

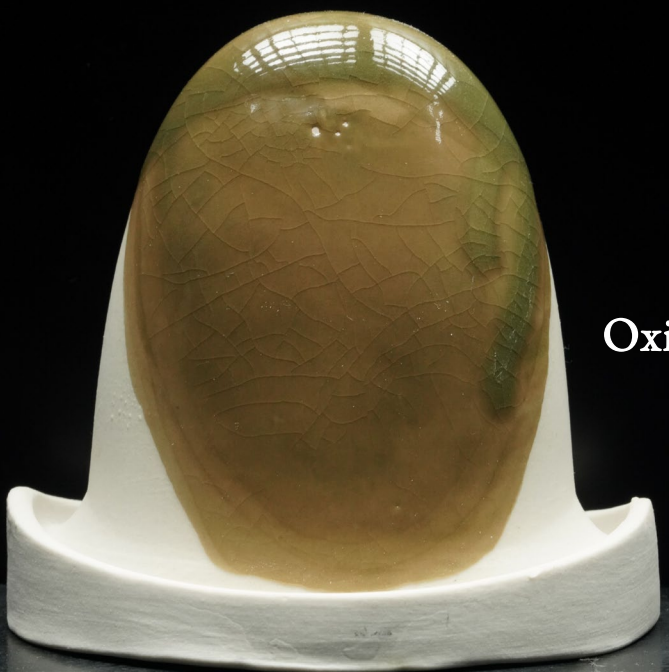
4321- Δ 10

Lab 5a-Color Wheel

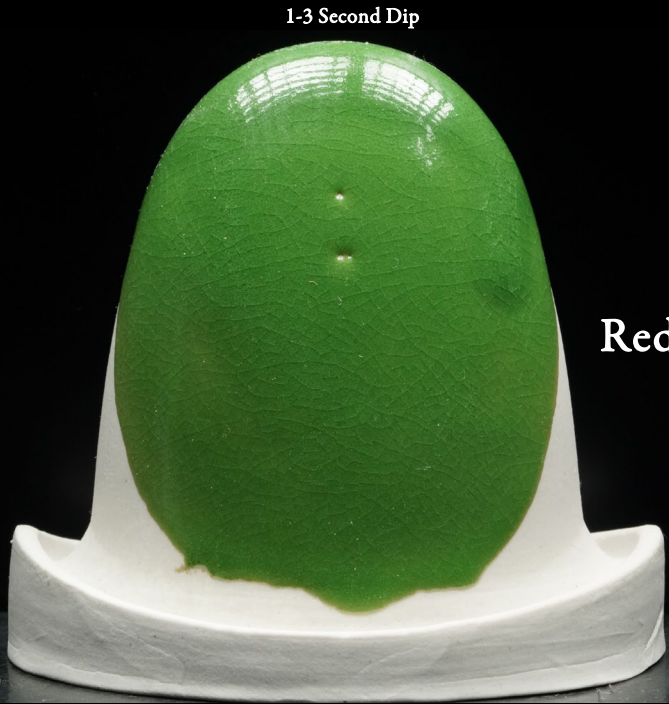
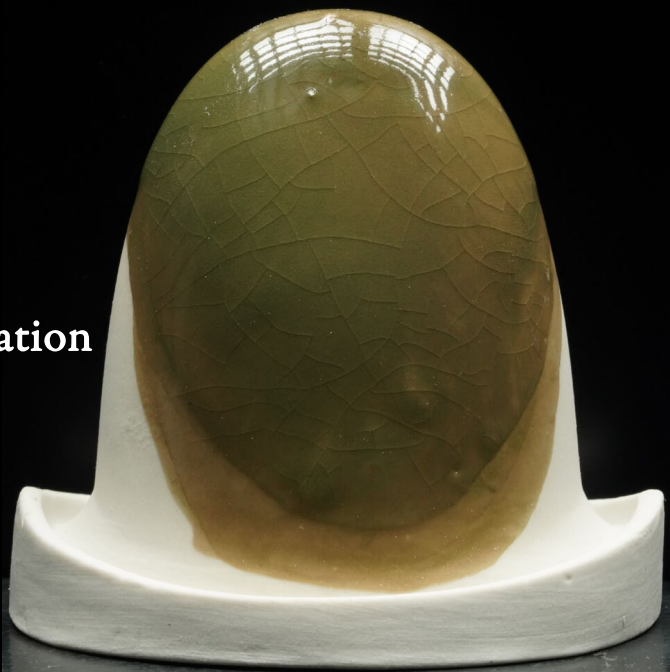
4321

Original
062322-1

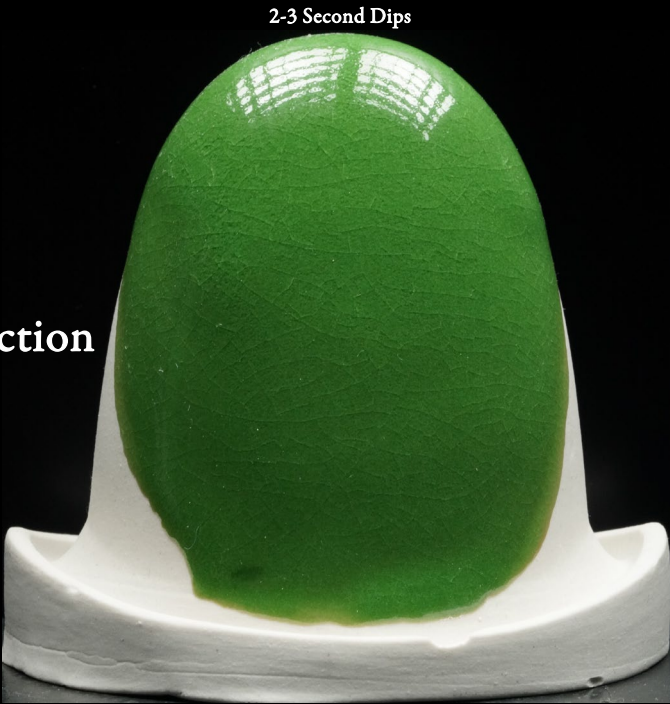
Neph Sy	40.00
Whiting	20.00
EPK	10.00
Flint	30.00
Chrome Oxide	1.00
Water	60



Oxidation

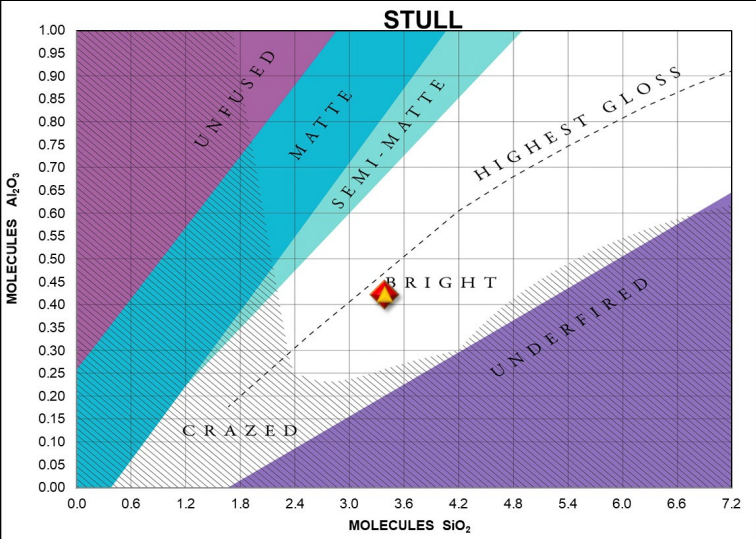


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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 7.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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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%



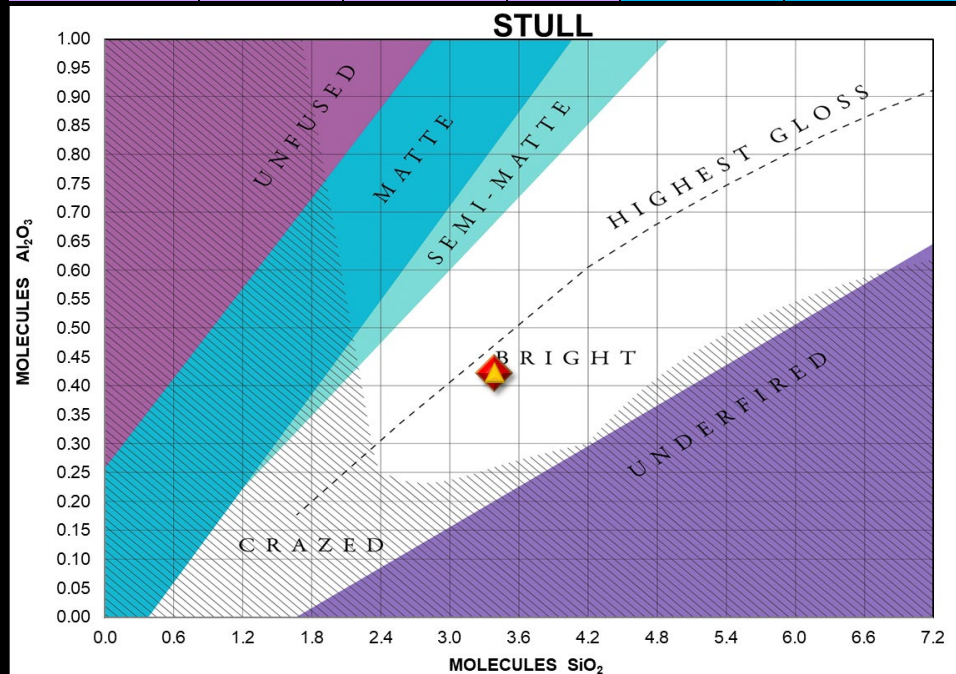
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Chrome Oxide

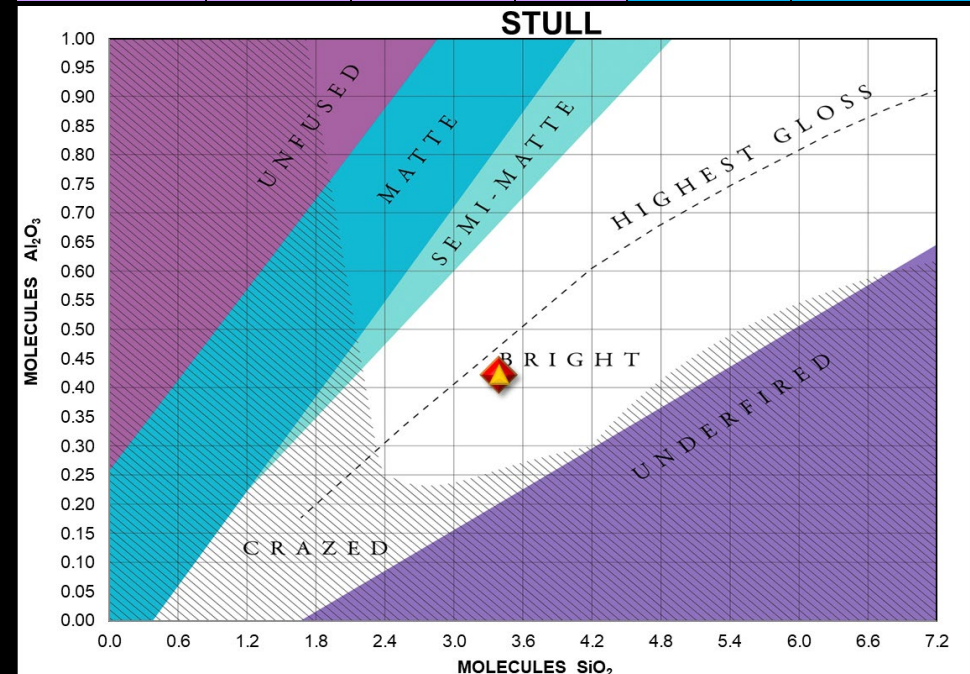
0.5%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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 7.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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%



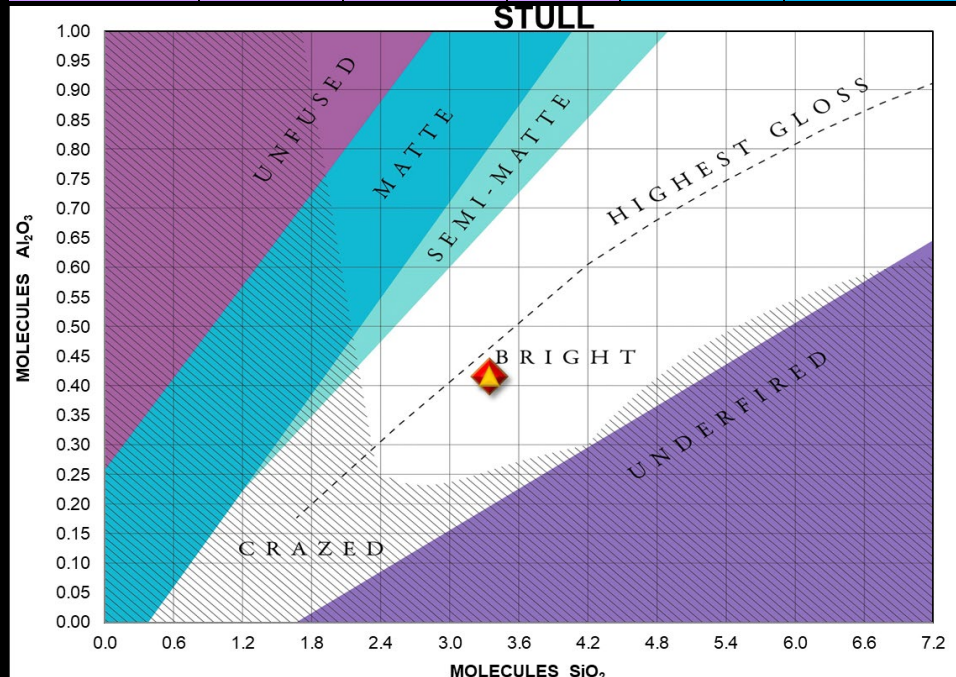
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Cobalt Carbonate

