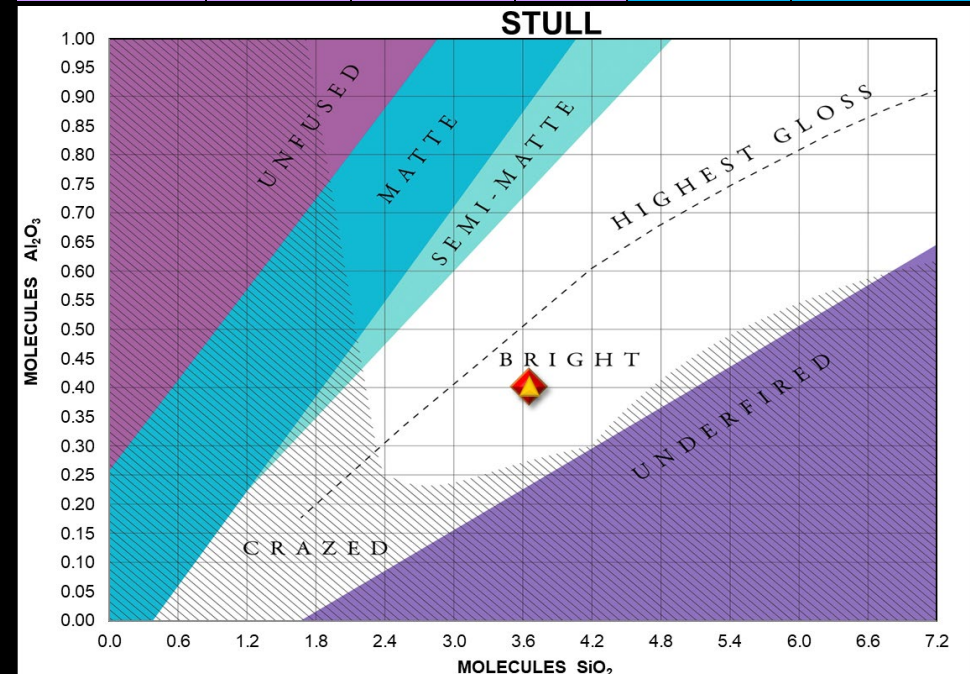
0.5%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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 0.01	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



2%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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 0.05	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Cobalt Carbonate

0.5%

Oxidation

Reduction

1-3 Second Dip

2-3 Second Dips

1-3 Second Dip

2-3 Second Dips

2%



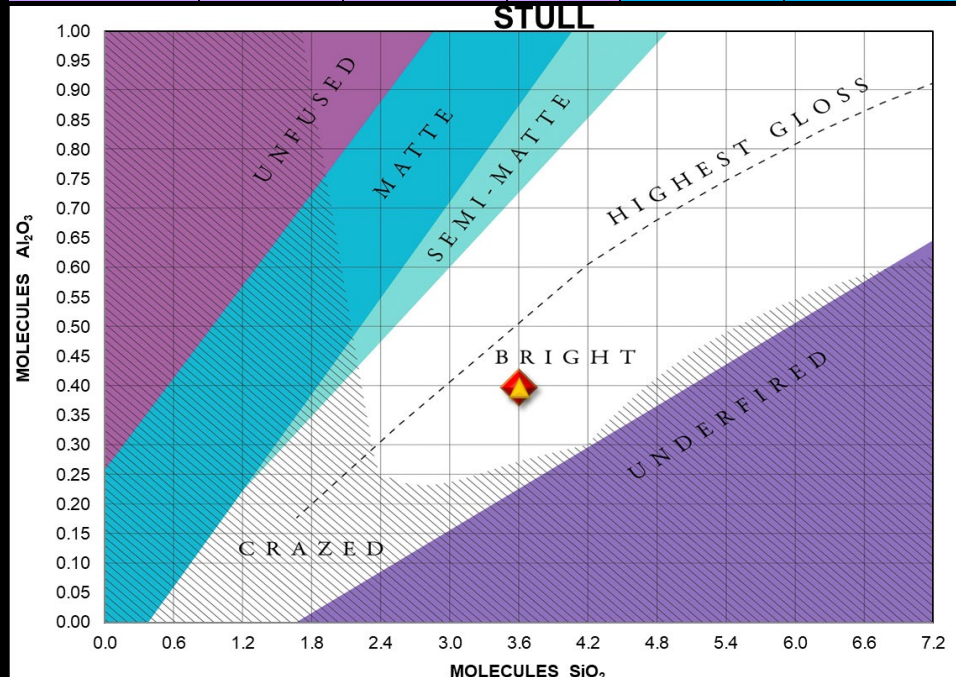
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Cobalt Carbonate

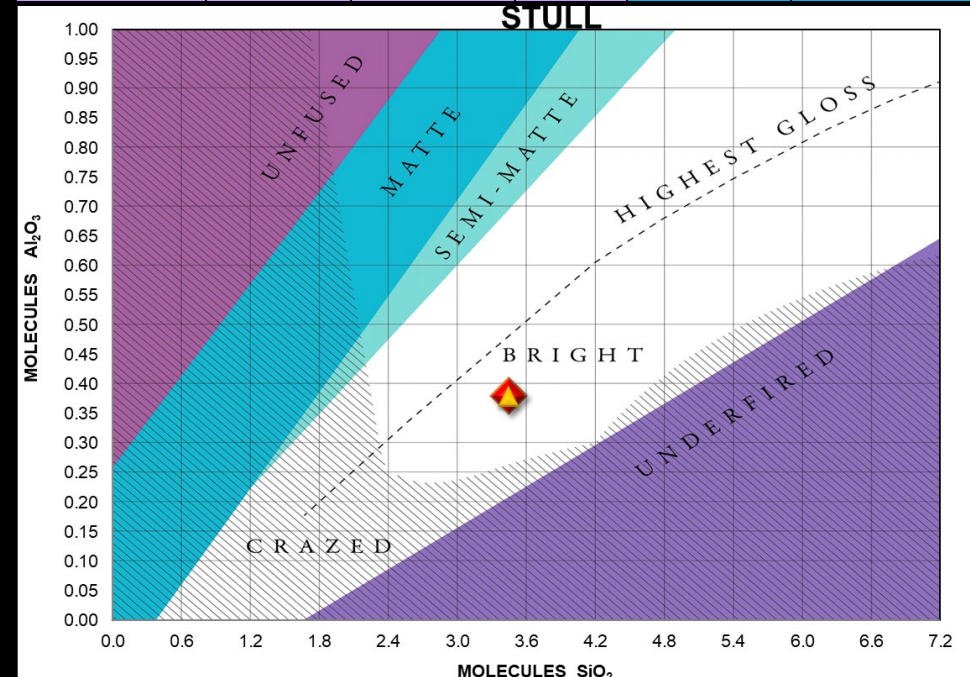
0.5%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.60	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.66
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO 0.01



2%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.30		Alkaline Earths 0.70	
SiO ₂ 3.45	Collective "Al ₂ O ₃ " 0.38	Na ₂ O 0.07	K ₂ O 0.24	MgO 0.00	CaO 0.63
B ₂ O ₃	Al ₂ O ₃ 0.38	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		MnO ₂	CoO 0.06



Cobalt Oxide

0.5%

Oxidation

Reduction

1-3 Second Dip

2-3 Second Dips

1-3 Second Dip

2-3 Second Dips

2%



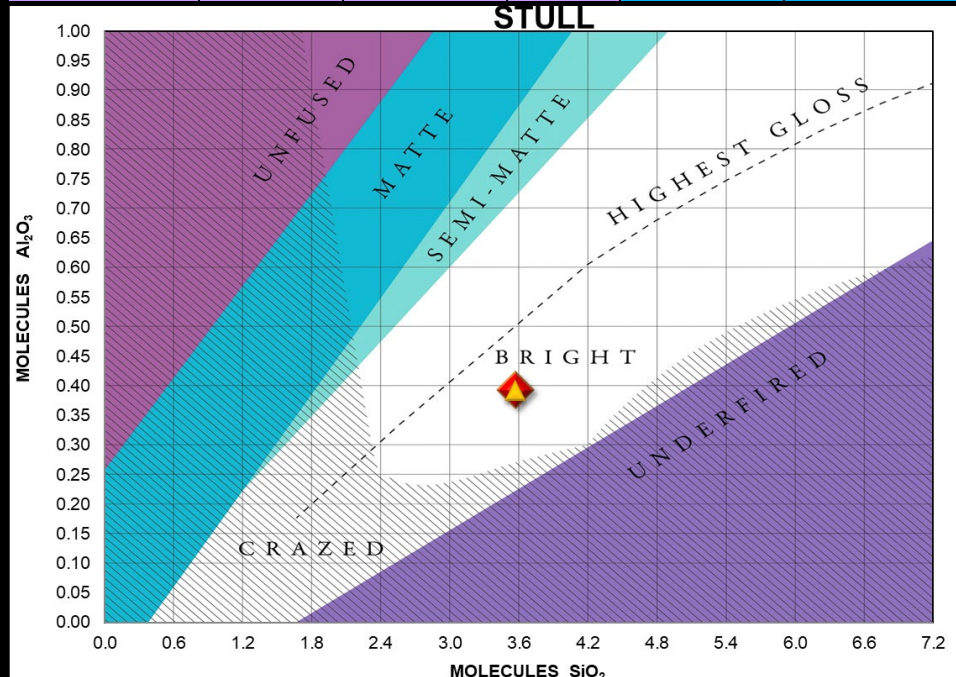
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Cobalt Oxide

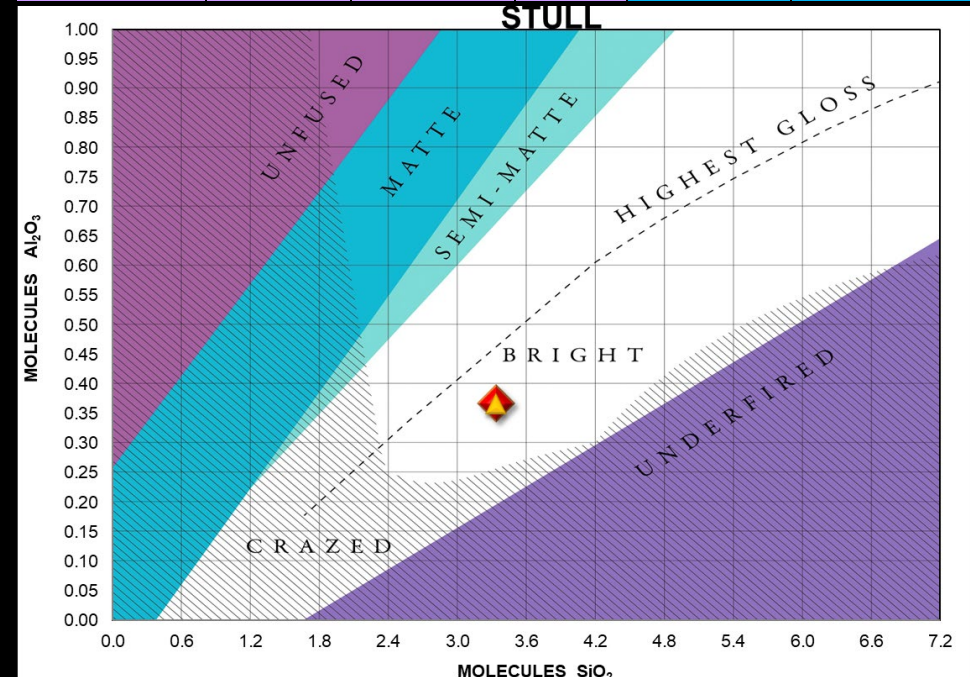
0.5%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.31		Alkaline Earths 0.69	
SiO ₂ 3.57	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.07	K ₂ O 0.24	MgO 0.00	CaO 0.65
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		MnO ₂	CoO 0.02



2%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.34	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.07	K ₂ O 0.23	MgO 0.00	CaO 0.61
B ₂ O ₃	Al ₂ O ₃ 0.37	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		MnO ₂	CoO 0.09