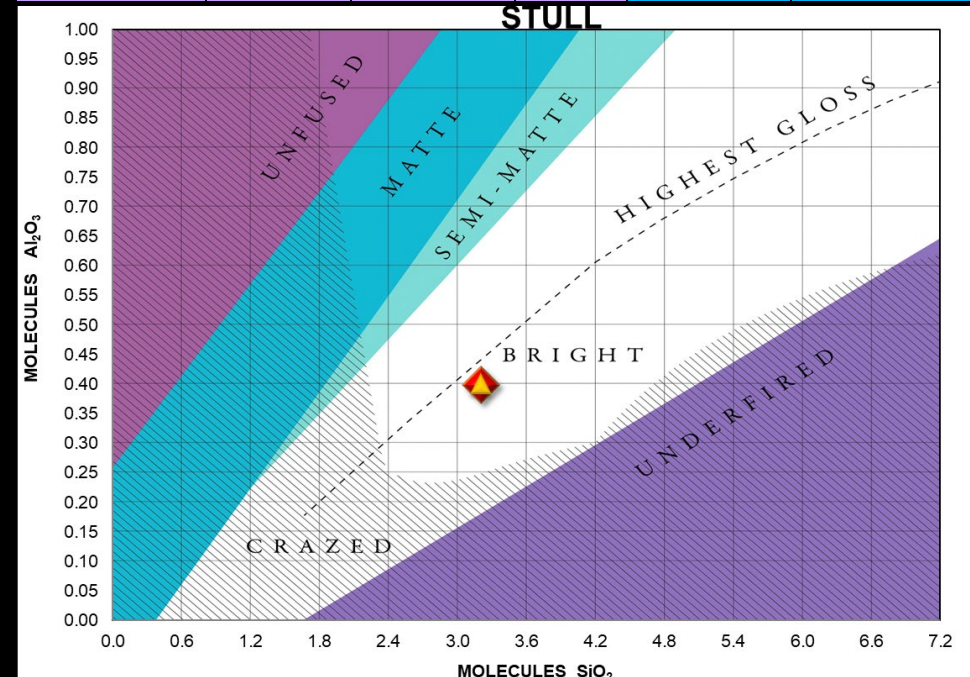
0.5%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.34	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.06	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.42	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 7.99 : 1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 3.21	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.22	K ₂ O 0.06	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 0.05



Cobalt Oxide

0.5%

Oxidation

Reduction

1-3 Second Dip

2-3 Second Dips

1-3 Second Dip

2-3 Second Dips

2%



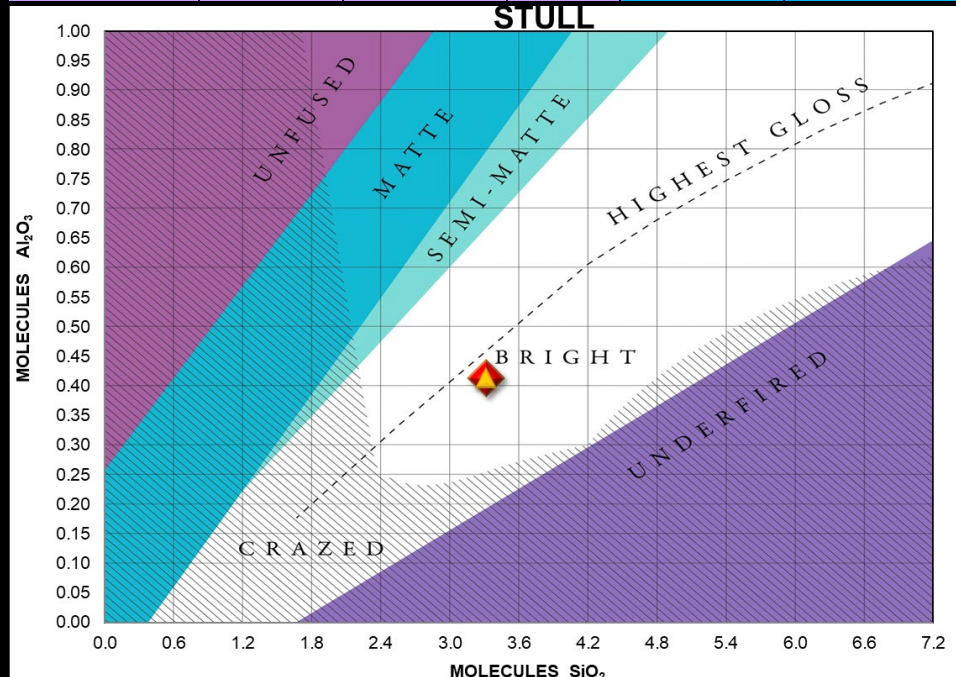
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Cobalt Oxide

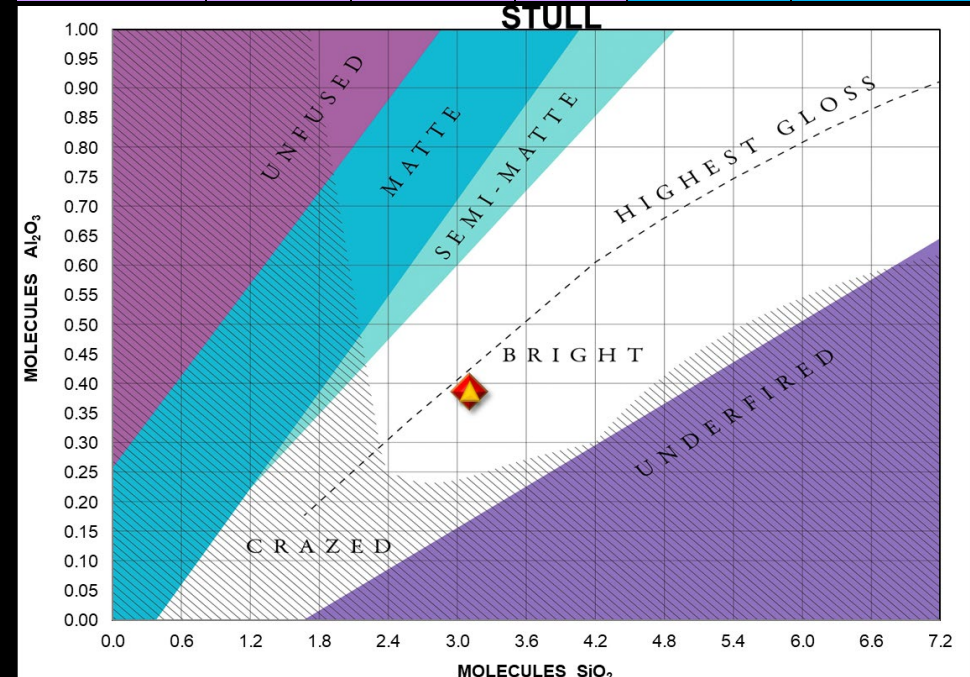
0.5%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.32	Collective "Al ₂ O ₃ " 0.41	Na ₂ O 0.22	K ₂ O 0.06	MgO 0.00	CaO 0.68
B ₂ O ₃	Al ₂ O ₃ 0.41	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 7.99 : 1		Alkali Metals 0.27		Alkaline Earths 0.73	
SiO ₂ 3.11	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.21	K ₂ O 0.06	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	CoO 0.08



Copper Carbonate

Oxidation

Reduction

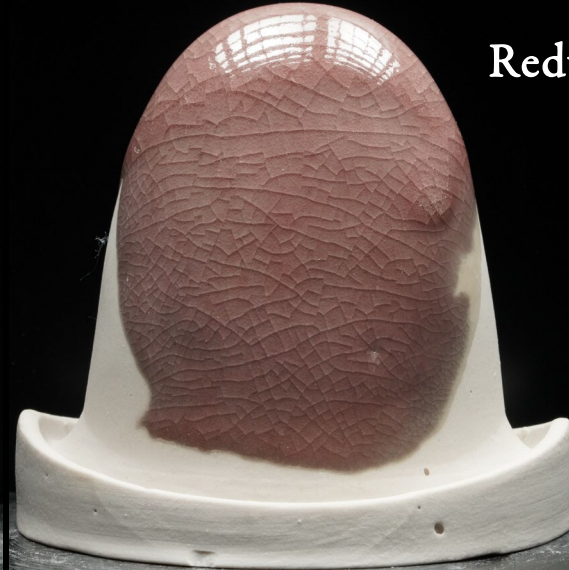
1%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

4%



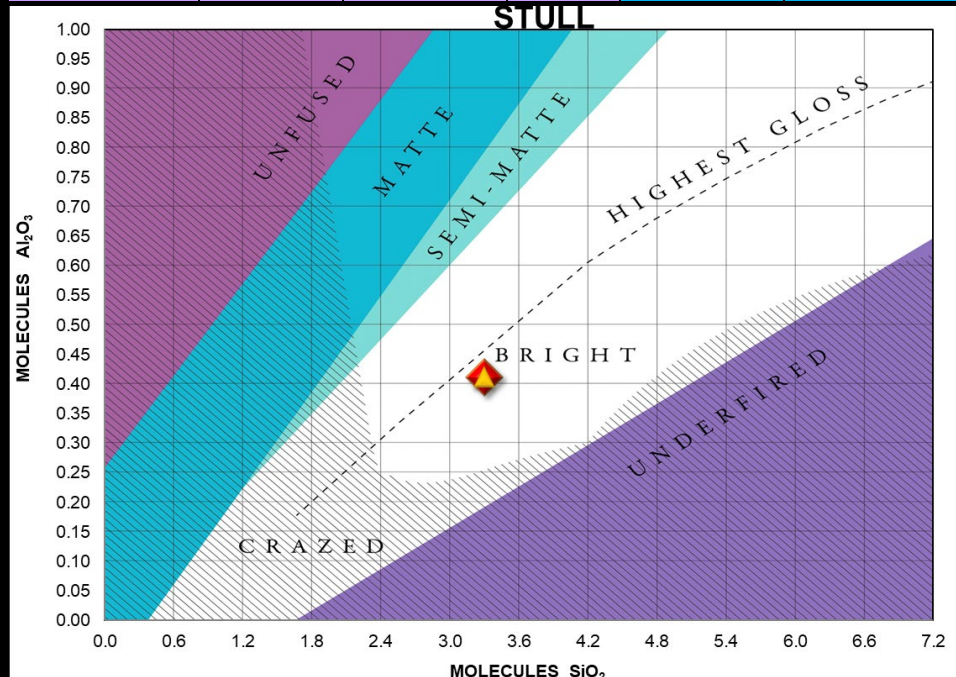
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Copper Carbonate

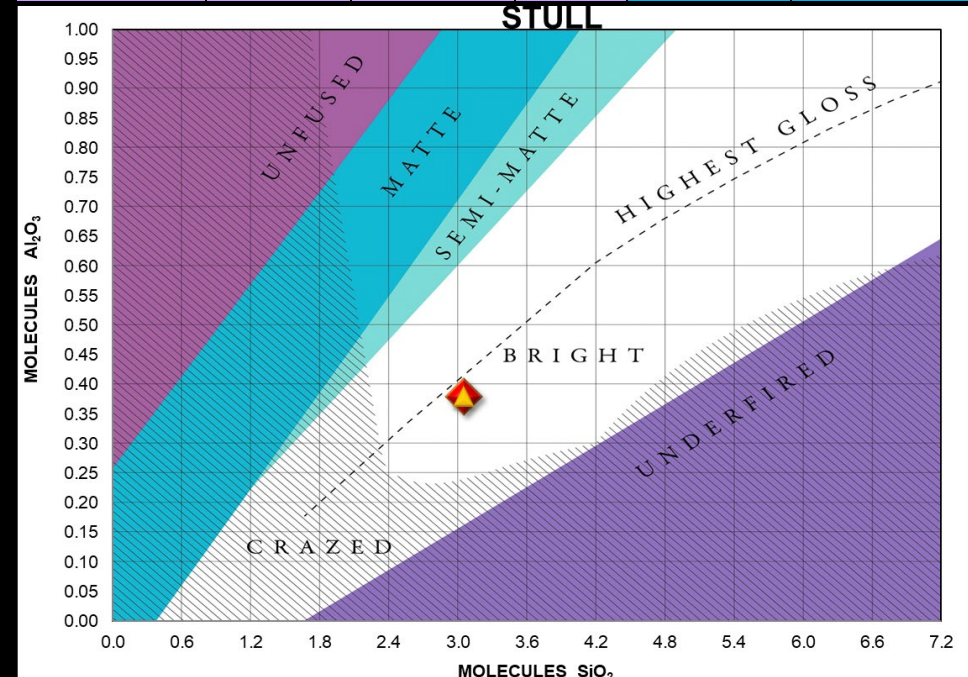
1%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.31		Alkaline Earths 0.69	
SiO ₂ 3.30	Collective "Al ₂ O ₃ " 0.41	Na ₂ O 0.22	K ₂ O 0.06	MgO 0.00	CaO 0.68
B ₂ O ₃	Al ₂ O ₃ 0.41	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 7.99 : 1		Alkali Metals 0.36		Alkaline Earths 0.64	
SiO ₂ 3.05	Collective "Al ₂ O ₃ " 0.38	Na ₂ O 0.21	K ₂ O 0.06	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



Copper Oxide-Black

Oxidation

Reduction

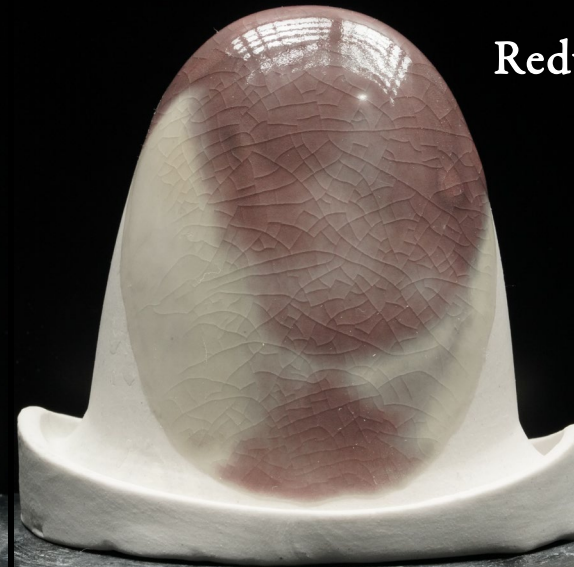
1%



1-3 Second Dip



2-3 Second Dips

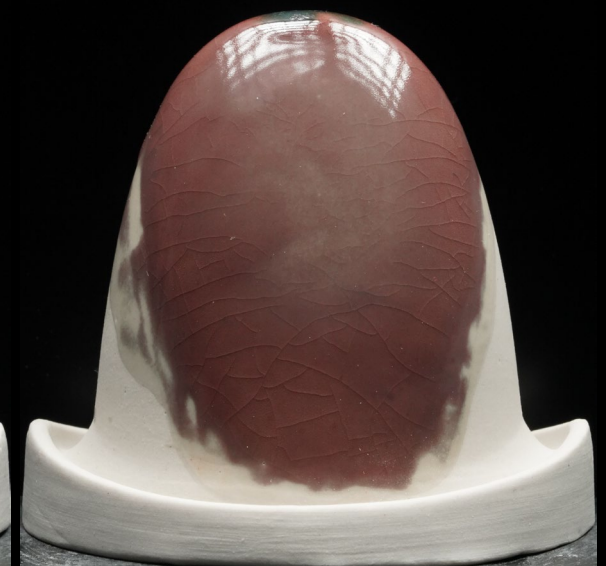
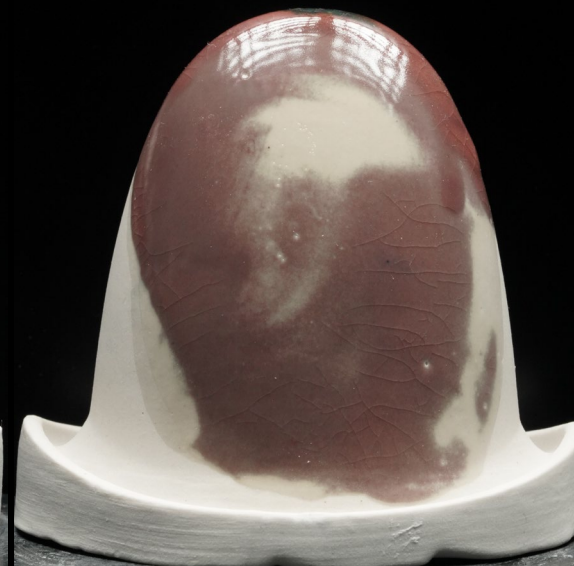
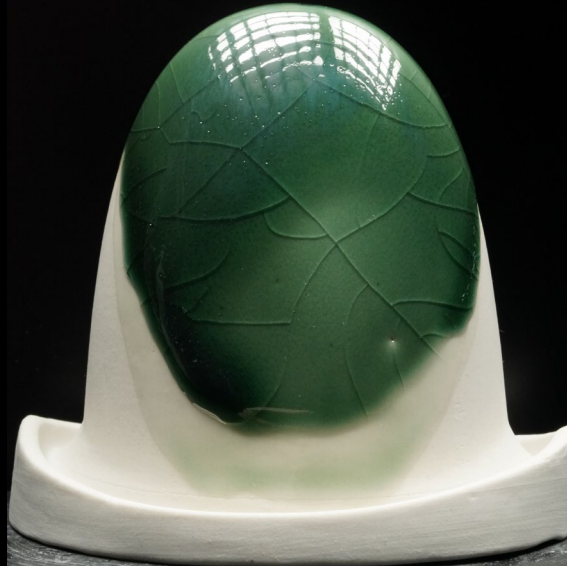


1-3 Second Dip



2-3 Second Dips

4%



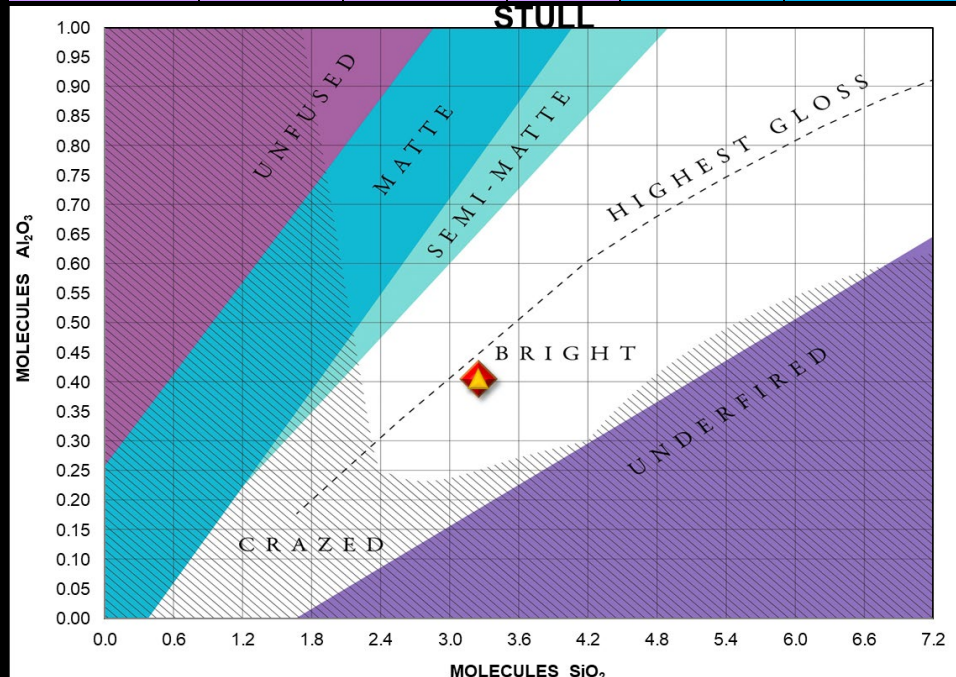
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Copper Oxide-Black

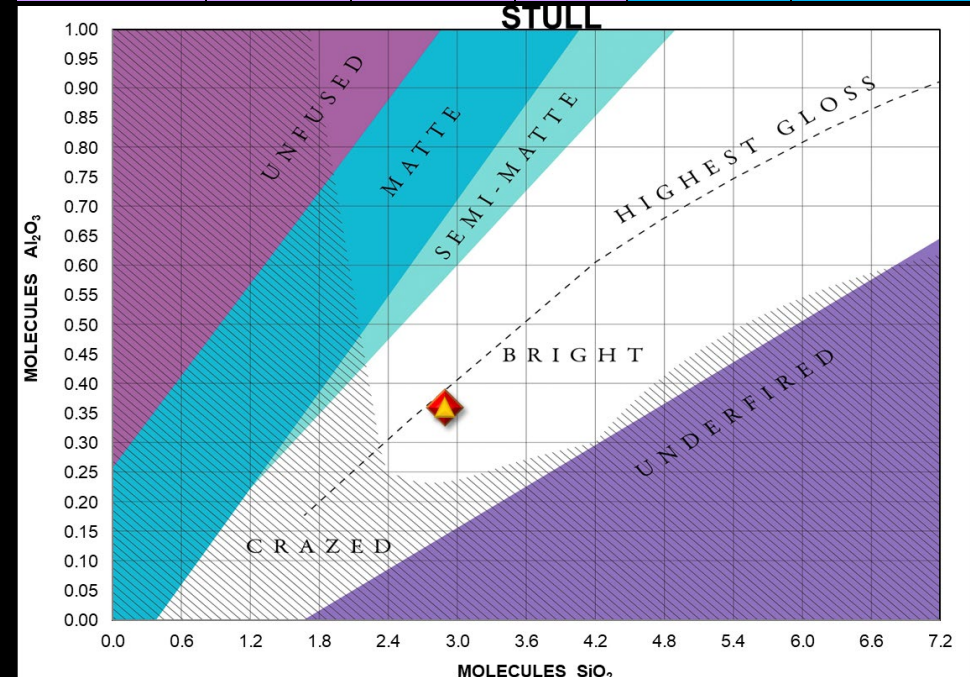
1%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.25	Collective "Al ₂ O ₃ " 0.41	Na ₂ O 0.22	K ₂ O 0.06	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.40	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 7.99 : 1		Alkali Metals 0.40		Alkaline Earths 0.60	
SiO ₂ 2.89	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.00	CaO 0.59
B ₂ O ₃	Al ₂ O ₃ 0.36	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%



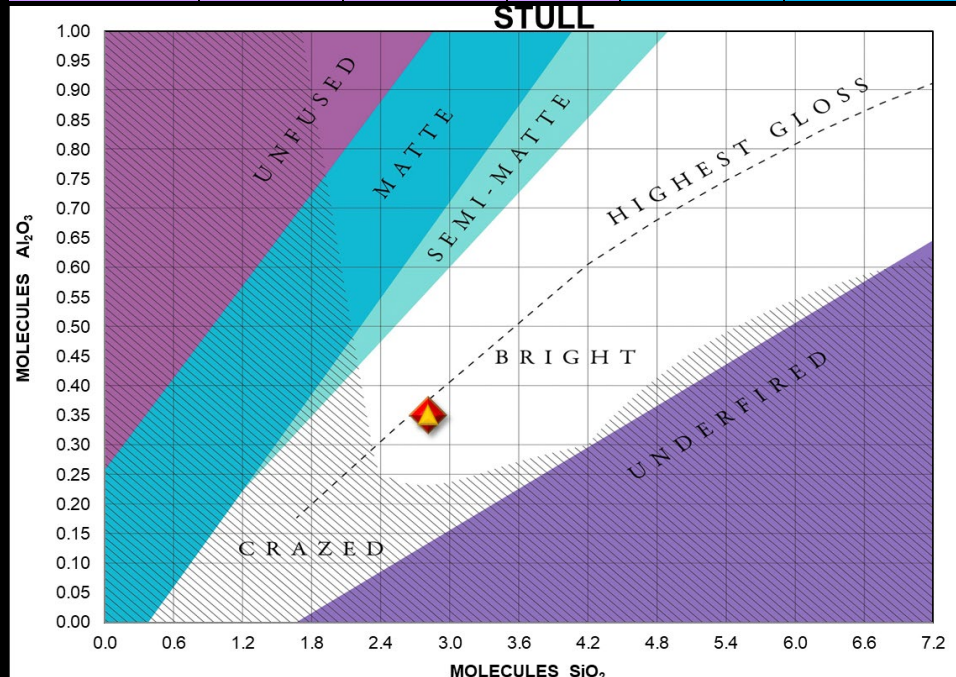
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Red Iron Oxide

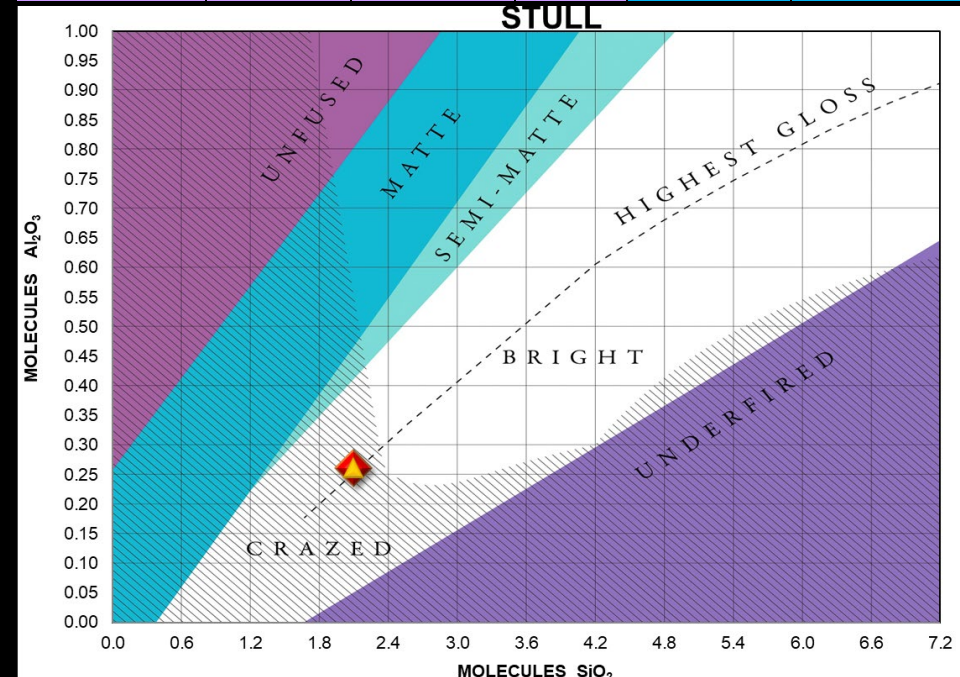
3%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.81	Collective "Al ₂ O ₃ " 0.35	Na ₂ O 0.19	K ₂ O 0.05	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	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 7.99 : 1		Alkali Metals 0.18		Alkaline Earths 0.82	
SiO ₂ 2.09	Collective "Al ₂ O ₃ " 0.26	Na ₂ O 0.14	K ₂ O 0.04	MgO 0.00	CaO 0.43
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 0.39
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%