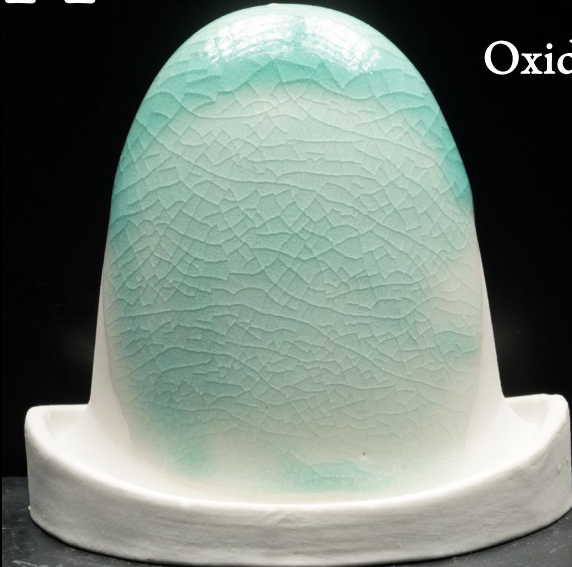


Copper Carbonate

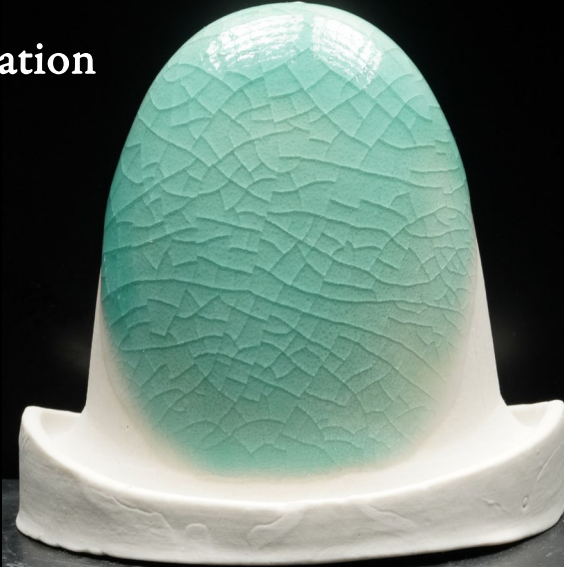
Oxidation

Reduction

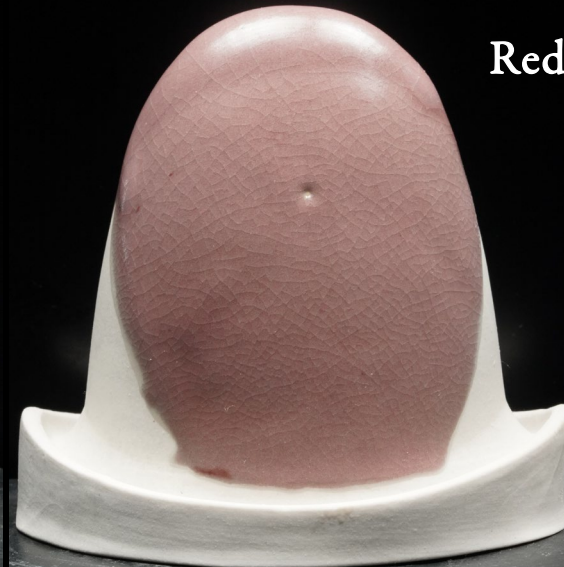
1%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

4%



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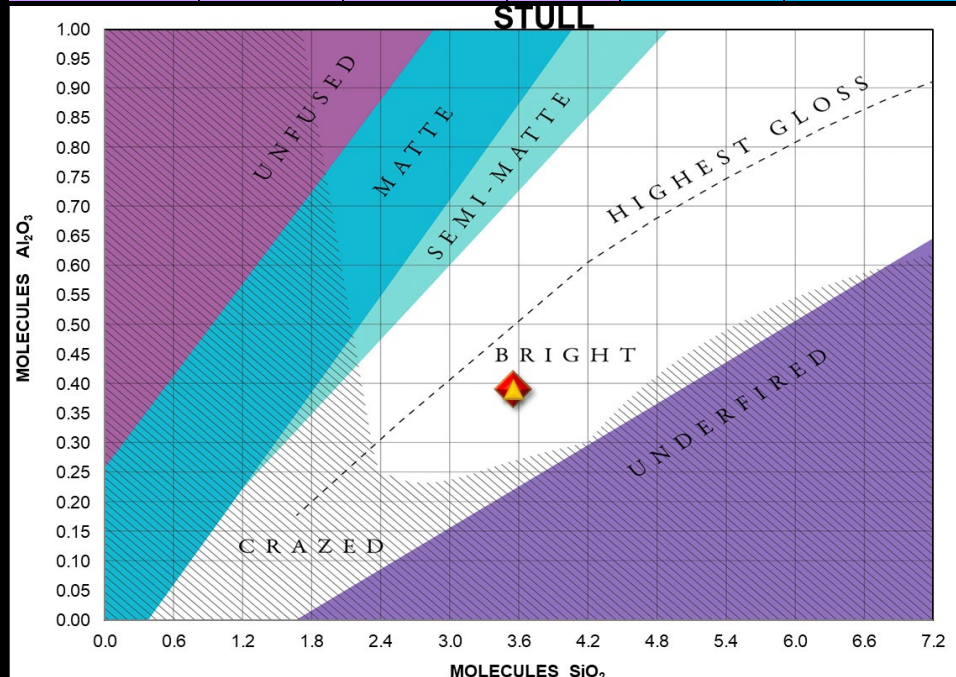
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Copper Carbonate

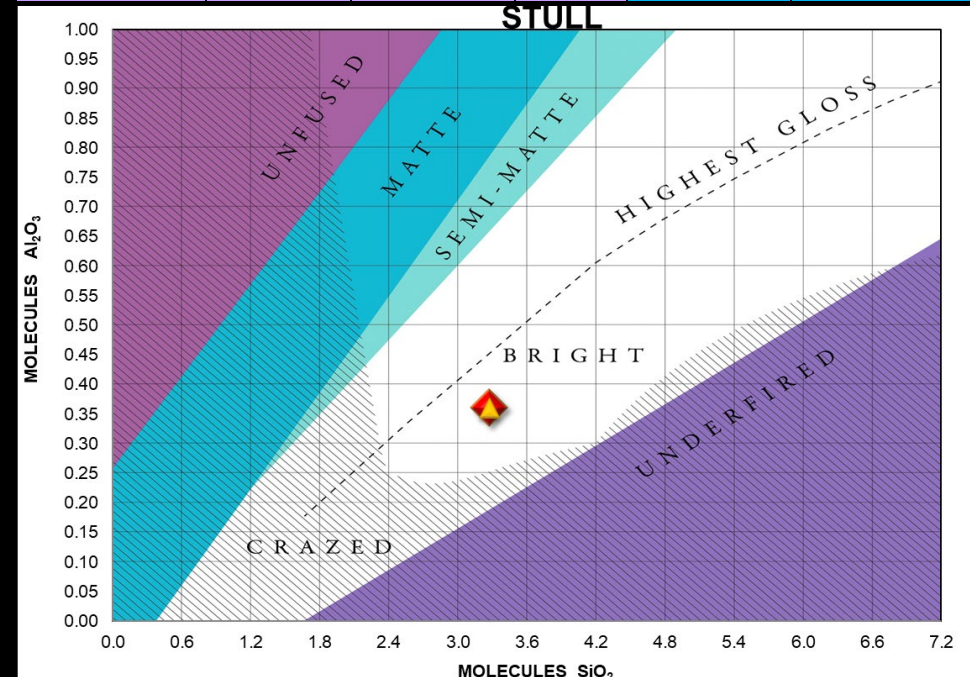
1%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.34		Alkaline Earths 0.66	
SiO ₂ 3.55	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.07	K ₂ O 0.24	MgO 0.00	CaO 0.65
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		MnO ₂	CoO



4%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.39		Alkaline Earths 0.61	
SiO ₂ 3.27	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.06	K ₂ O 0.22	MgO 0.00	CaO 0.60
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 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Copper Oxide-Black

Oxidation

Reduction

1%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

4%



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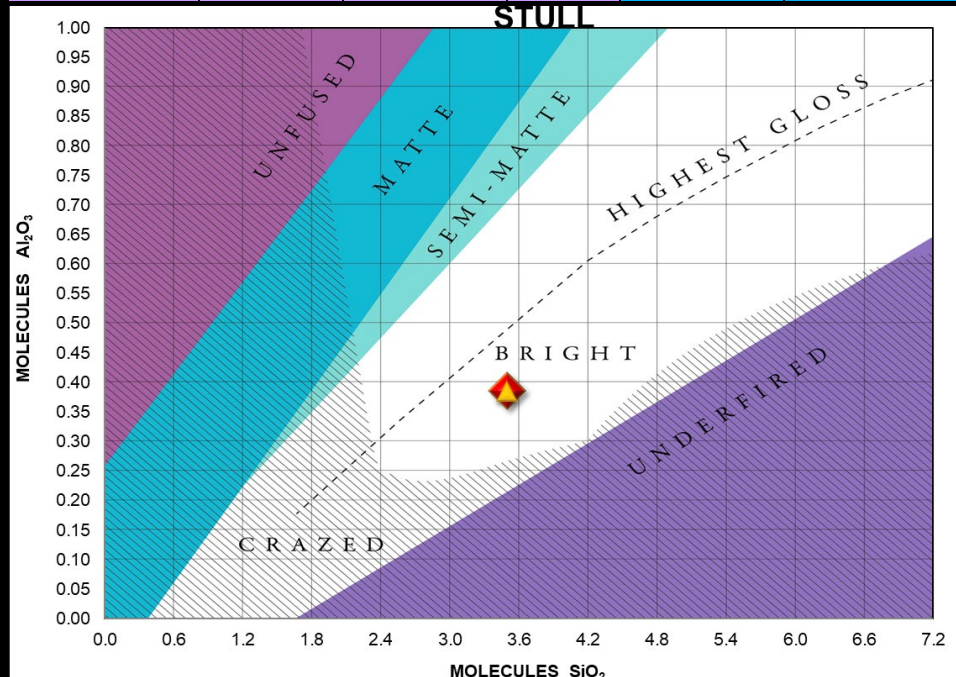
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Copper Oxide-Black

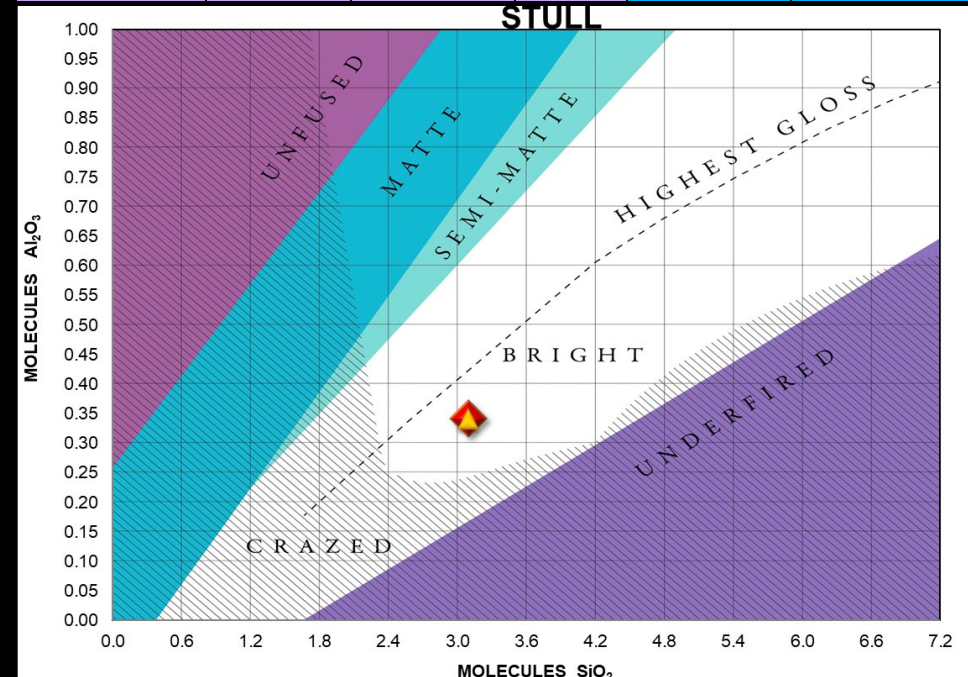
1%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.35		Alkaline Earths 0.65	
SiO ₂ 3.50	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.07	K ₂ O 0.24	MgO 0.00	CaO 0.64
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO 0.04	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		MnO ₂	CoO



4%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.43		Alkaline Earths 0.57	
SiO ₂ 3.10	Collective "Al ₂ O ₃ " 0.34	Na ₂ O 0.06	K ₂ O 0.21	MgO 0.00	CaO 0.56
B ₂ O ₃	Al ₂ O ₃ 0.34	Li ₂ O	CuO 0.15	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		MnO ₂	CoO



Red Iron Oxide

Oxidation

Reduction

3%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

9%



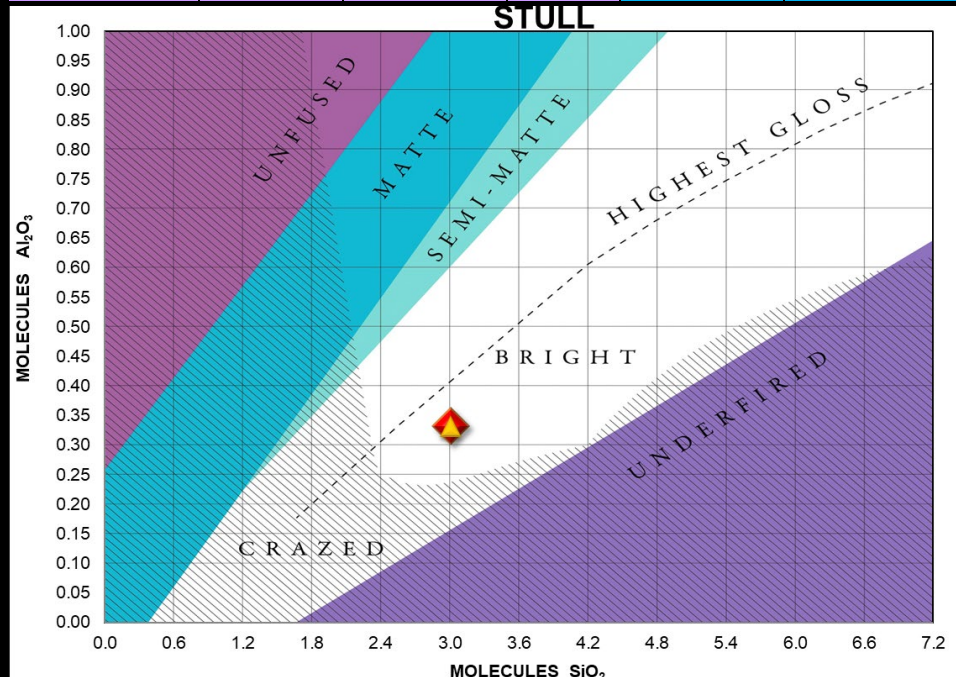
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Red Iron Oxide