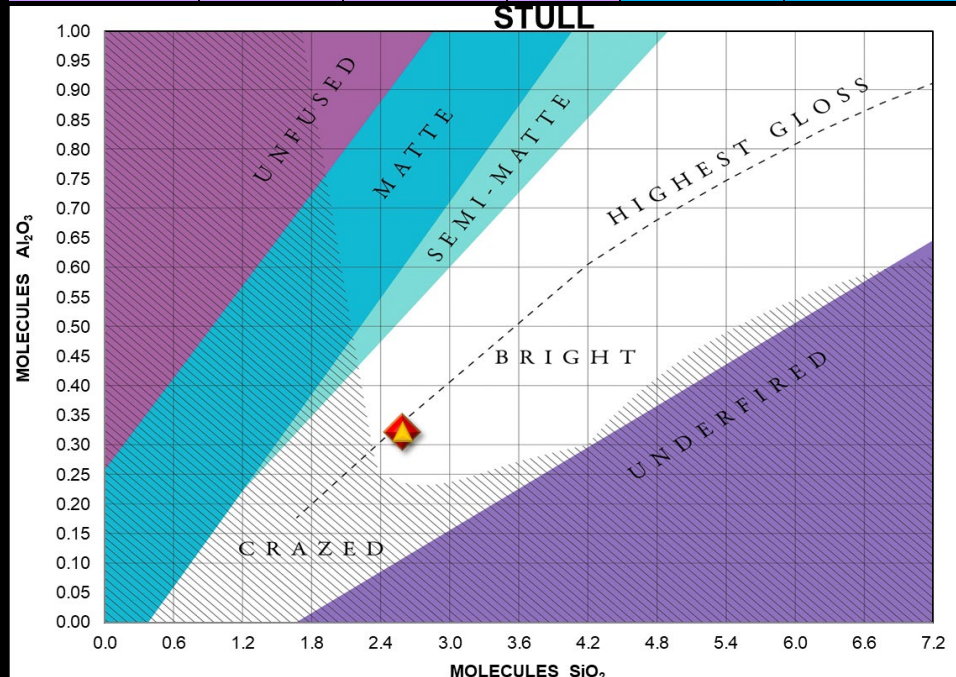
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Black Iron Oxide

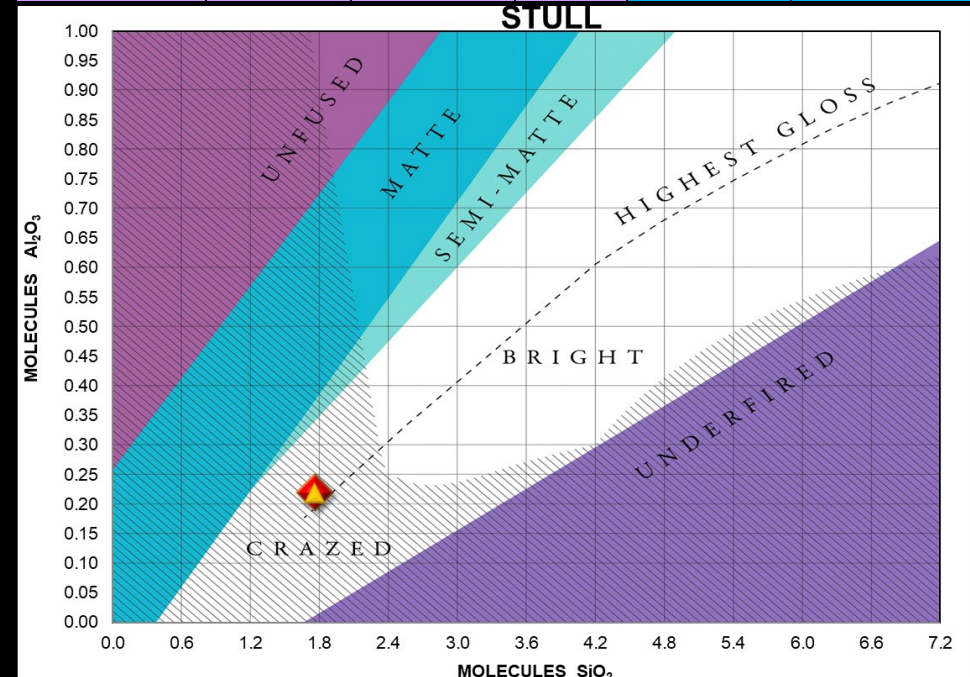
3%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.59	Collective "Al ₂ O ₃ " 0.32	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.53
B ₂ O ₃	Al ₂ O ₃ 0.32	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.24
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



9%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.15		Alkaline Earths 0.85	
SiO ₂ 1.76	Collective "Al ₂ O ₃ " 0.22	Na ₂ O 0.12	K ₂ O 0.03	MgO 0.00	CaO 0.36
B ₂ O ₃	Al ₂ O ₃ 0.22	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.49
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

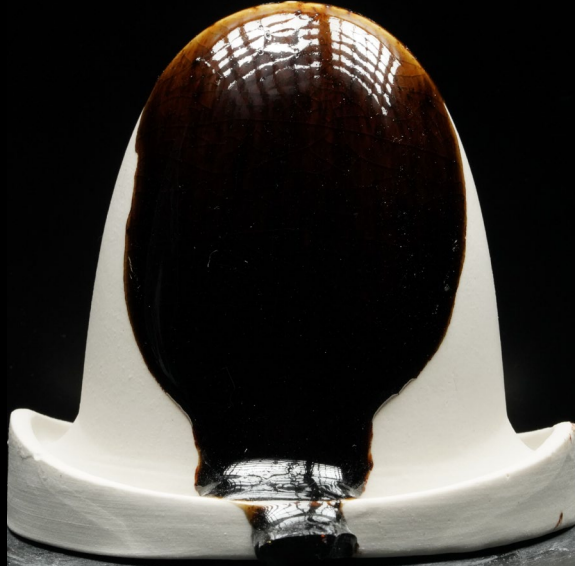


1-3 Second Dip



2-3 Second Dips

9%



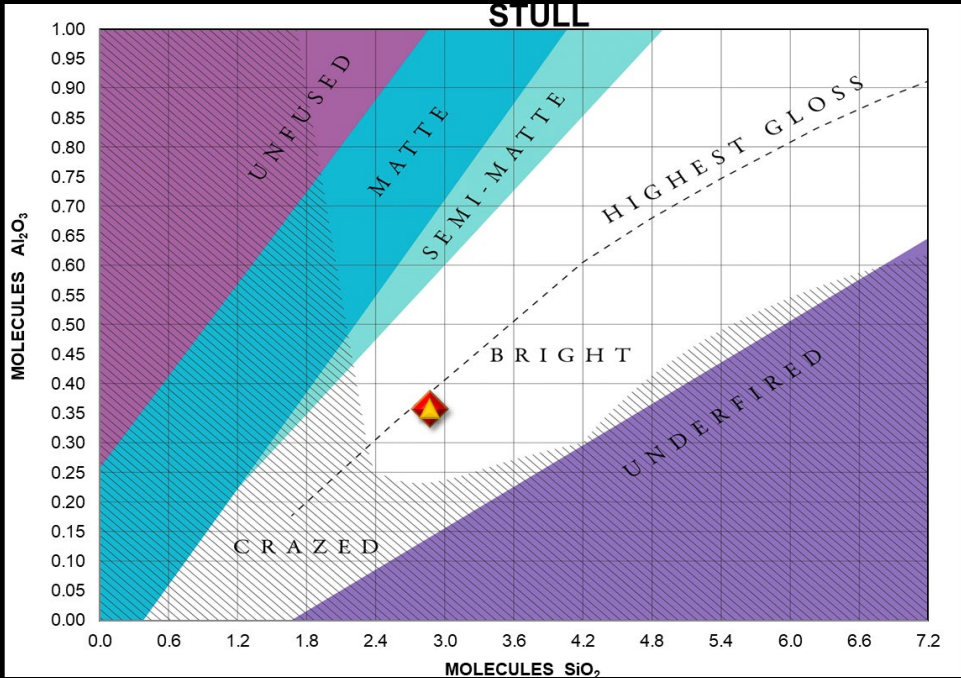
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Yellow Iron Oxide

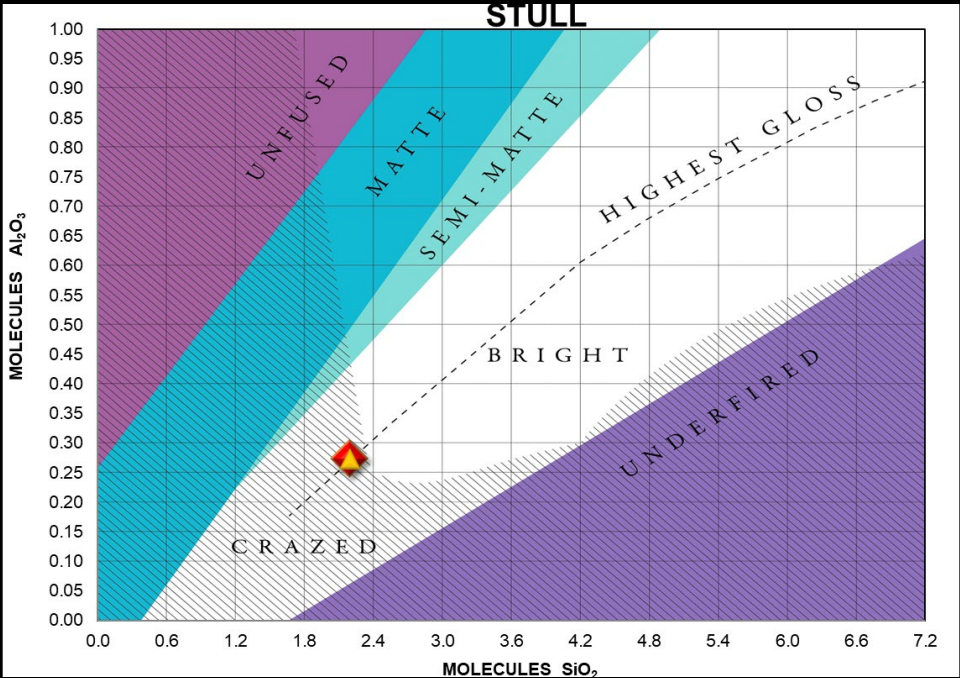
3%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.87	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.00	CaO 0.59
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 0.16
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



9%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.19	Collective "Al ₂ O ₃ " 0.27	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.00	CaO 0.45
B ₂ O ₃	Al ₂ O ₃ 0.27	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.36
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%



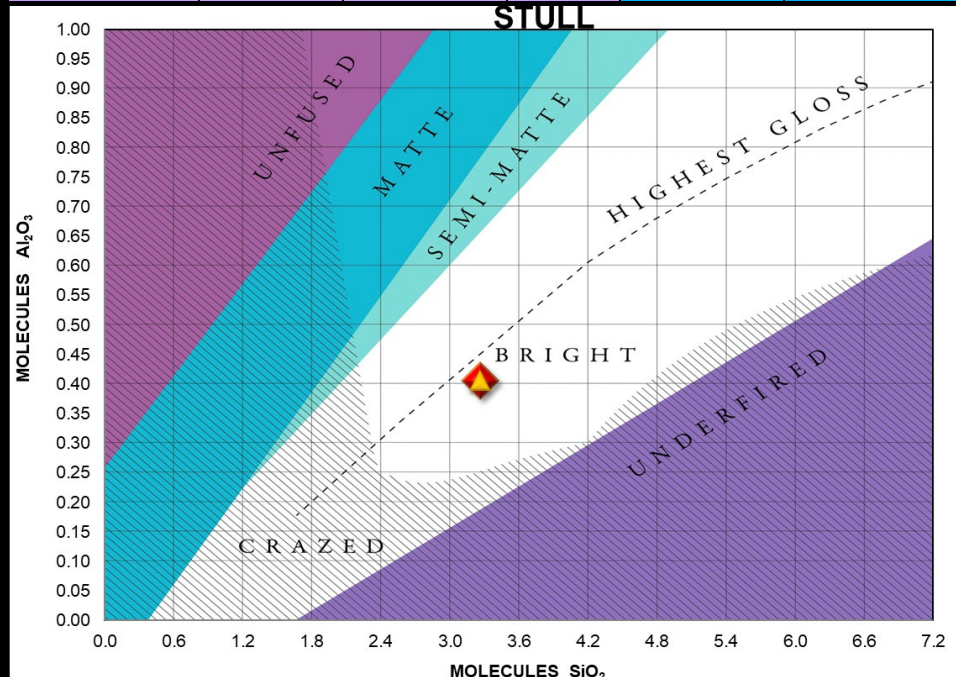
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Manganese Dioxide