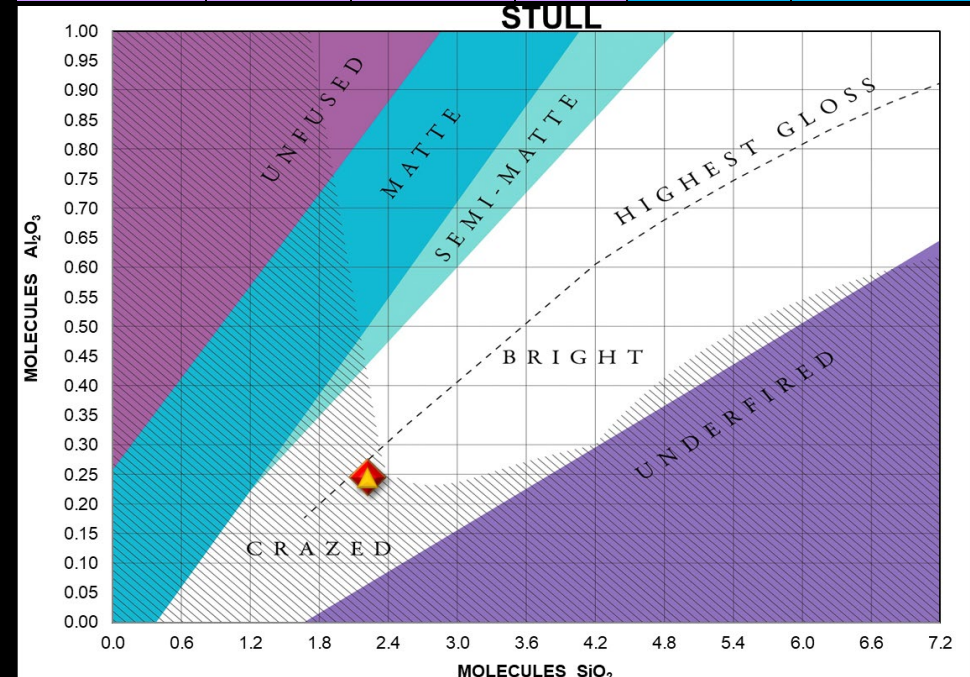
3%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 3.01	Collective "Al ₂ O ₃ " 0.33	Na ₂ O 0.06	K ₂ O 0.21	MgO 0.00	CaO 0.55
B ₂ O ₃	Al ₂ O ₃ 0.33	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.18
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



9%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.22	Collective "Al ₂ O ₃ " 0.25	Na ₂ O 0.04	K ₂ O 0.15	MgO 0.00	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.24	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.40
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

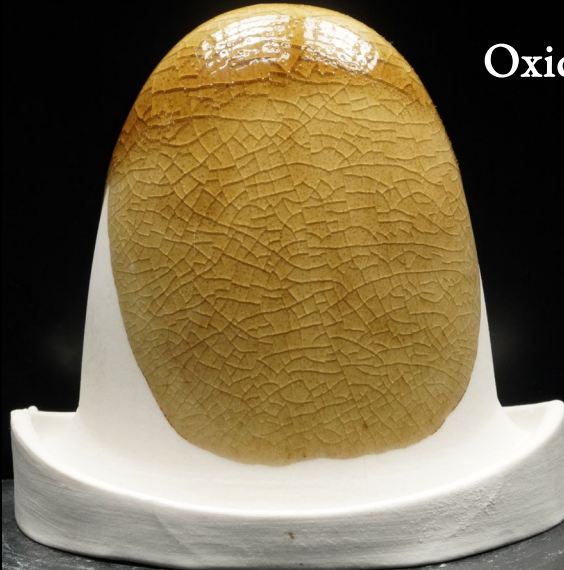


Black Iron Oxide

Oxidation

Reduction

3%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

9%



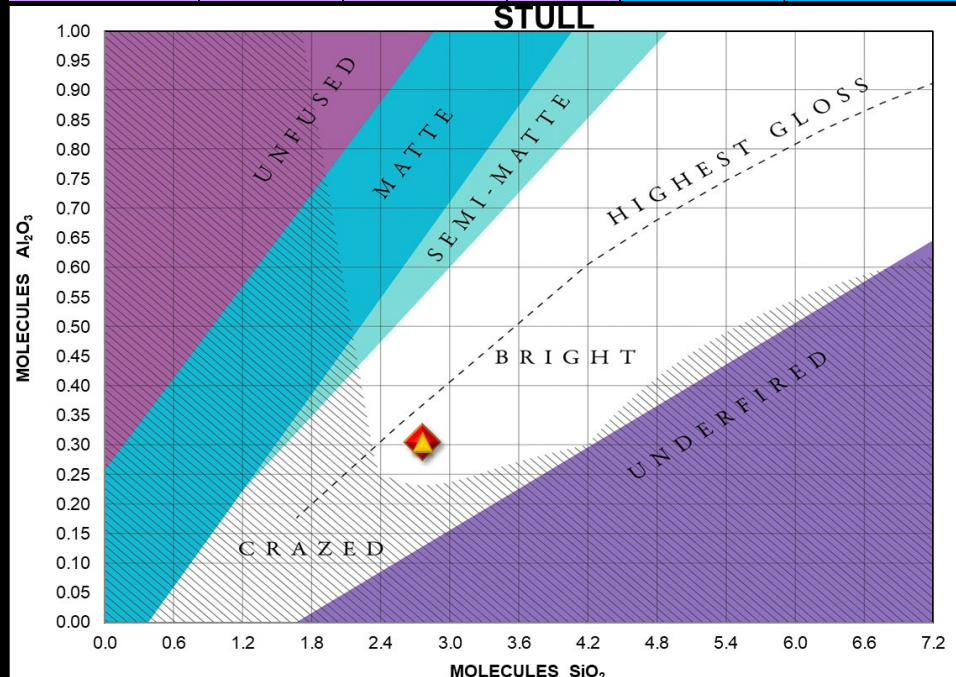
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Black Iron Oxide

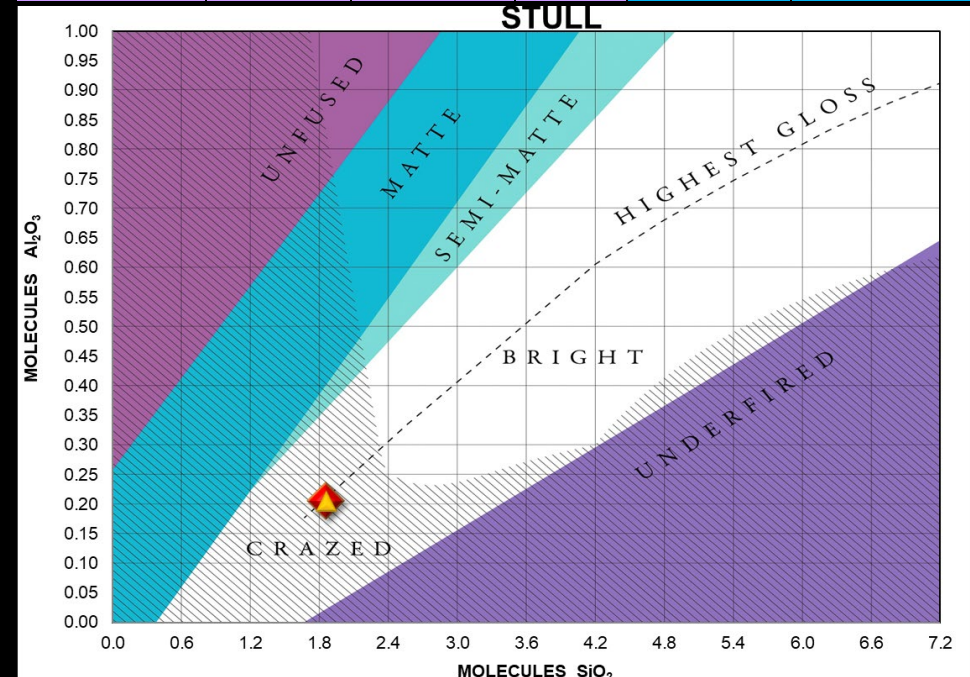
3%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.76	Collective "Al ₂ O ₃ " 0.30	Na ₂ O 0.05	K ₂ O 0.19	MgO 0.00	CaO 0.50
B ₂ O ₃	Al ₂ O ₃ 0.30	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.25
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



9%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.16		Alkaline Earths 0.84	
SiO ₂ 1.86	Collective "Al ₂ O ₃ " 0.20	Na ₂ O 0.04	K ₂ O 0.13	MgO 0.00	CaO 0.34
B ₂ O ₃	Al ₂ O ₃ 0.20	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.50
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Yellow Iron Oxide

Oxidation

Reduction

3%



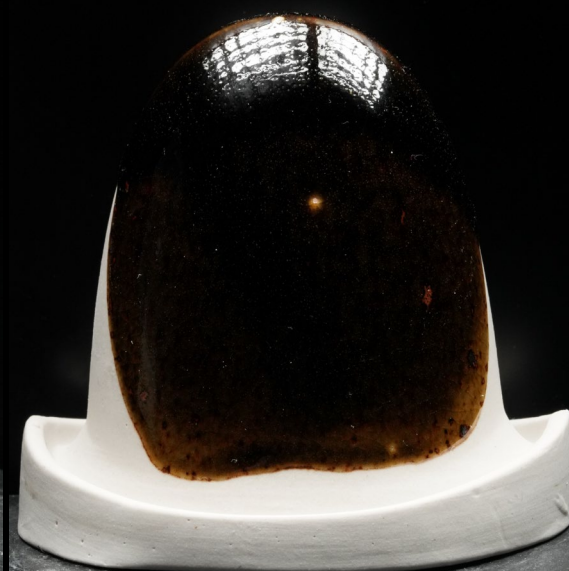
1-3 Second Dip

2-3 Second Dips

1-3 Second Dip

2-3 Second Dips

9%



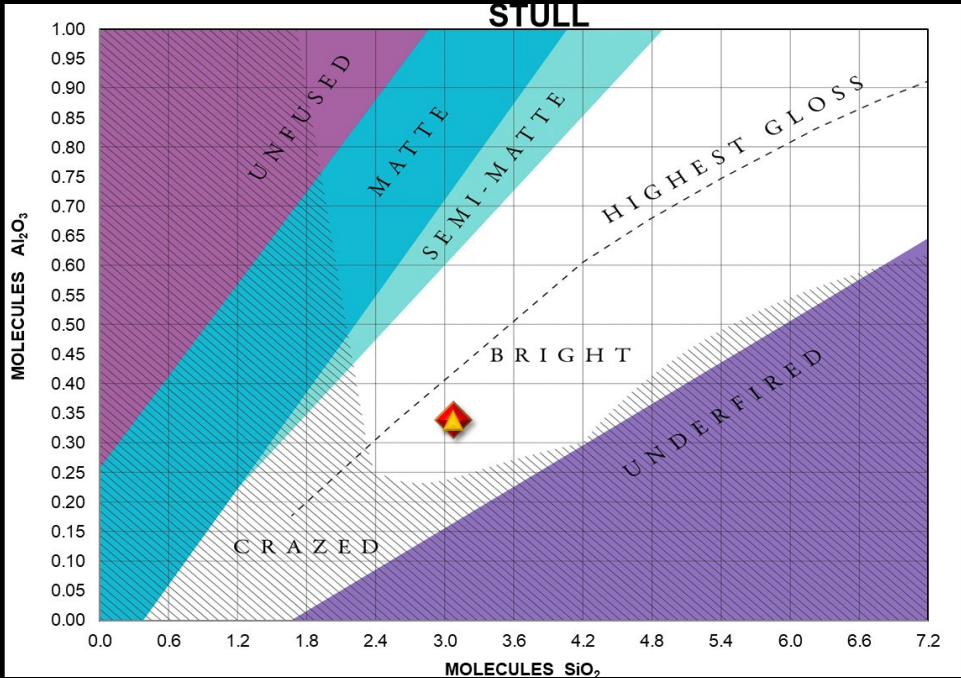
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Yellow Iron Oxide