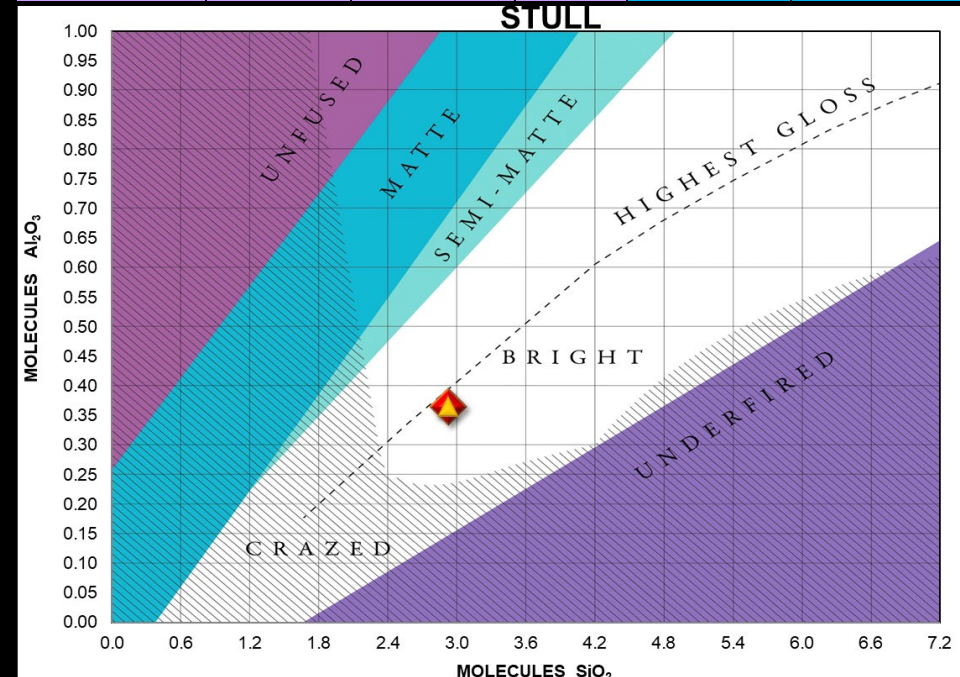
1%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 3.26	Collective "Al ₂ O ₃ " 0.41	Na ₂ O 0.22	K ₂ O 0.06	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.41	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 7.99 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.20	K ₂ O 0.06	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 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%



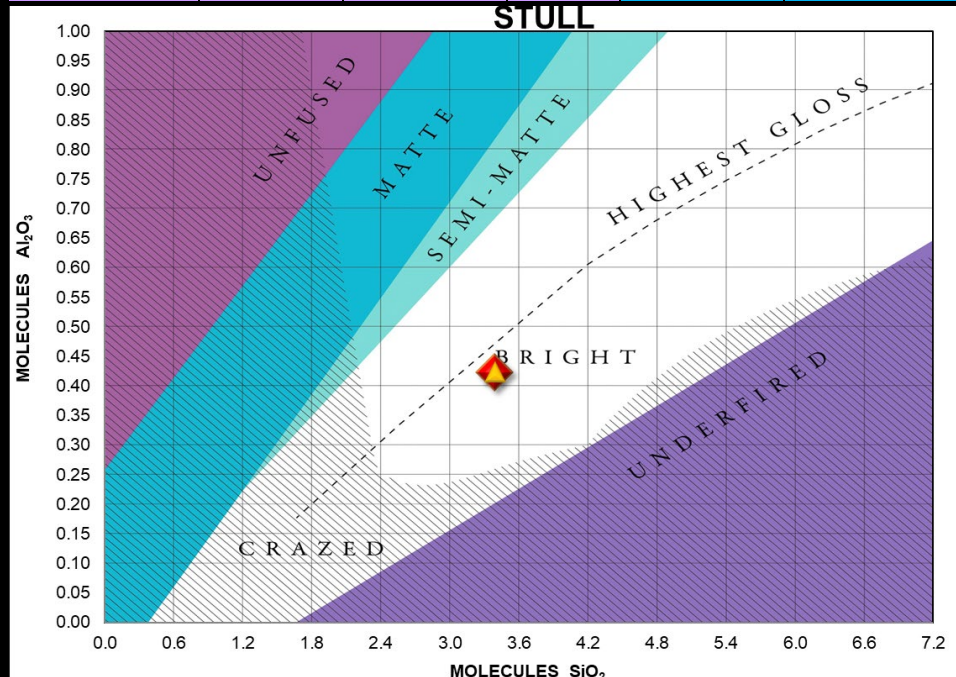
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Vanadium Pentoxide

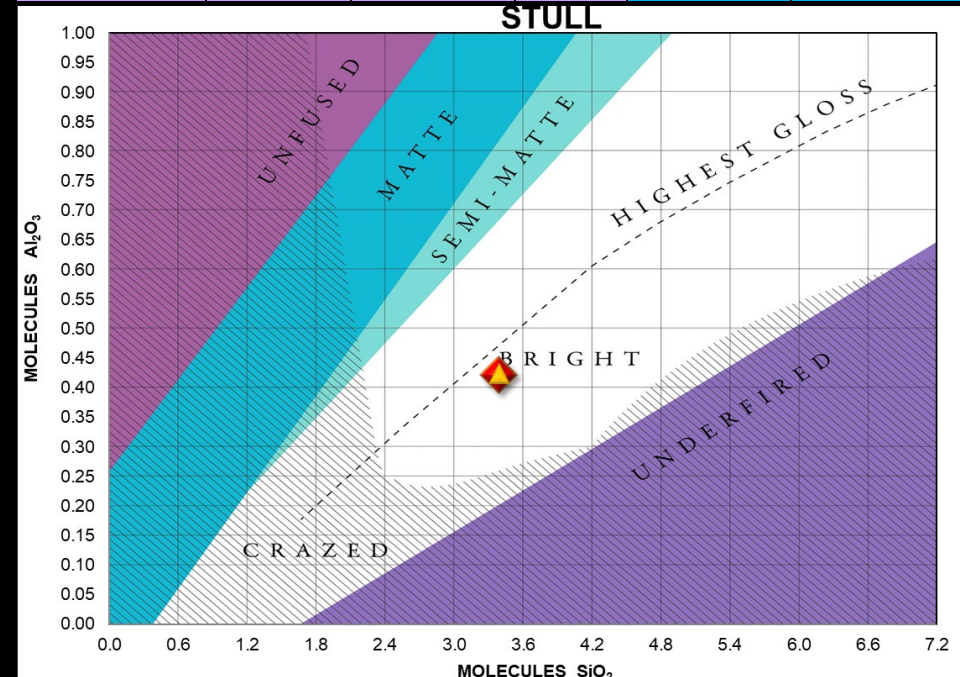
3%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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 7.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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%



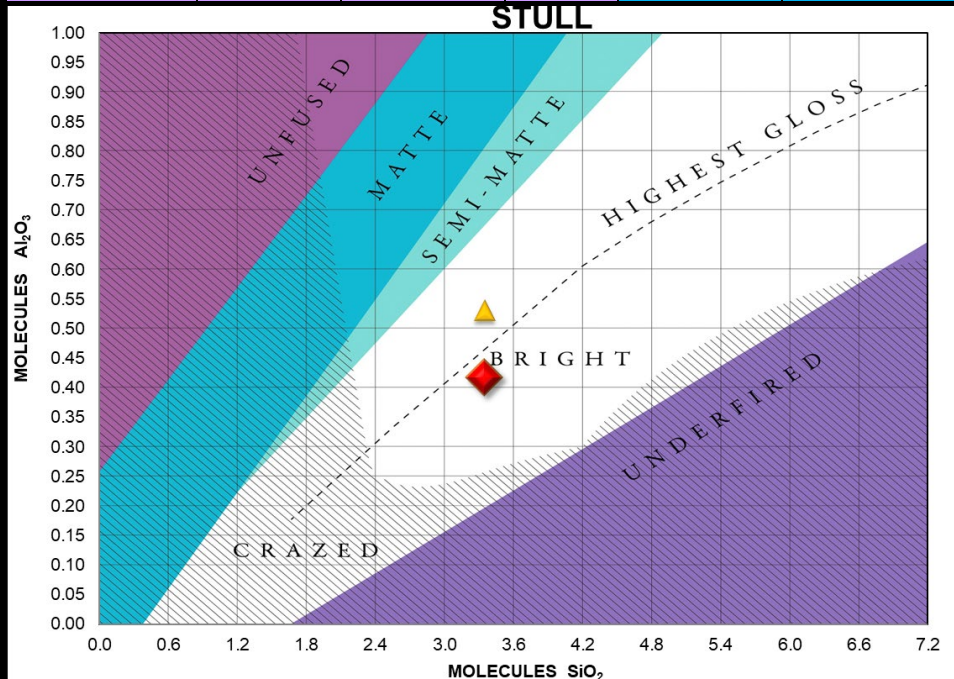
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Dark Rutile

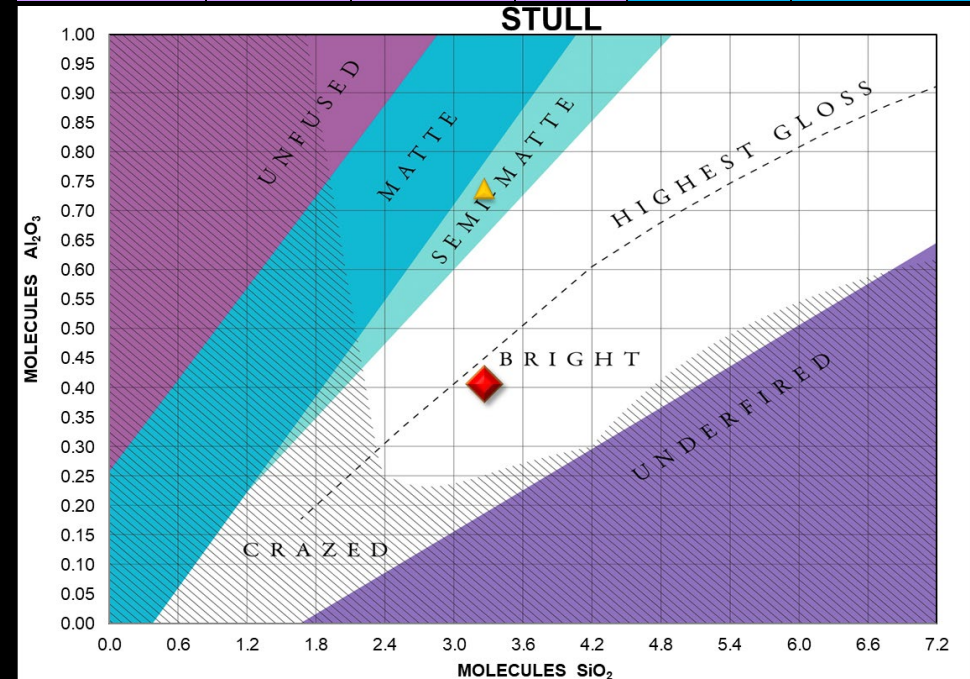
3%

SiO ₂ :Al ₂ O ₃ Ratio 6.29 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.35	Collective "Al ₂ O ₃ " 0.53	Na ₂ O 0.23	K ₂ O 0.06	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.42	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 4.41 :1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 3.26	Collective "Al ₂ O ₃ " 0.74	Na ₂ O 0.22	K ₂ O 0.06	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.41	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.33	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.04
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Light Rutile

Oxidation

Reduction

3%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

9%



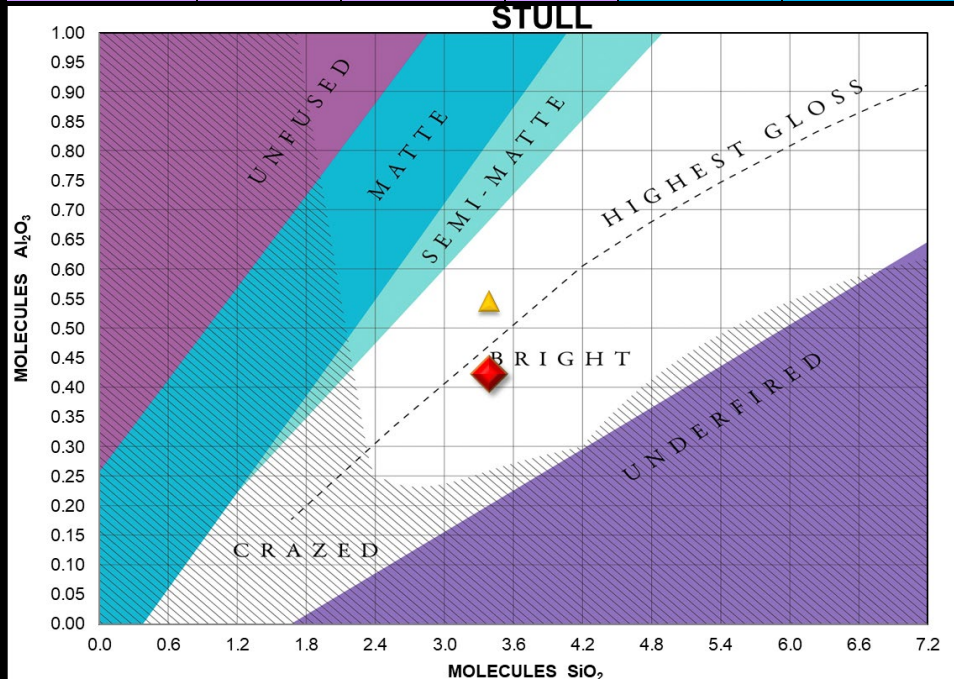
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Light Rutile

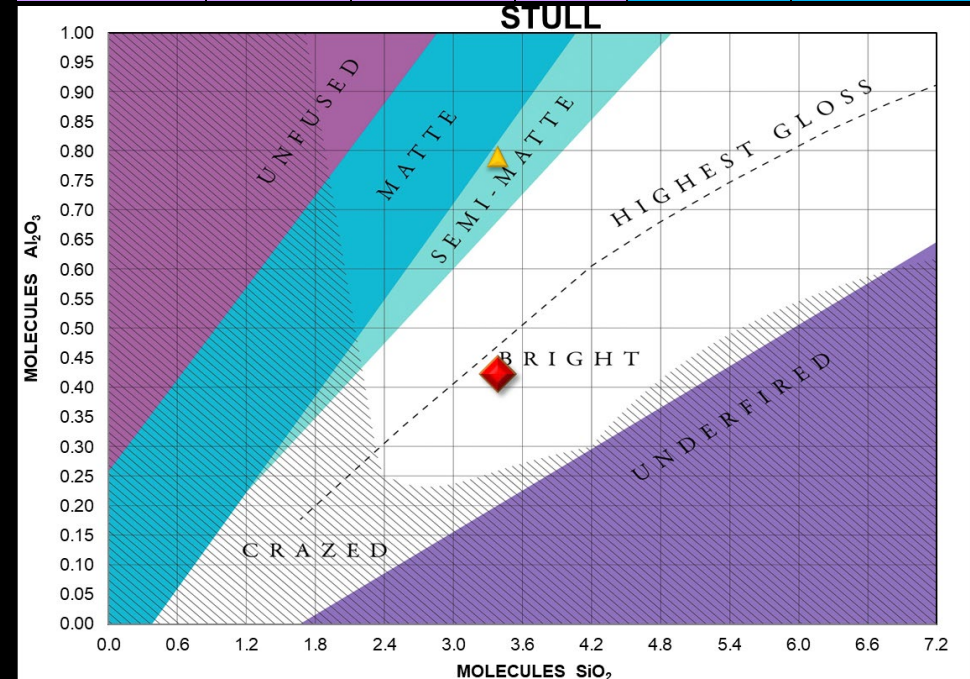
3%

SiO ₂ :Al ₂ O ₃ Ratio 6.20 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.55	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.12	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 4.28 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.79	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.42	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.37	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

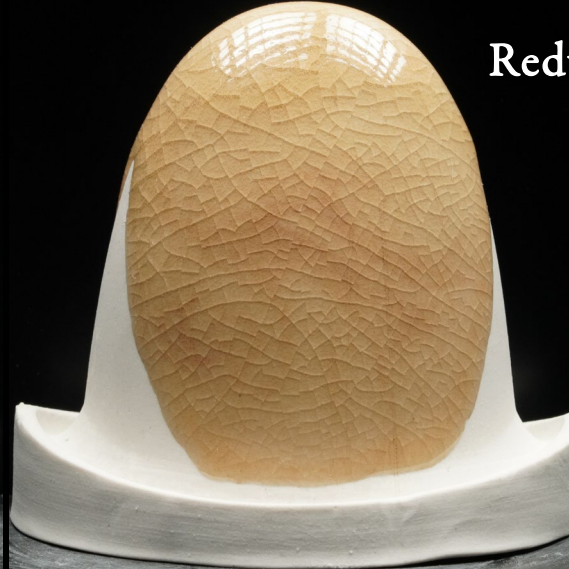
3%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

9%



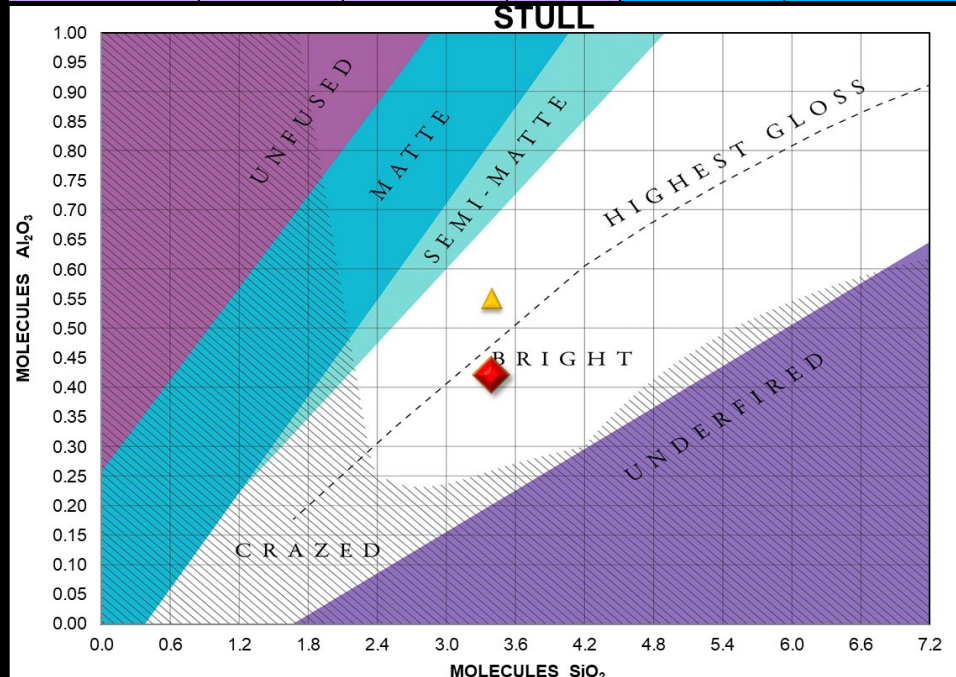
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Titanium Dioxide

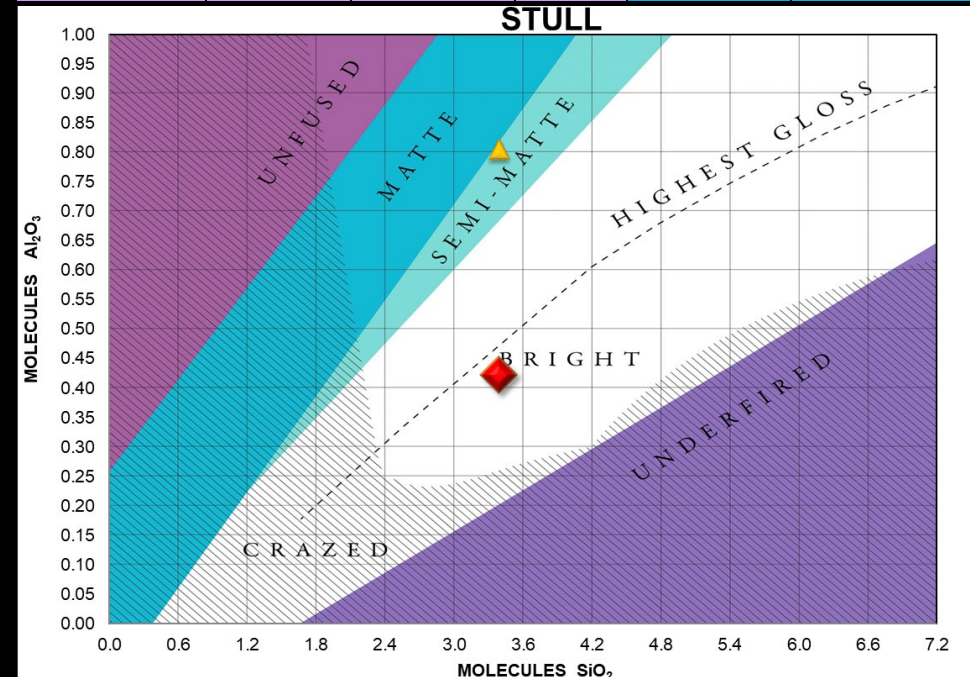
3%

SiO ₂ :Al ₂ O ₃ Ratio 6.15 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.55	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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 4.20 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.81	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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



Nickel Carbonate

Oxidation

Reduction

2%



1-3 Second Dip

2-3 Second Dips

1-3 Second Dip

2-3 Second Dips

6%



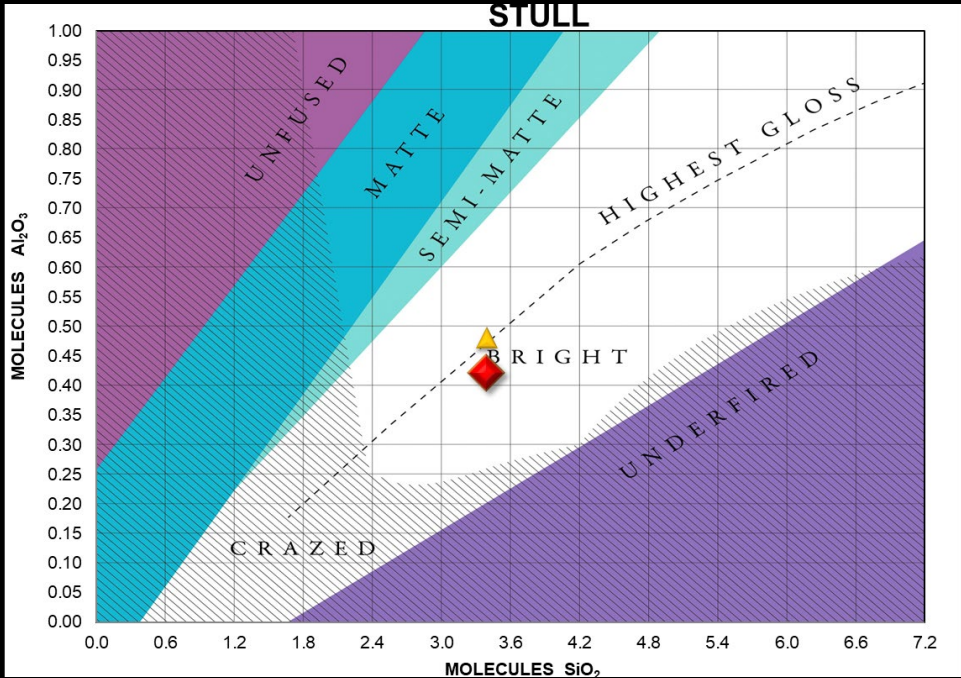
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Nickel Carbonate

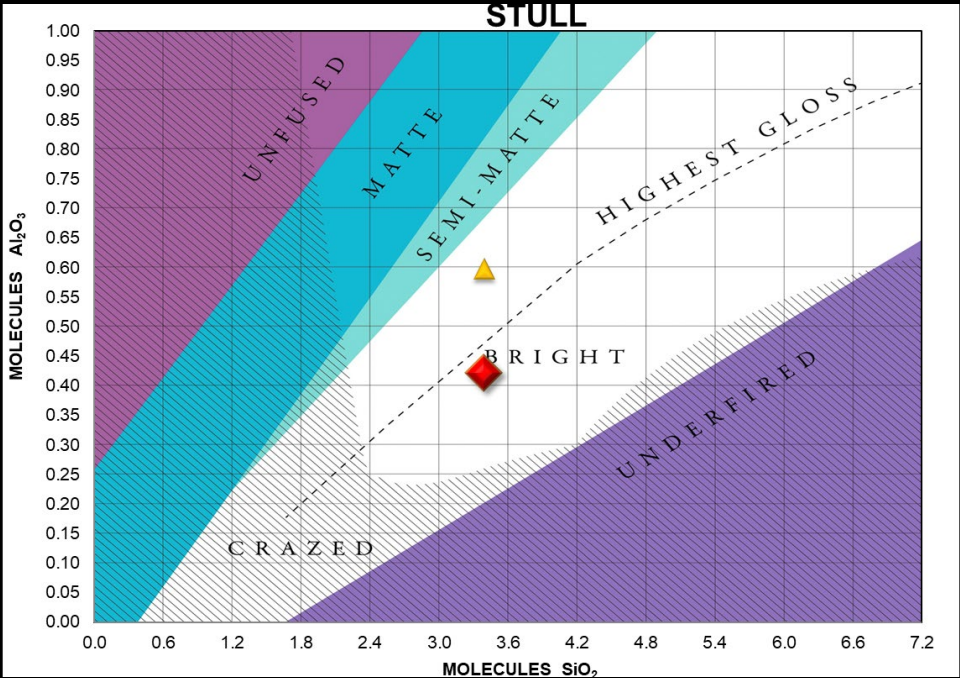
2%

SiO ₂ :Al ₂ O ₃ Ratio 7.03 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.48	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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 5.67 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.60	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO 0.17	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