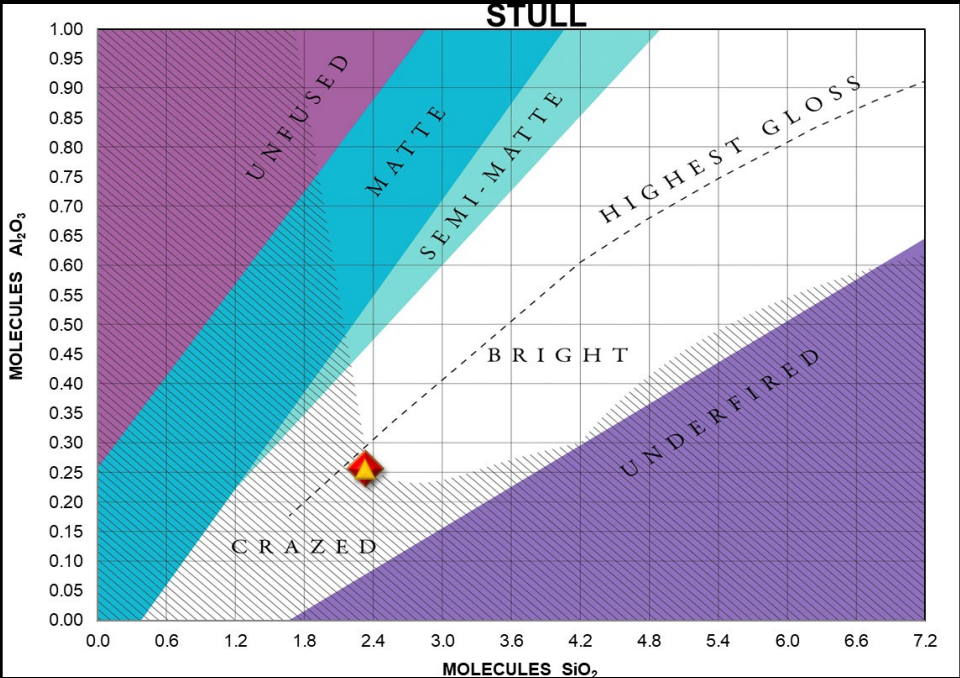
3%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.27		Alkaline Earths 0.73	
SiO ₂ 3.07	Collective "Al ₂ O ₃ " 0.34	Na ₂ O 0.06	K ₂ O 0.21	MgO 0.00	CaO 0.56
B ₂ O ₃	Al ₂ O ₃ 0.34	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.17
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



9%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.33	Collective "Al ₂ O ₃ " 0.26	Na ₂ O 0.05	K ₂ O 0.16	MgO 0.00	CaO 0.42
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 0.37
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

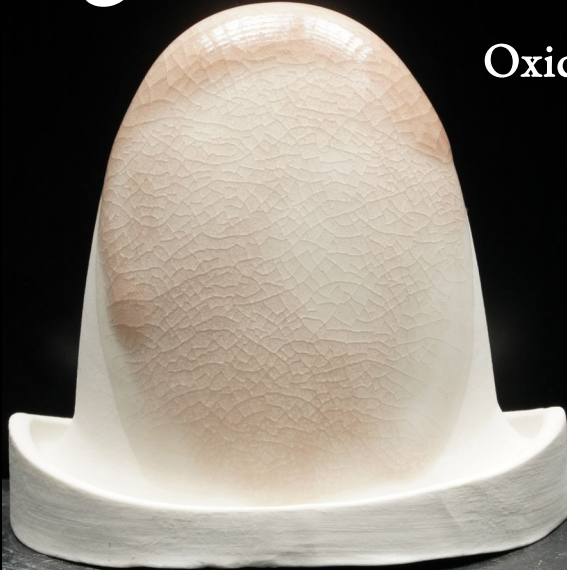


Manganese Dioxide

Oxidation

Reduction

1%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

4%



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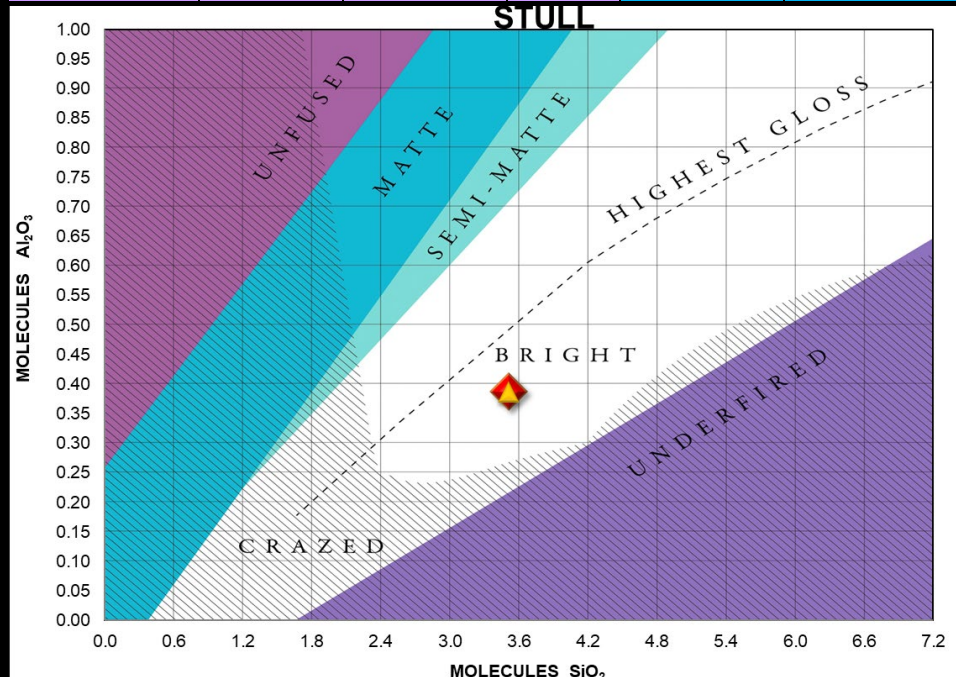
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Manganese Dioxide

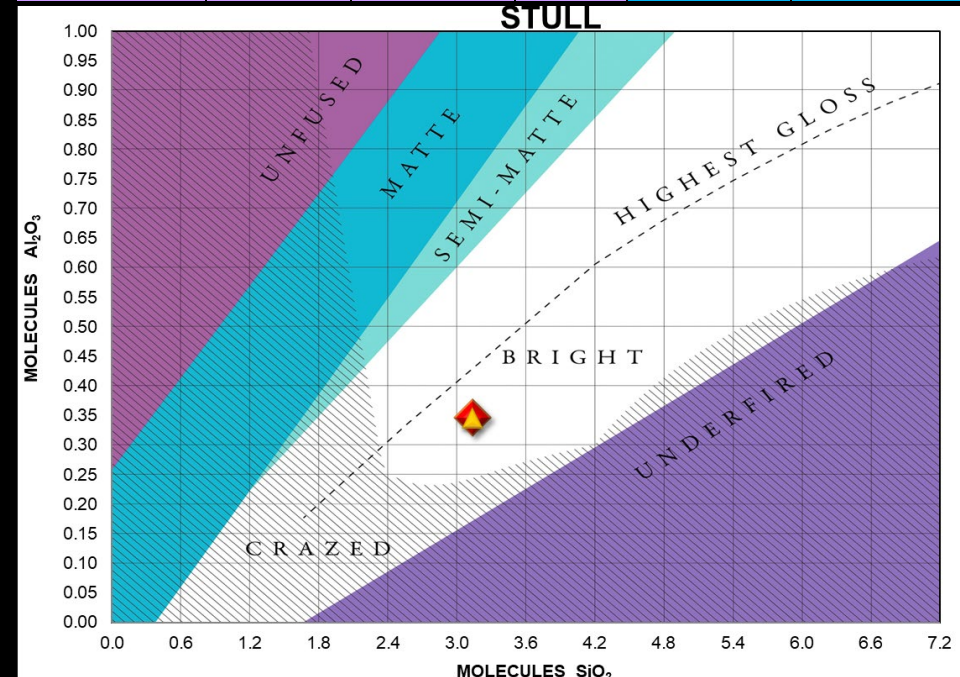
1%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.31		Alkaline Earths 0.69	
SiO ₂ 3.51	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.07	K ₂ O 0.24	MgO 0.00	CaO 0.64
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		MnO ₂ 0.04	CoO



4%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 3.14	Collective "Al ₂ O ₃ " 0.35	Na ₂ O 0.06	K ₂ O 0.21	MgO 0.00	CaO 0.57
B ₂ O ₃	Al ₂ O ₃ 0.35	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		MnO ₂ 0.14	CoO



Vanadium Pentoxide

Oxidation

Reduction

3%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

9%



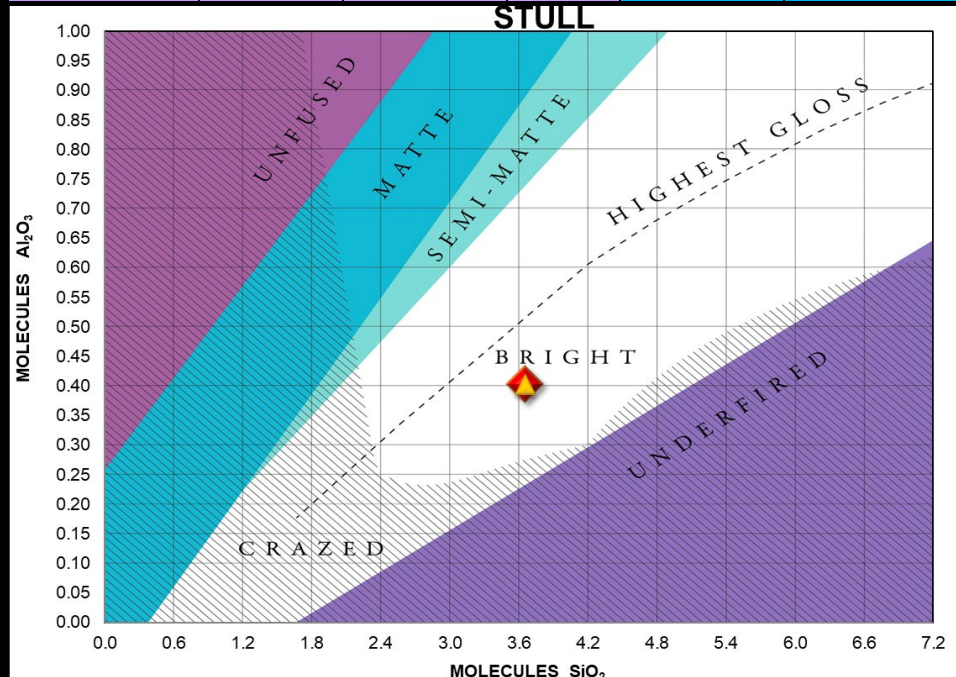
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Vanadium Pentoxide

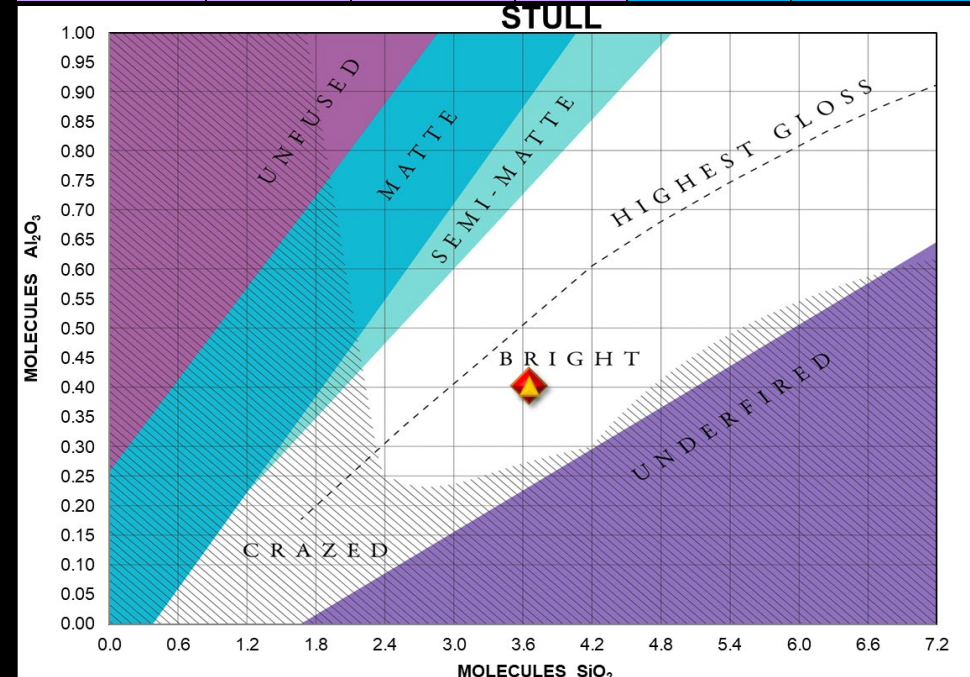
3%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO



9%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO



Dark Rutile

Oxidation

Reduction

3%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

9%



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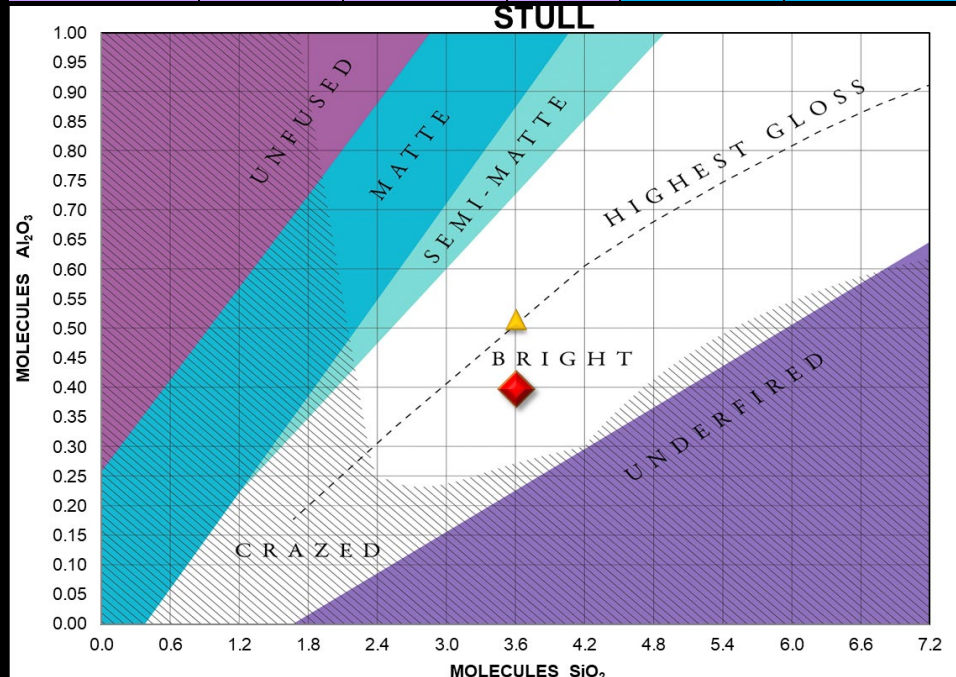
Absence 062422

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Dark Rutile

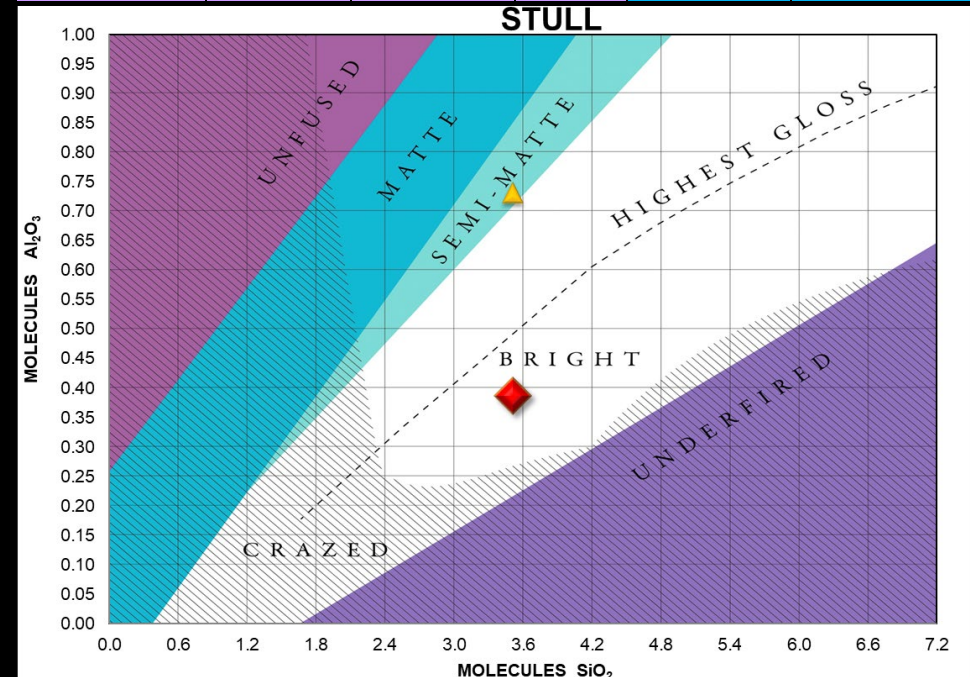
3%

SiO ₂ :Al ₂ O ₃ Ratio 6.99 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.61	Collective "Al ₂ O ₃ " 0.52	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.66
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.12	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



9%

SiO ₂ :Al ₂ O ₃ Ratio 4.79 :1		Alkali Metals 0.31		Alkaline Earths 0.69	
SiO ₂ 3.51	Collective "Al ₂ O ₃ " 0.73	Na ₂ O 0.07	K ₂ O 0.24	MgO 0.00	CaO 0.64
B ₂ O ₃	Al ₂ O ₃ 0.39	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.35	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.05
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Light Rutile

3%

Oxidation

Reduction



1-3 Second Dip

2-3 Second Dips

1-3 Second Dip

2-3 Second Dips

9%



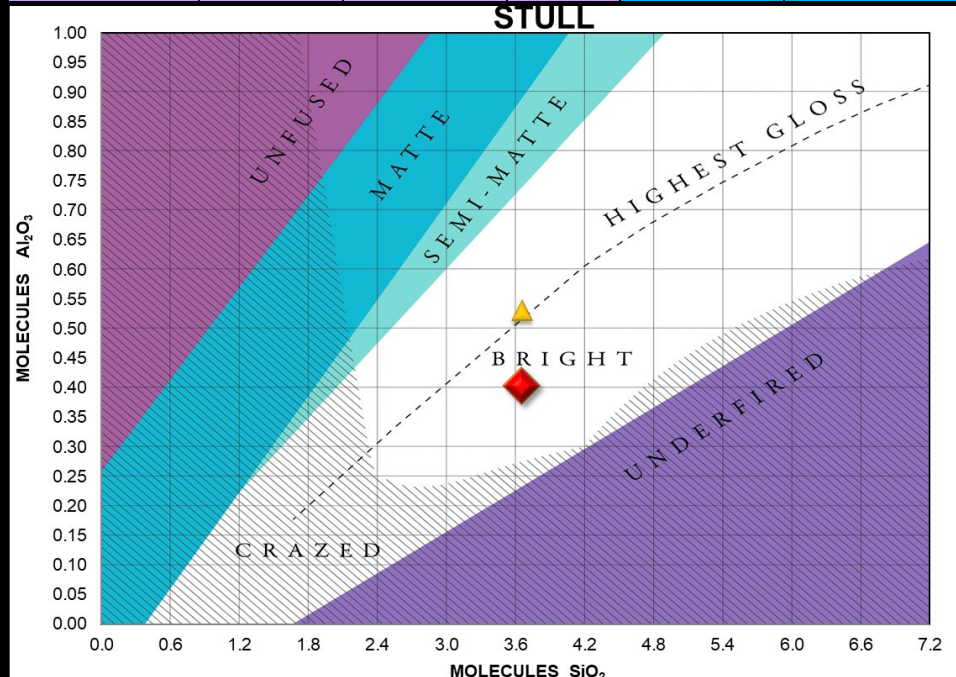
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Absence 062422
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Light Rutile

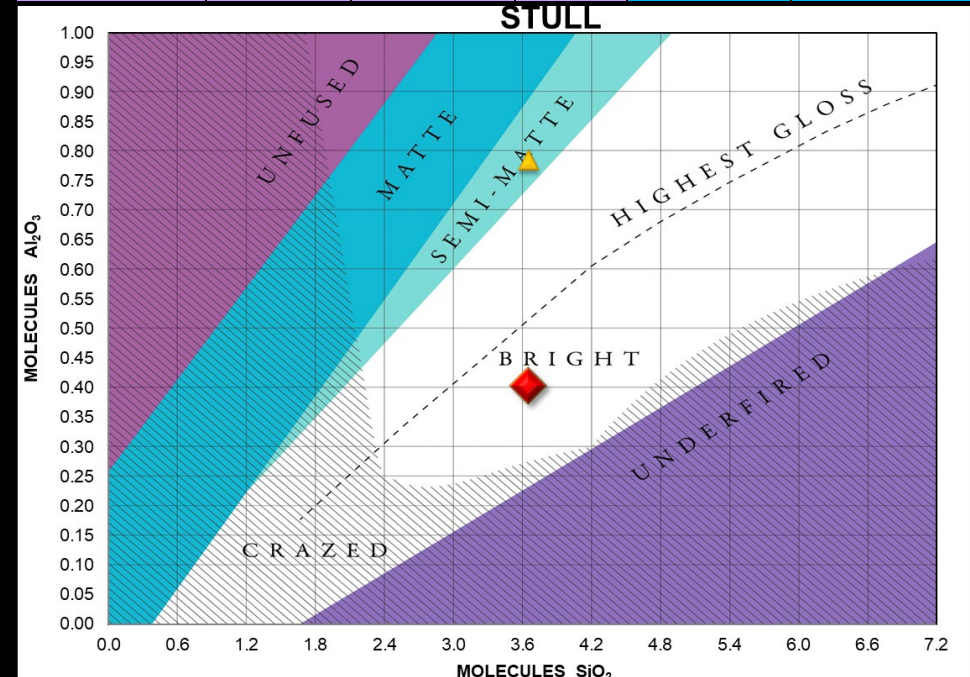
3%

SiO ₂ :Al ₂ O ₃ Ratio 6.88 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.65	Collective "Al ₂ O ₃ " 0.53	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.13	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



9%

SiO ₂ :Al ₂ O ₃ Ratio 4.64 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.65	Collective "Al ₂ O ₃ " 0.79	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.66
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.38	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Titanium Dioxide

Oxidation

Reduction

3%



1-3 Second Dip

2-3 Second Dips

1-3 Second Dip

2-3 Second Dips

9%



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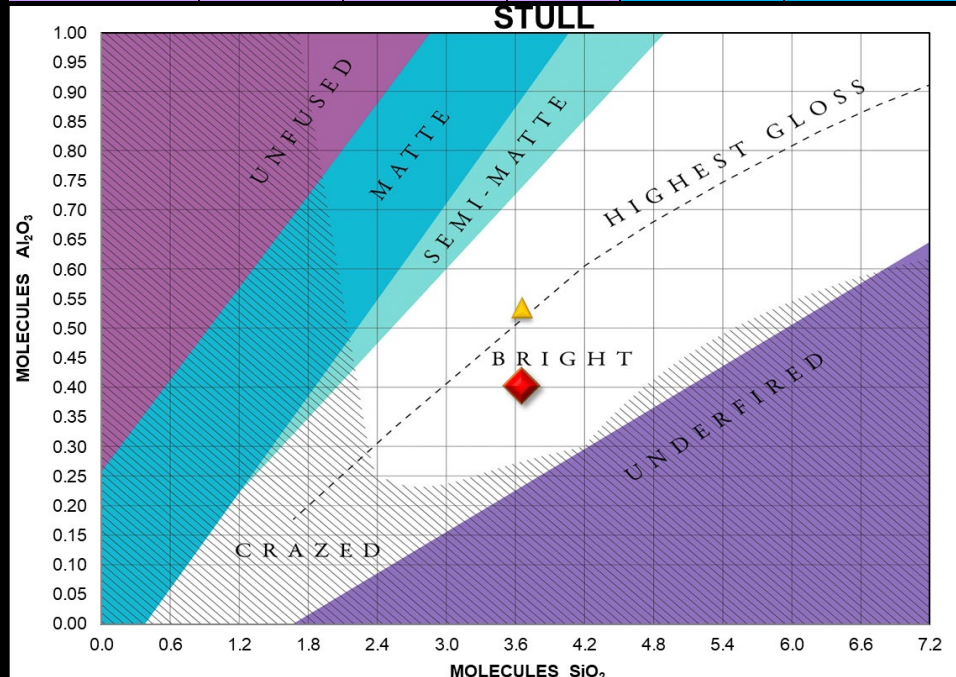
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Titanium Dioxide

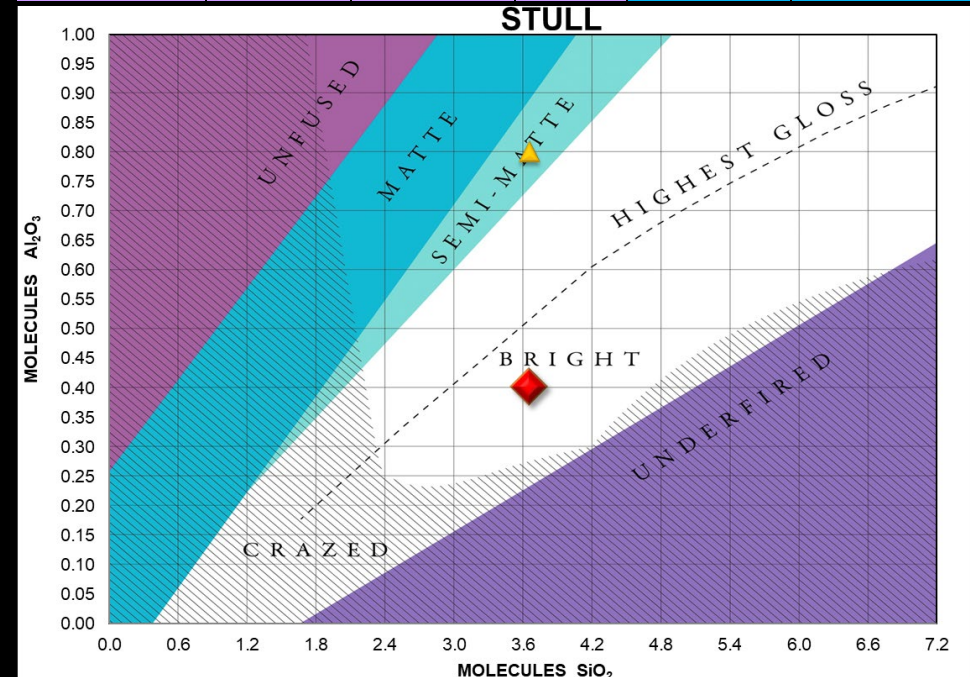
3%

SiO ₂ :Al ₂ O ₃ Ratio 6.82 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.54	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.13	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