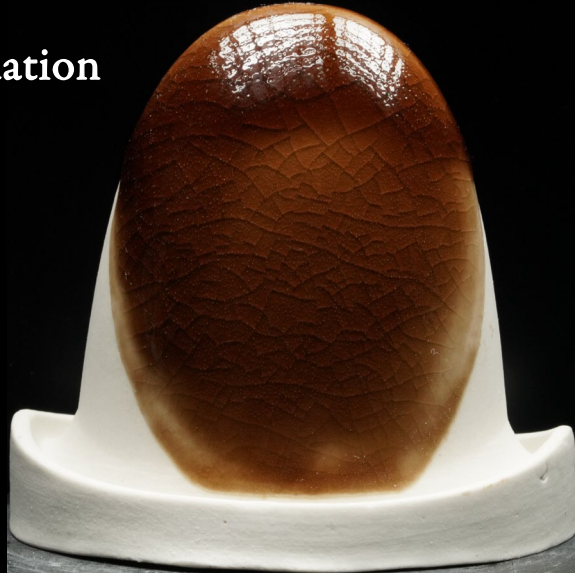
Oxidation

Reduction

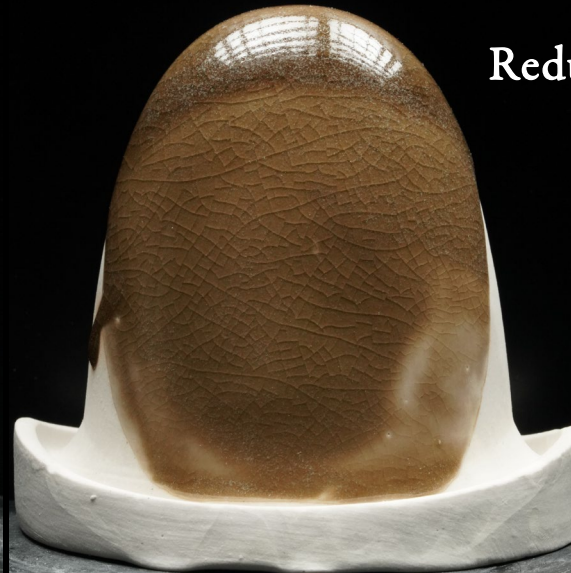
2%



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



2-3 Second Dips

6%



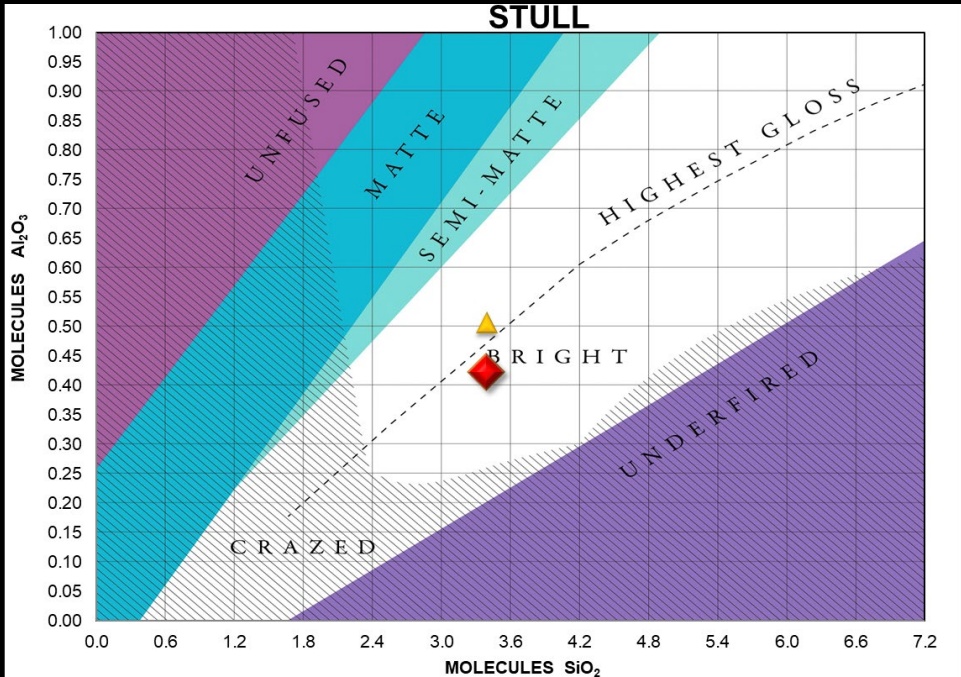
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Nickel Oxide-Black

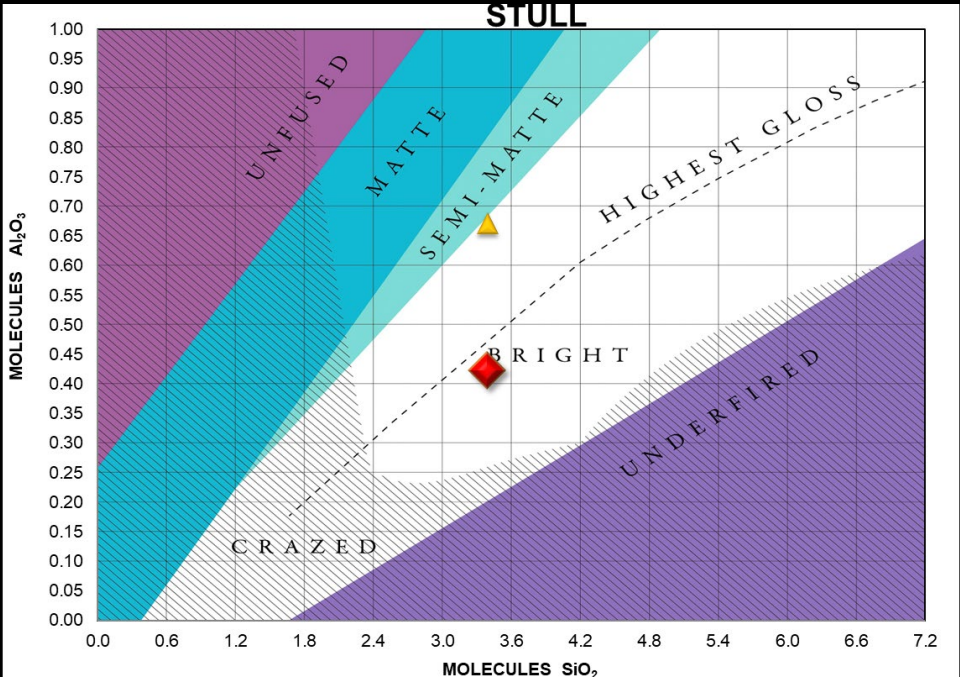
2%

SiO ₂ :Al ₂ O ₃ Ratio 6.69 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.51	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO 0.08	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 5.04 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.67	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO 0.25	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%



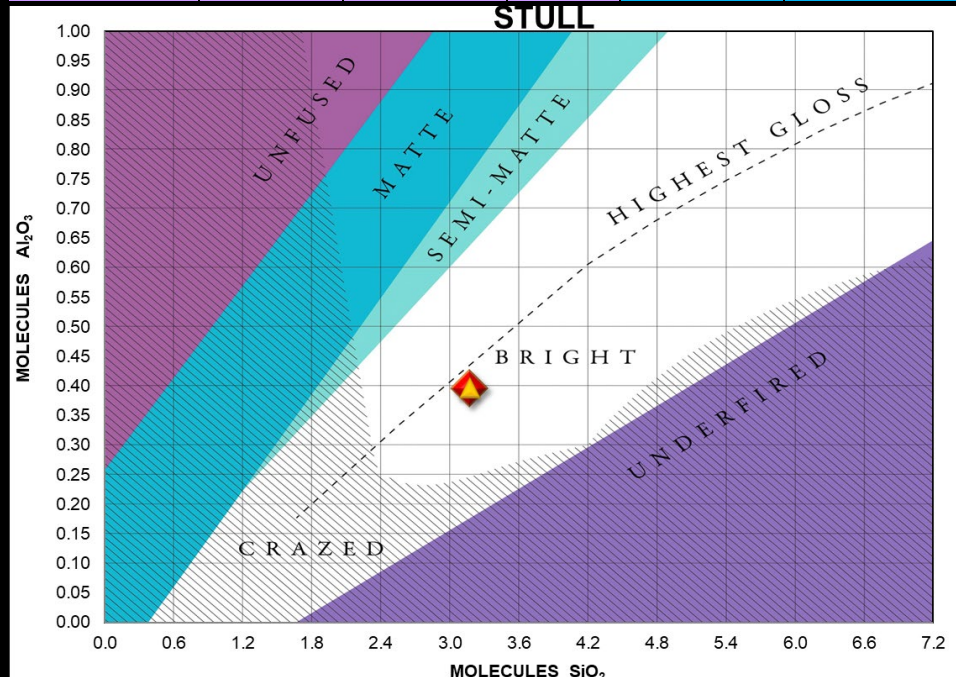
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Tin Oxide

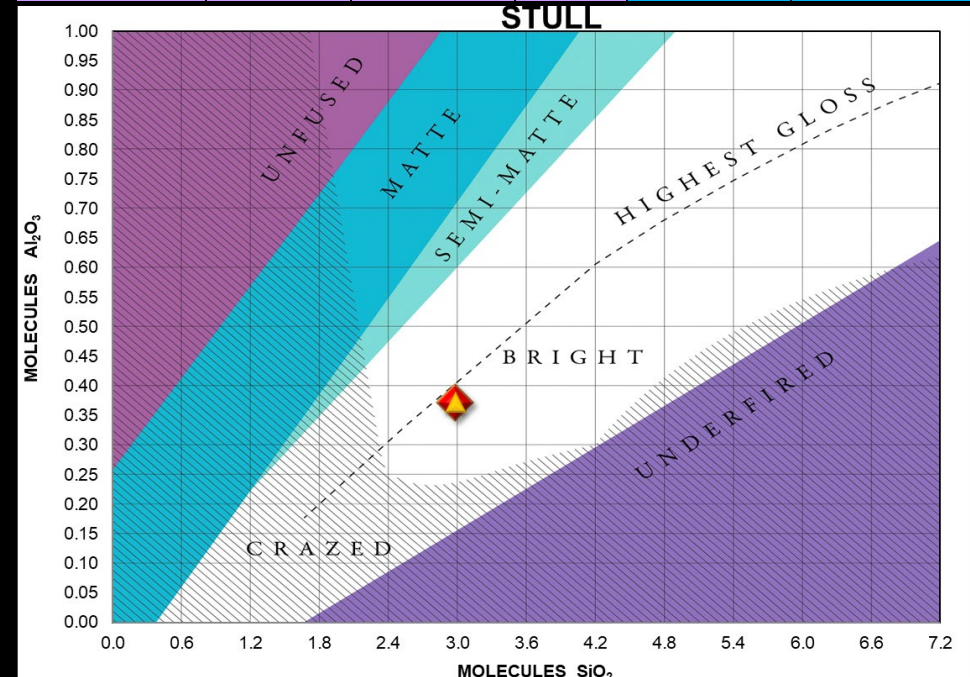
3%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.34		Alkaline Earths 0.66	
SiO ₂ 3.17	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.21	K ₂ O 0.06	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 0.06	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 7.99 : 1		Alkali Metals 0.38		Alkaline Earths 0.62	
SiO ₂ 2.98	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.20	K ₂ O 0.06	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 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%



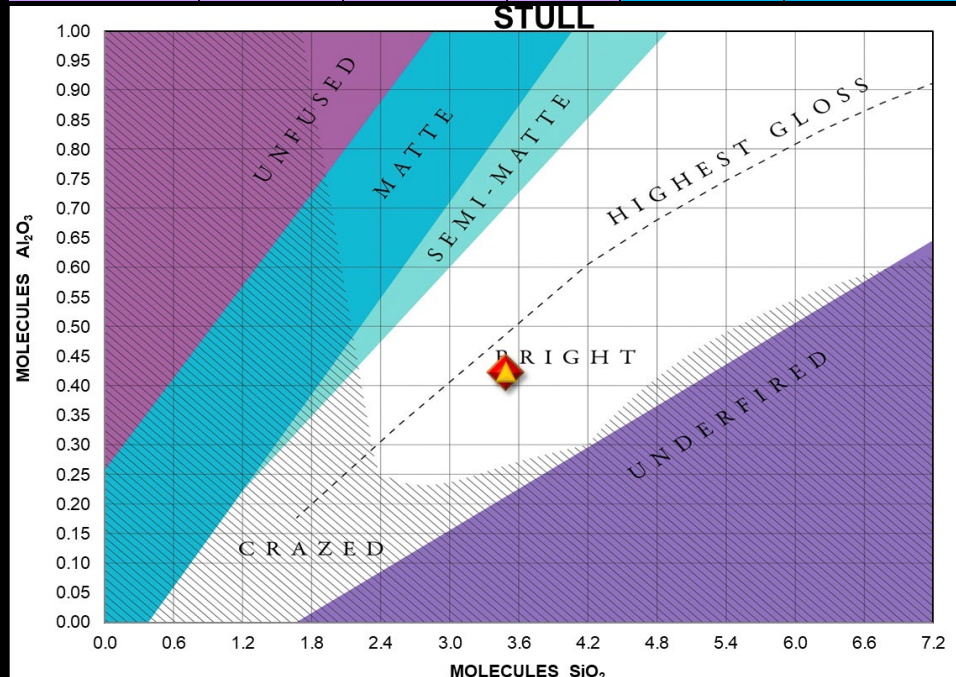
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Zirconium Silicate

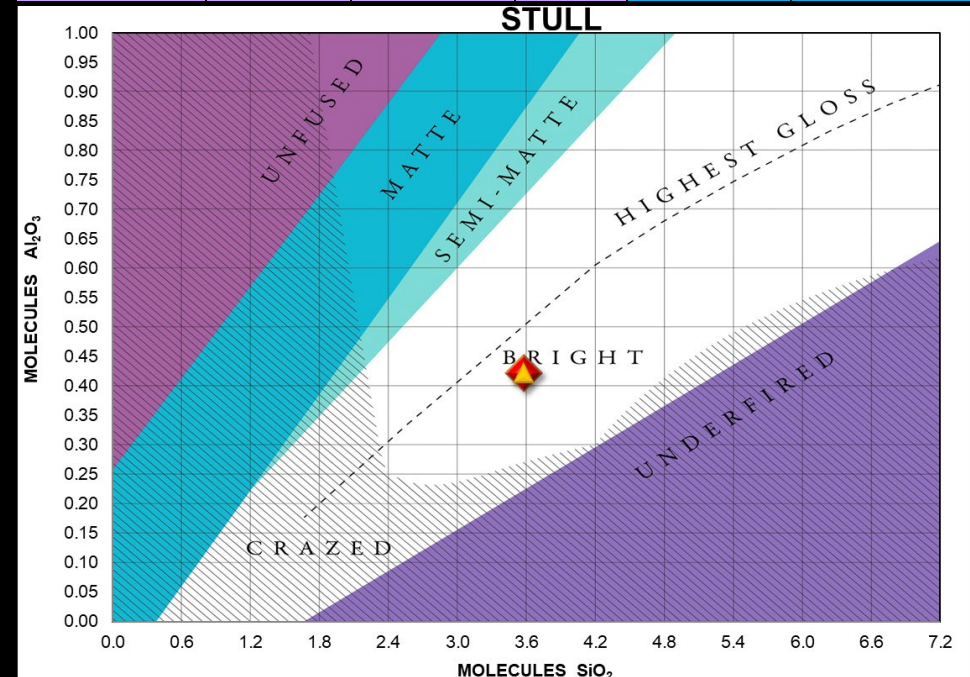
5%

SiO ₂ :Al ₂ O ₃ Ratio 8.22 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.48	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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 8.44 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.58	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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%