9%

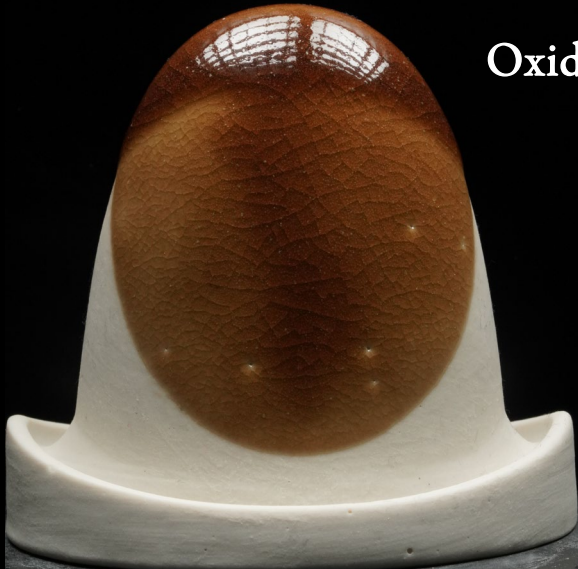
SiO ₂ :Al ₂ O ₃ Ratio 4.56 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.80	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.40	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



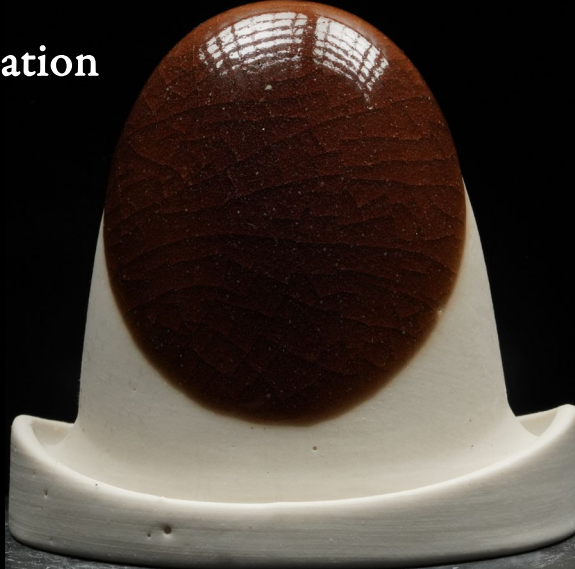
Nickel Carbonate

Oxidation

2%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

6%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips



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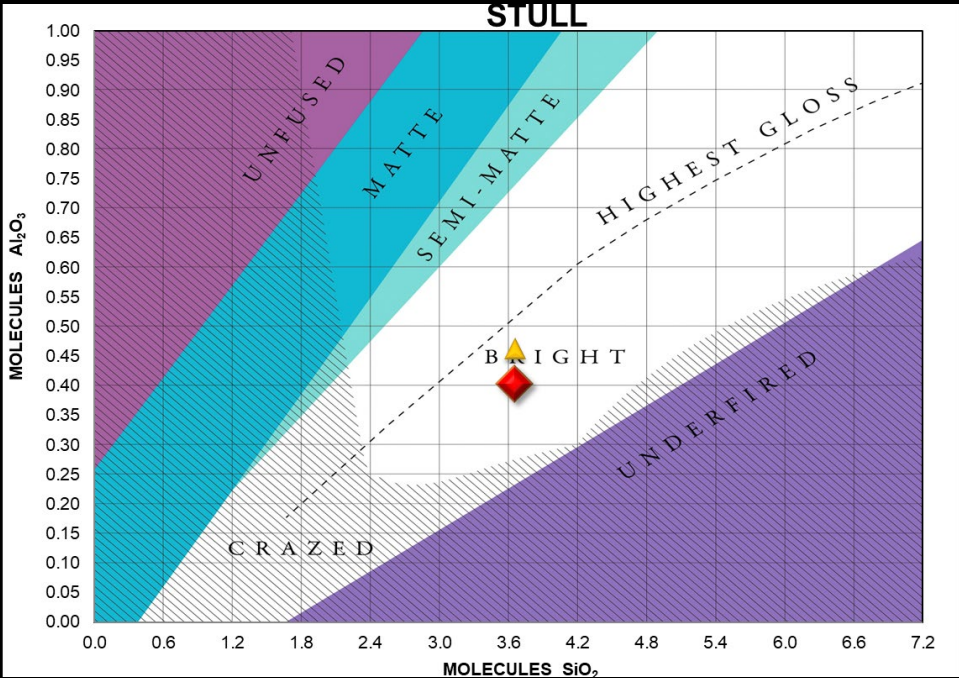
Absence 062422

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Nickel Carbonate

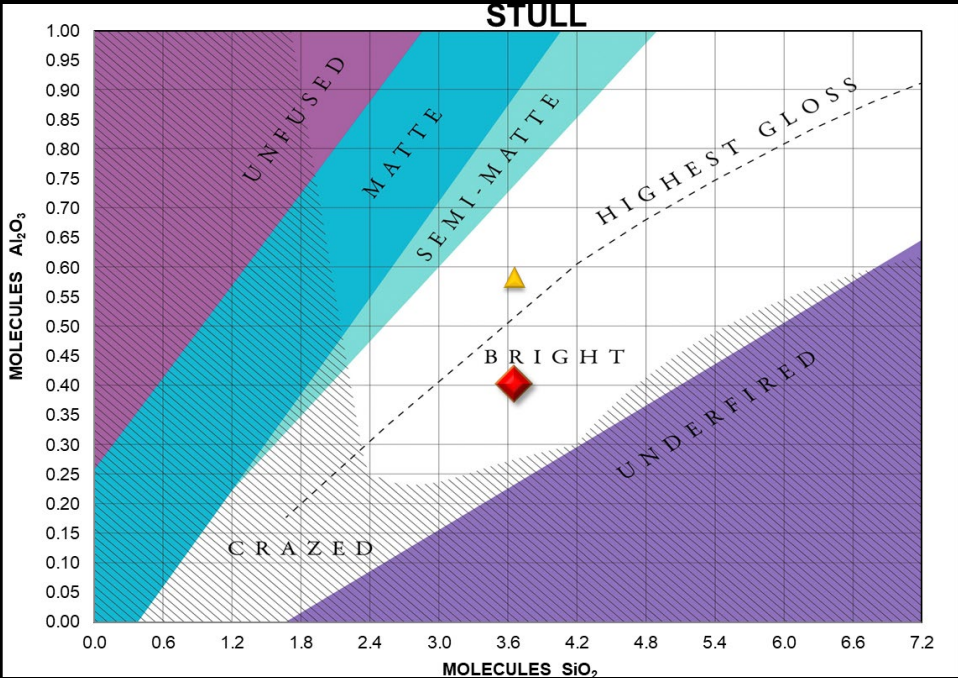
2%

SiO ₂ :Al ₂ O ₃ Ratio 7.88 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.46	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO 0.06	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



6%

SiO ₂ :Al ₂ O ₃ Ratio 6.25 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.58	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO 0.18	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

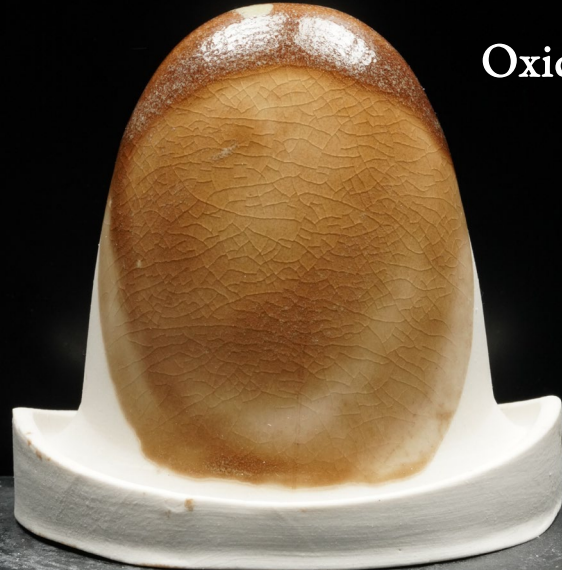


Nickel Oxide-Black

Oxidation

Reduction

2%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

6%



Ceramic
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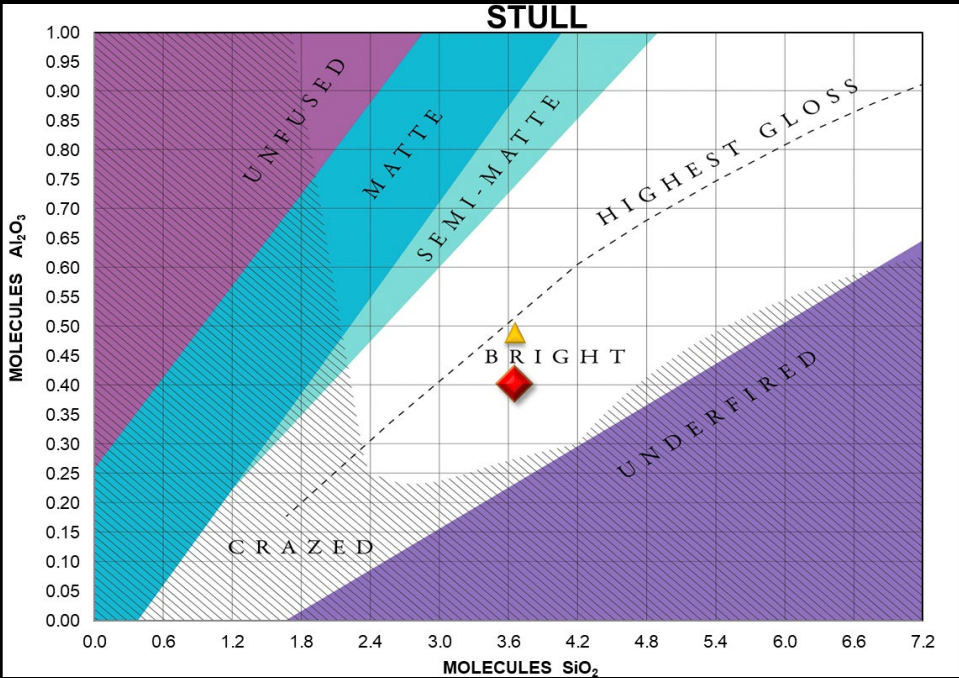
Absence 062422

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Nickel Oxide-Black

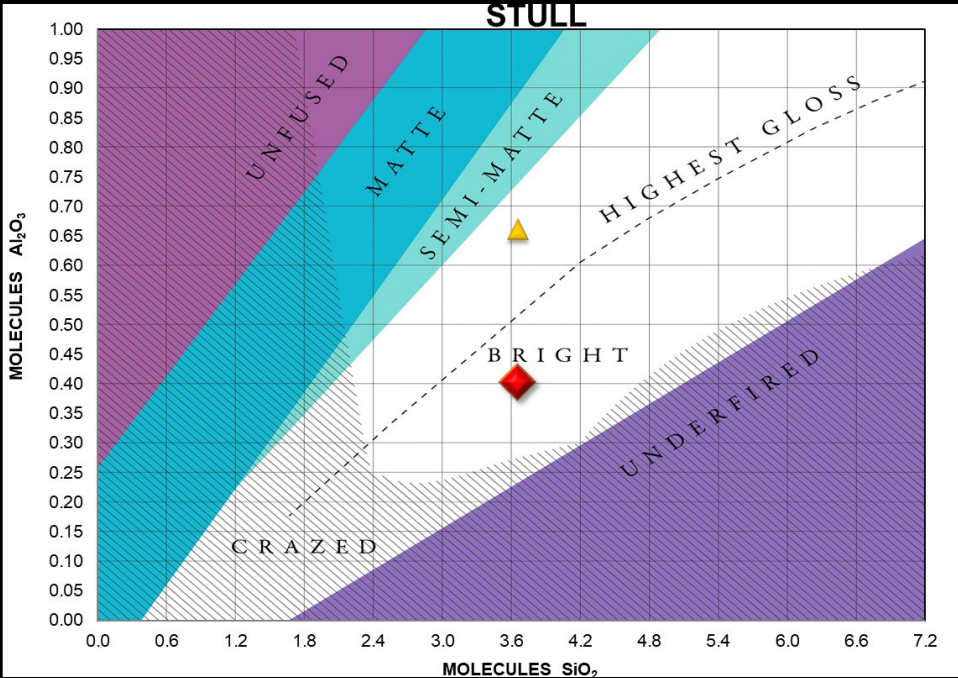
2%

SiO ₂ :Al ₂ O ₃ Ratio 7.46 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.49	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO 0.09	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



6%

SiO ₂ :Al ₂ O ₃ Ratio 5.52 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.66	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO 0.26	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

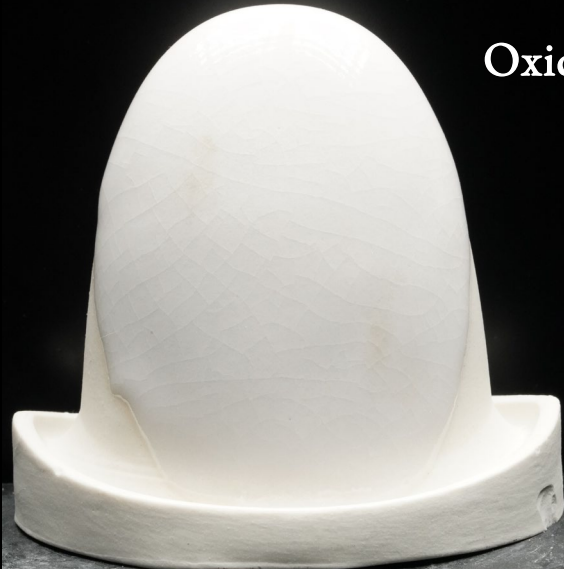


Tin Oxide

Oxidation

Reduction

3%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

6%



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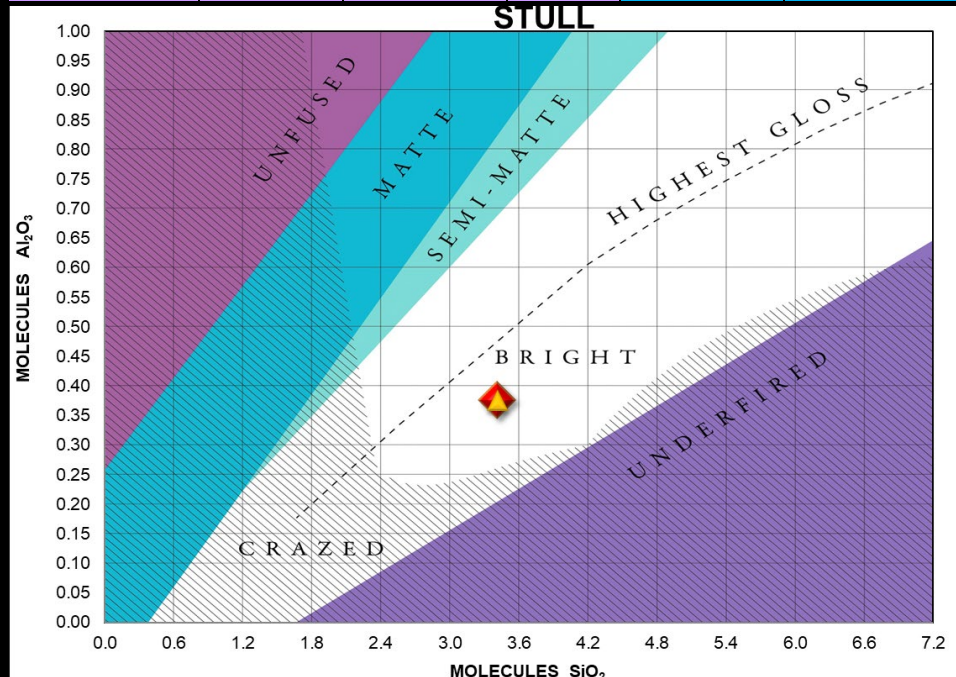
Absence 062422

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Tin Oxide

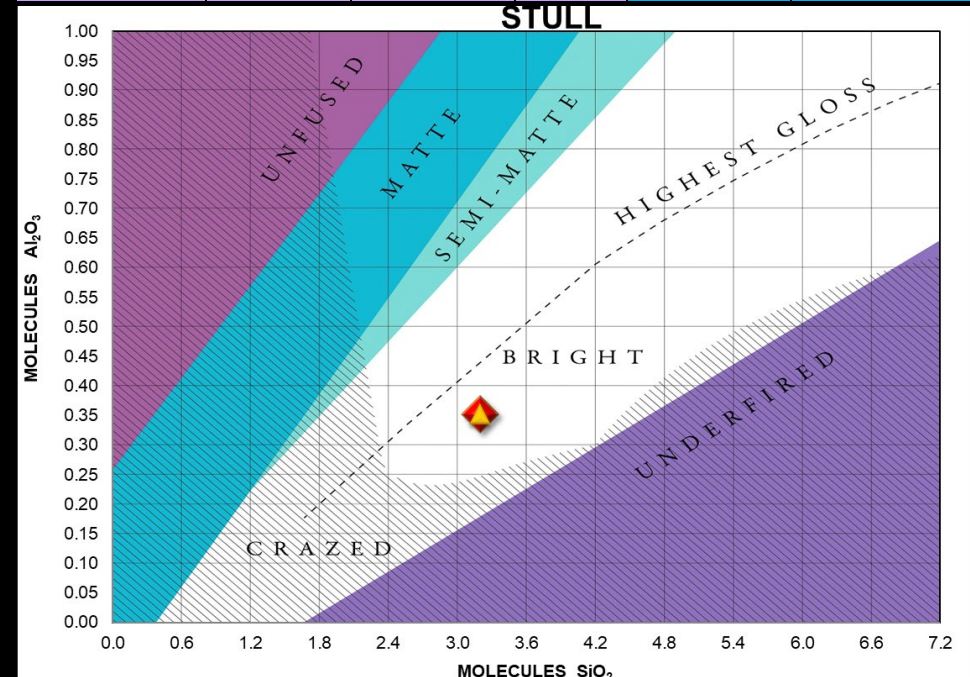
3%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.37		Alkaline Earths 0.63	
SiO ₂ 3.41	Collective "Al ₂ O ₃ " 0.38	Na ₂ O 0.07	K ₂ O 0.23	MgO 0.00	CaO 0.62
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂ 0.07	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



6%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.41		Alkaline Earths 0.59	
SiO ₂ 3.20	Collective "Al ₂ O ₃ " 0.35	Na ₂ O 0.06	K ₂ O 0.22	MgO 0.00	CaO 0.58
B ₂ O ₃	Al ₂ O ₃ 0.35	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂ 0.12	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Zirconium Silicate

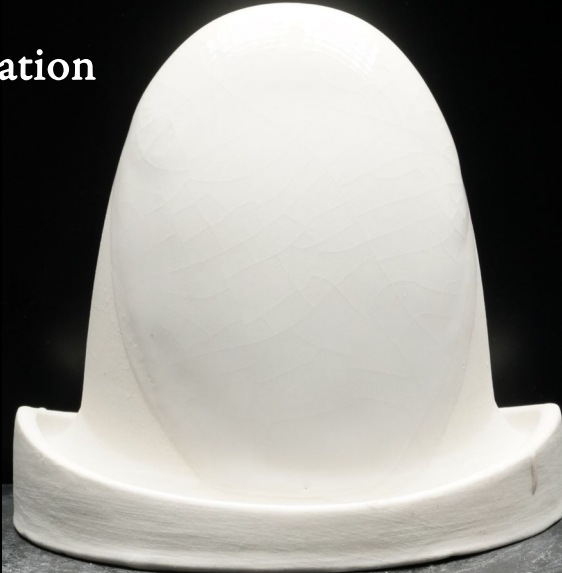
Oxidation

Reduction

5%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

10%



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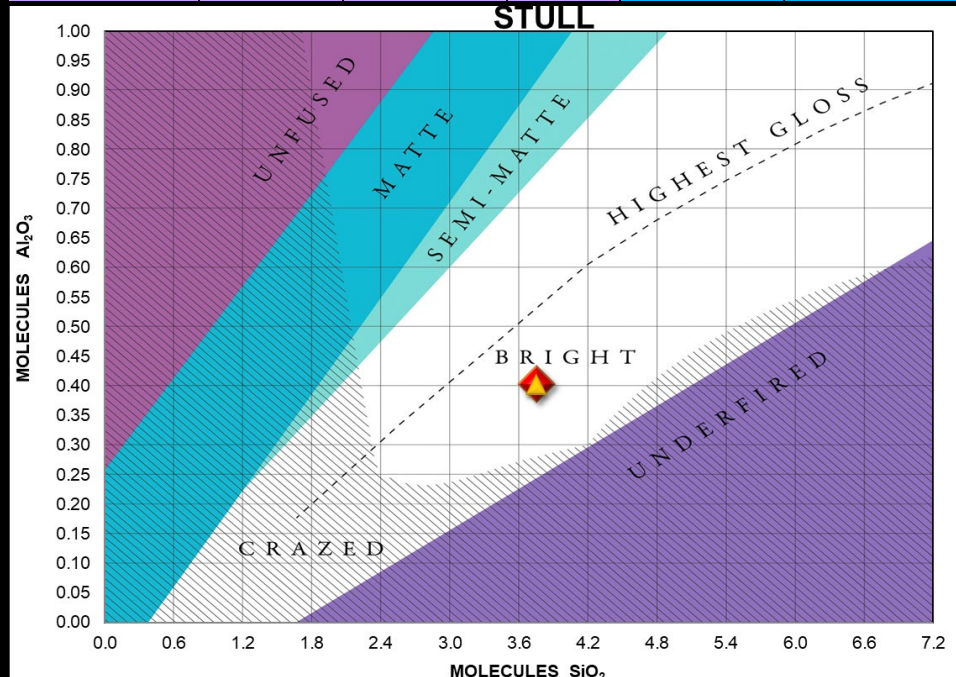
Absence 062422

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Zirconium Silicate

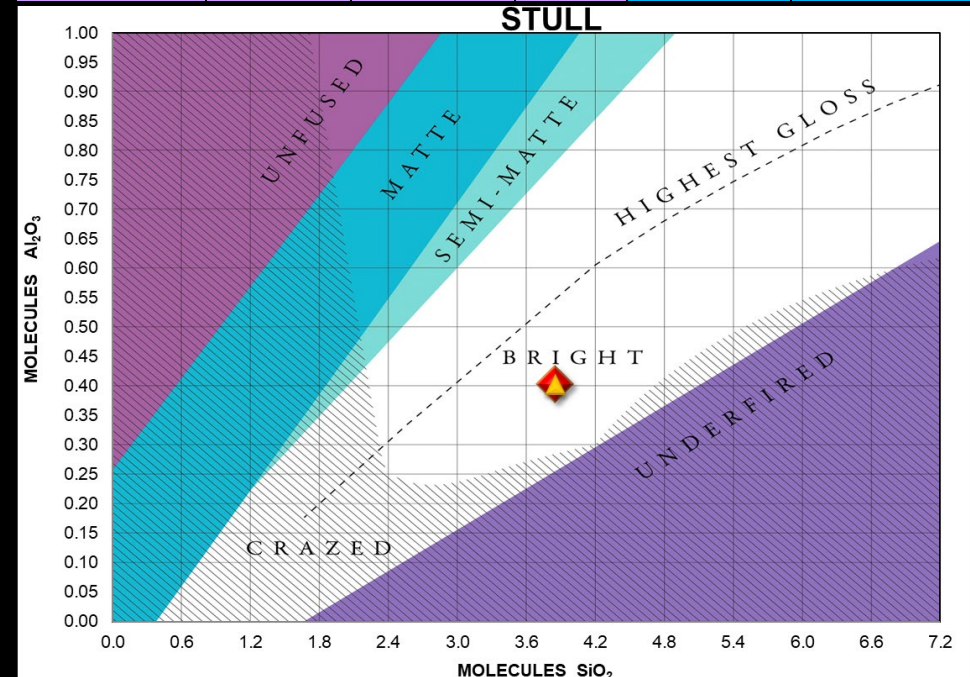
5%

SiO ₂ :Al ₂ O ₃ Ratio 9.31 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.75	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO



10%

SiO ₂ :Al ₂ O ₃ Ratio 9.55 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.85	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO