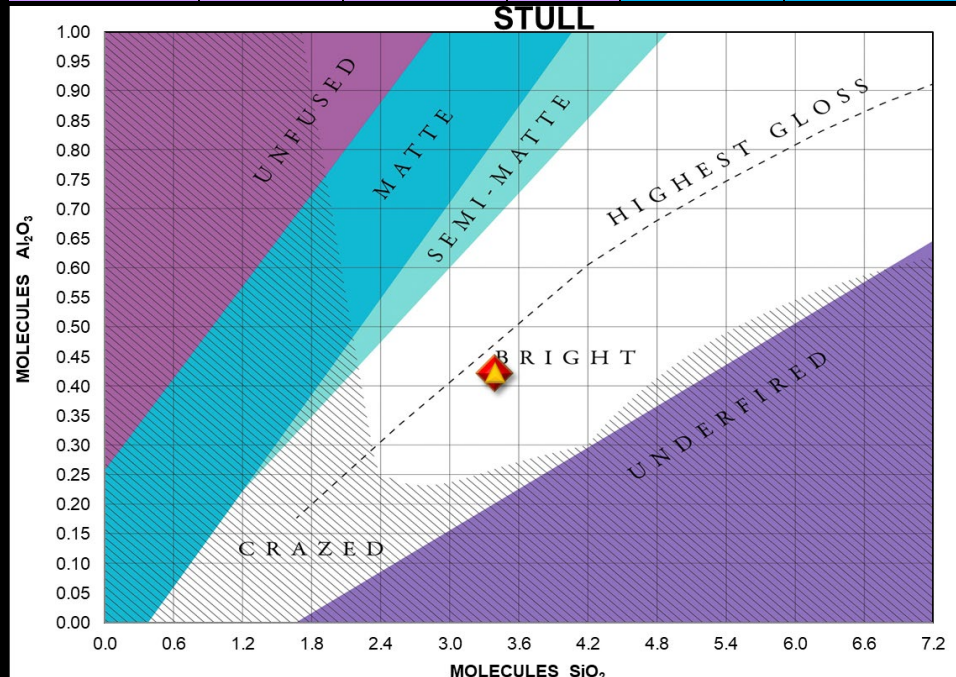
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Stain Dark Red 6021

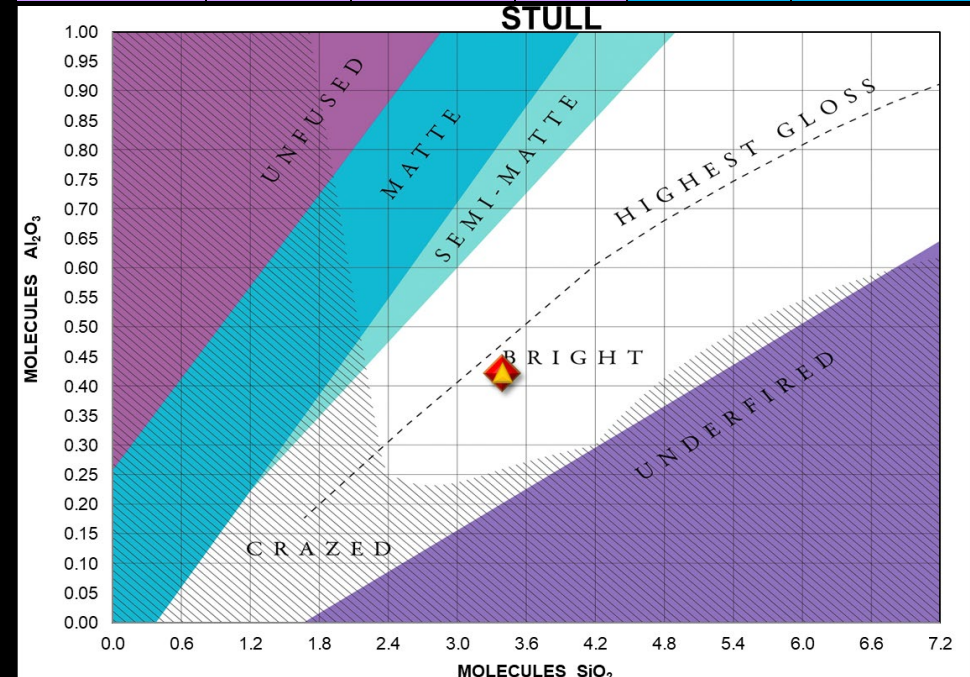
5%

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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 7.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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%



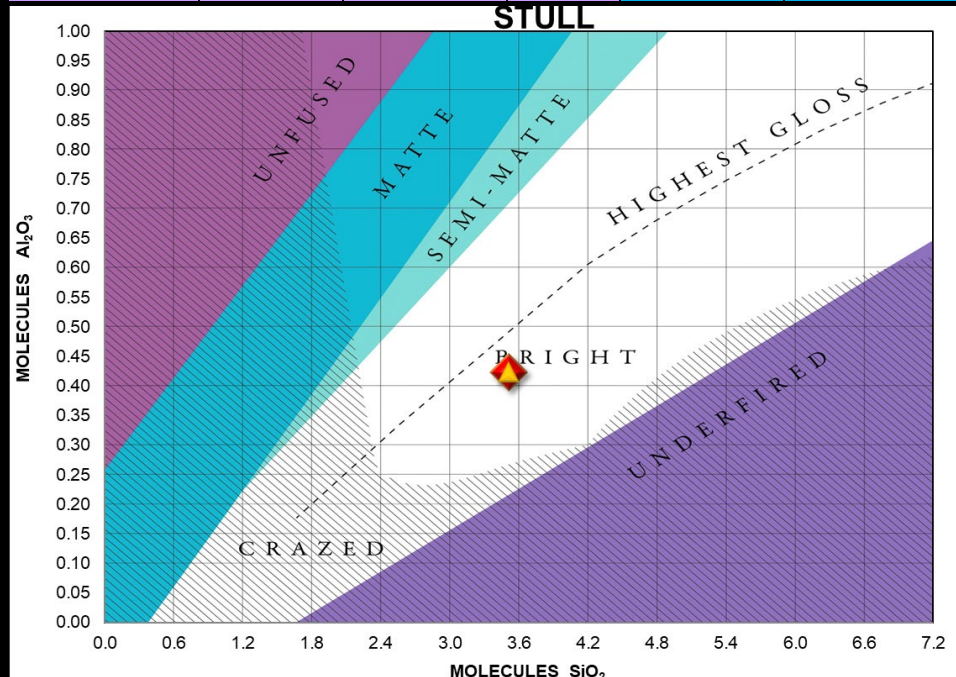
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Silicon Carbide-30 Mesh

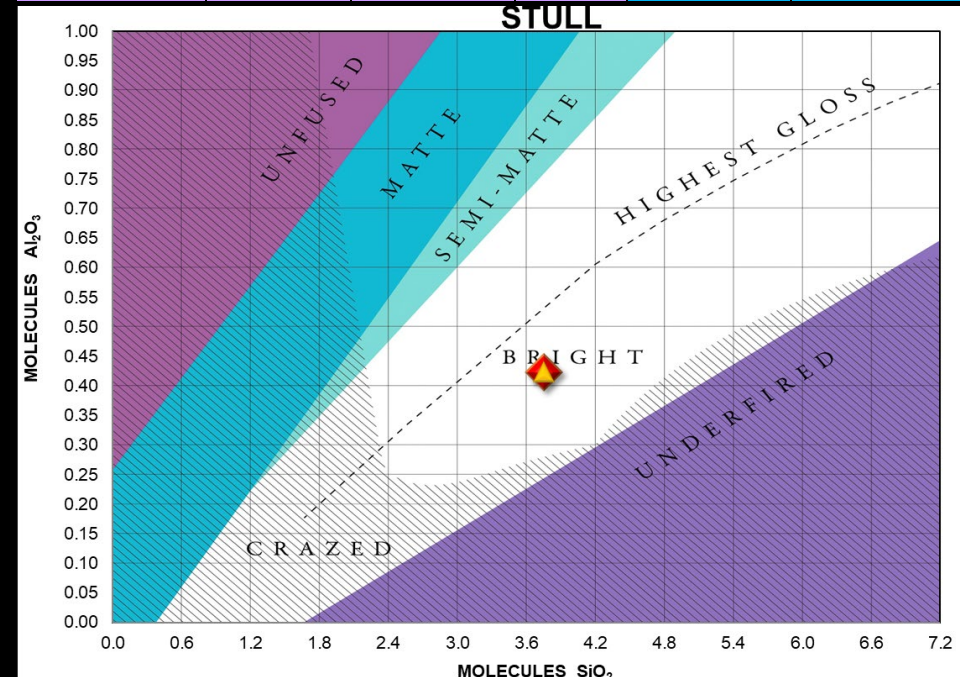
3%

SiO ₂ :Al ₂ O ₃ Ratio 8.28 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.51	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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 8.85 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.75	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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%



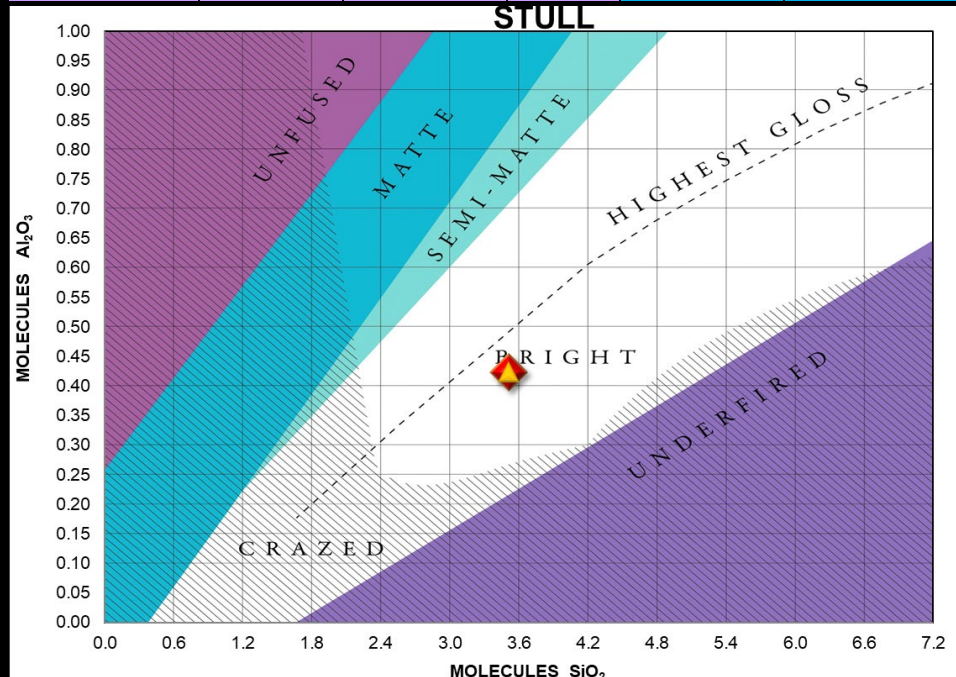
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Silicon Carbide-800 Mesh

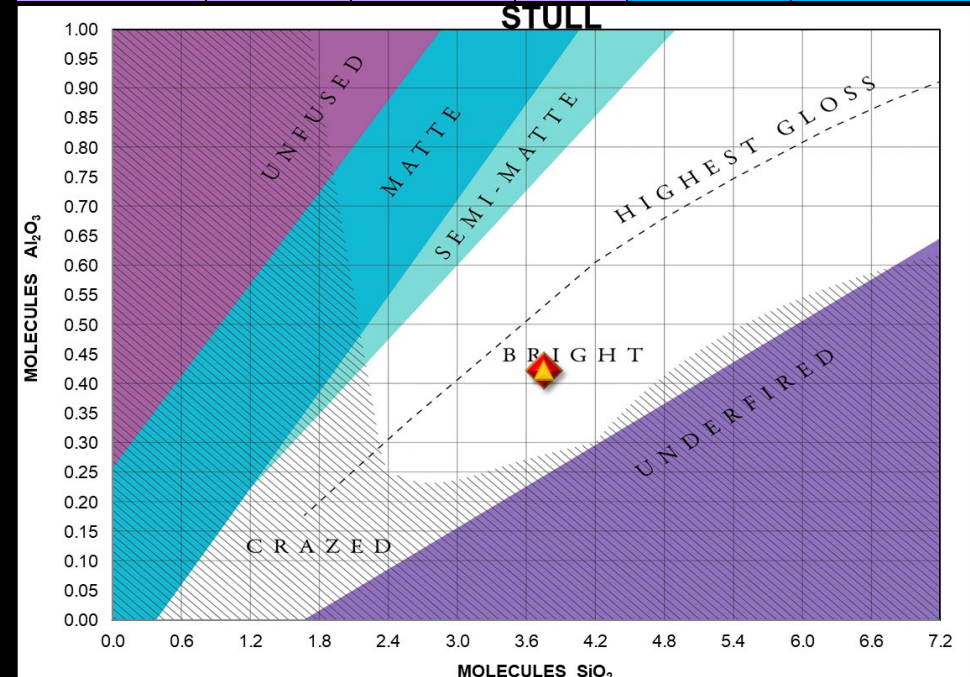
3%

SiO ₂ :Al ₂ O ₃ Ratio 8.28 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.51	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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 8.85 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.75	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.70
B ₂ O ₃	Al ₂ O ₃ 0.42	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



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