Stain Dark Red 6021

Oxidation

Reduction

5%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

10%



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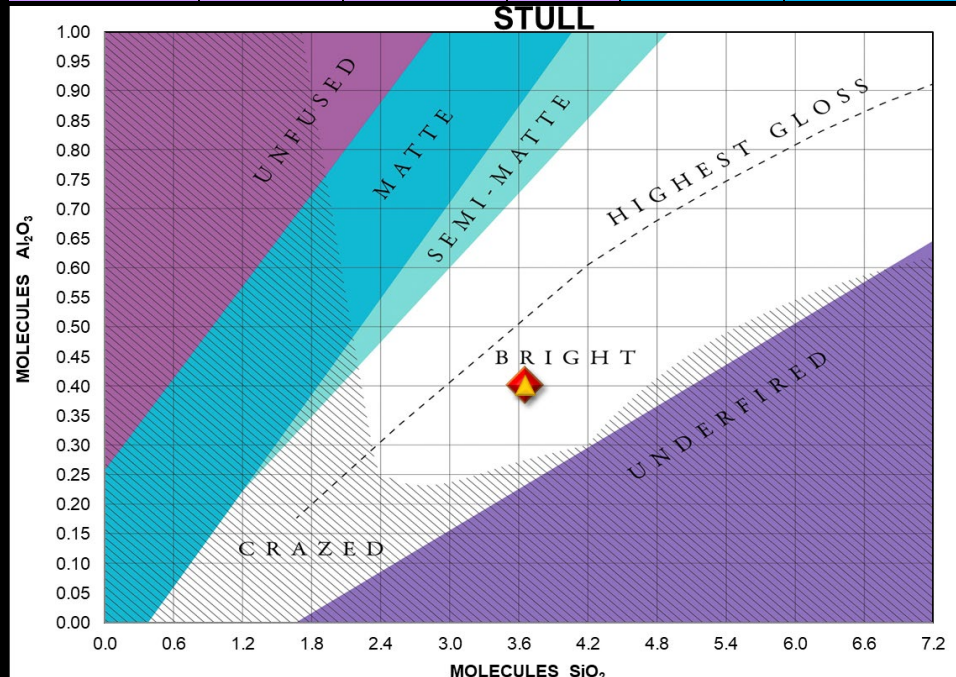
Absence 062422

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Stain Dark Red 6021

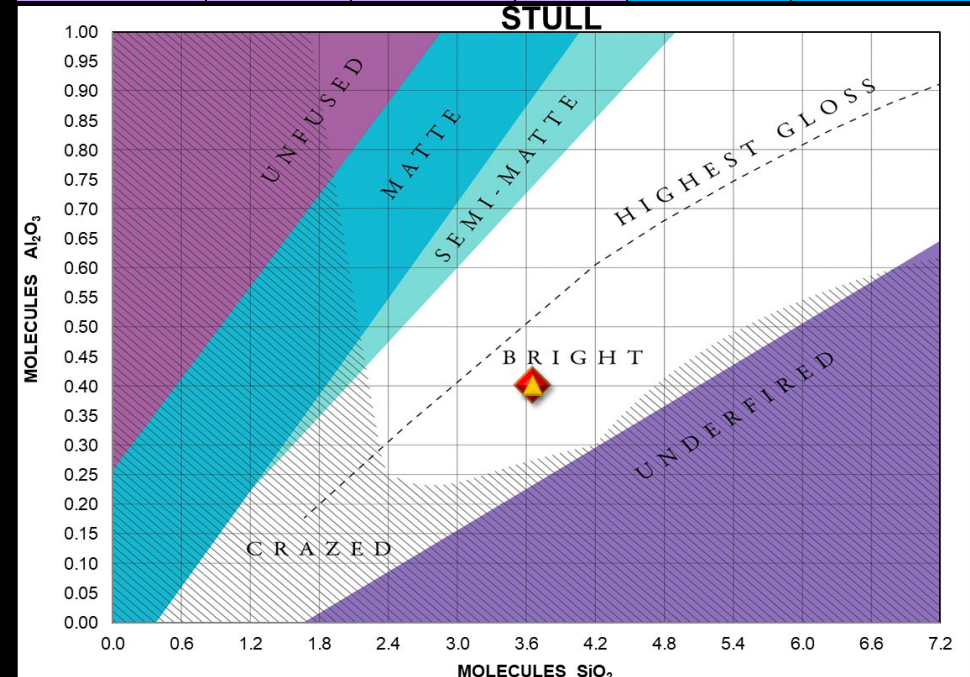
5%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO



10%

SiO ₂ :Al ₂ O ₃ Ratio 9.06 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO



Silicon Carbide-30 Mesh

Oxidation

Reduction

3%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

9%



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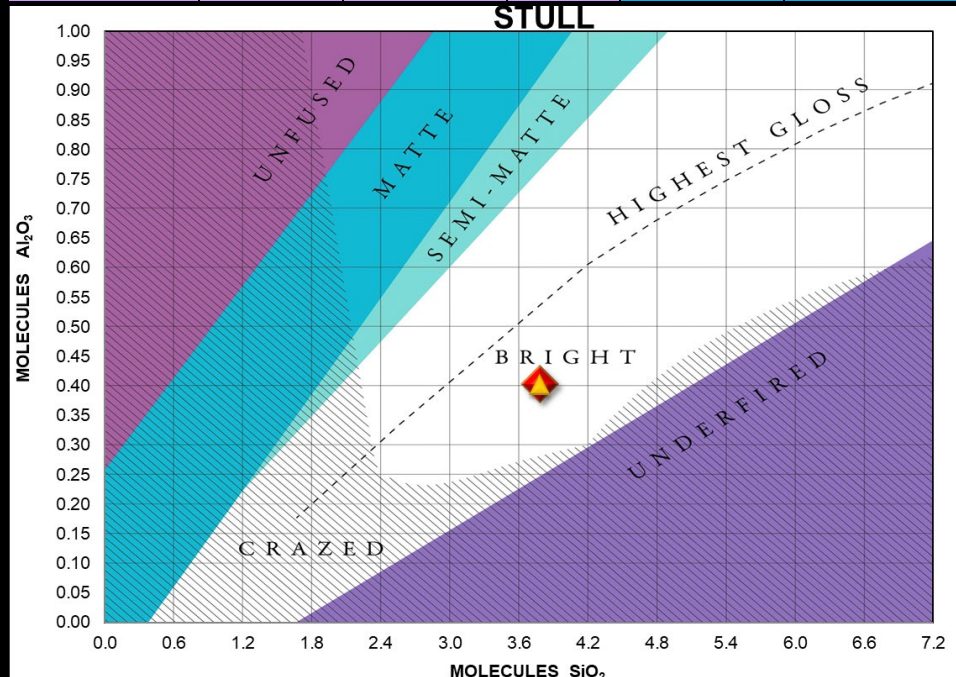
Absence 062422

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Silicon Carbide-30 Mesh

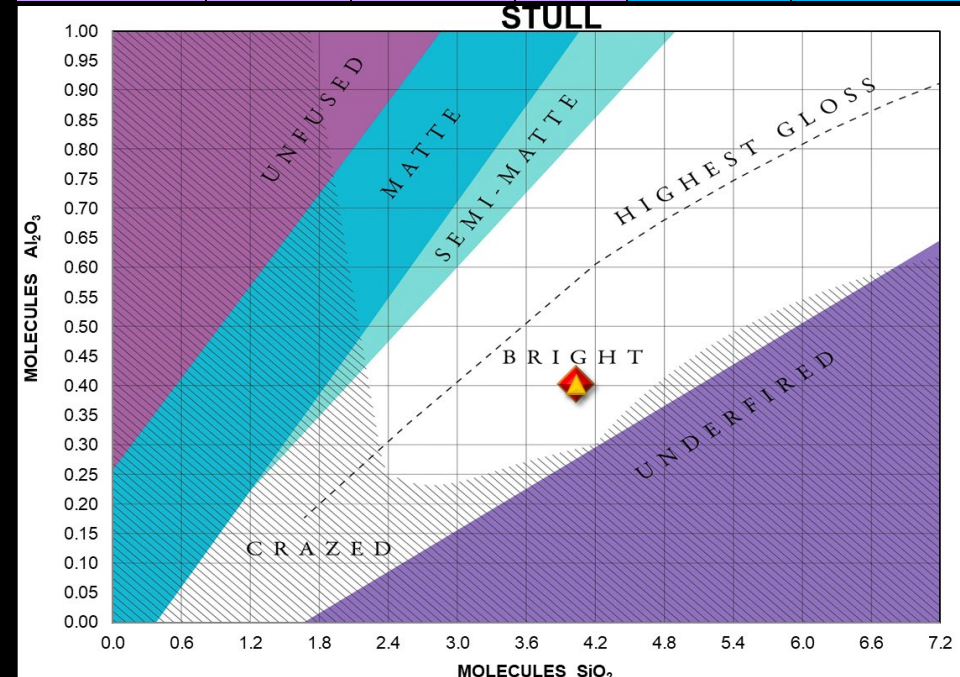
3%

SiO ₂ :Al ₂ O ₃ Ratio 9.38 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.78	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO



9%

SiO ₂ :Al ₂ O ₃ Ratio 10.00 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 4.03	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO

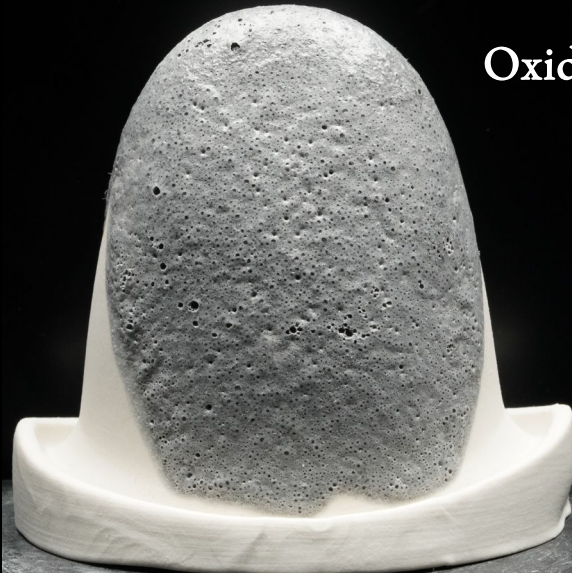


Silicon Carbide-800 Mesh

Oxidation

Reduction

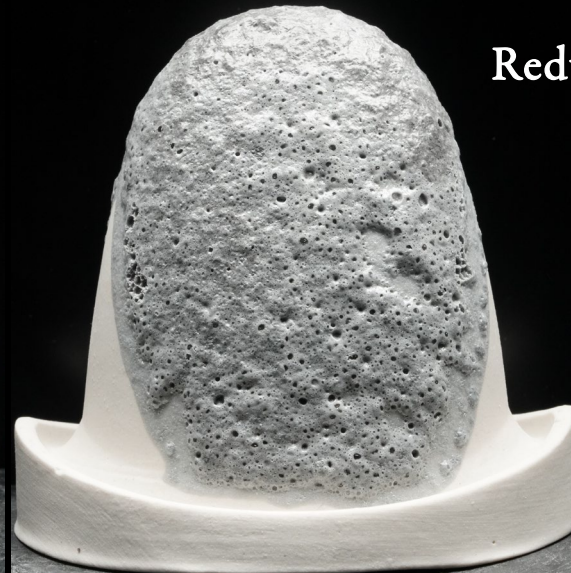
3%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

9%



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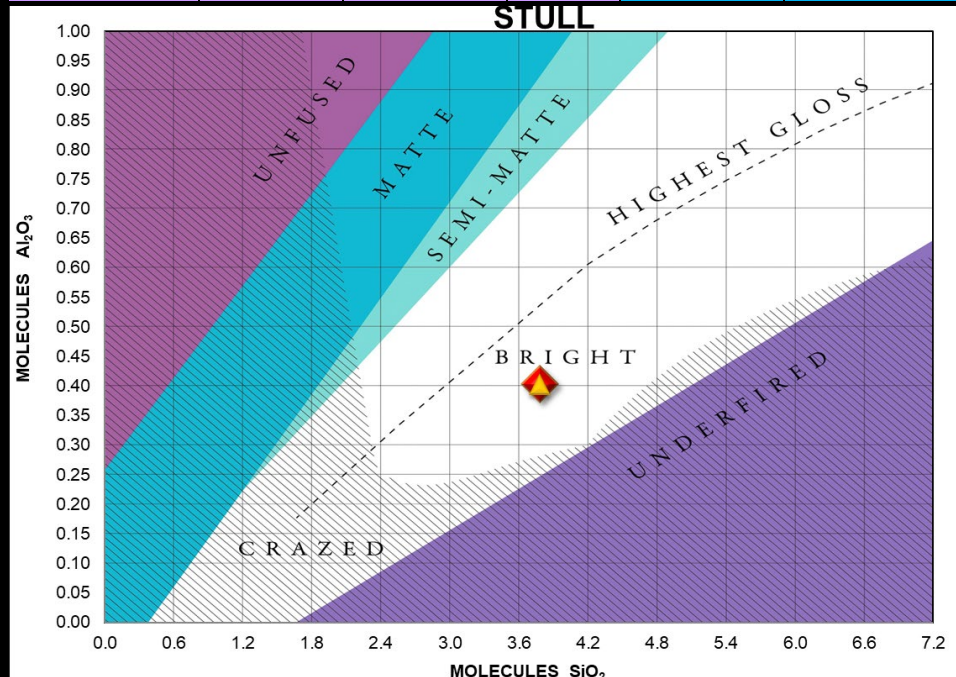
Absence 062422

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Silicon Carbide-800 Mesh

3%

SiO ₂ :Al ₂ O ₃ Ratio 9.38 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.78	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO



9%

SiO ₂ :Al ₂ O ₃ Ratio 10.00 :1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 4.03	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.07	K ₂ O 0.25	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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		MnO ₂	CoO

