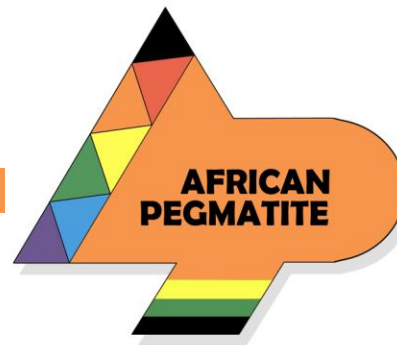


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MILLERS & PROCESSORS OF BASE MINERALS

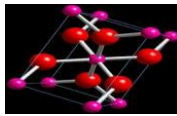


Approved by: MR. Wenger
 Compiled by: D. Prevoos

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 Page: 1 of 1

Data Sheet



Product: Manganese Umber
Grade: Export

CHEMICAL ANALYSIS %

Typical:	Mn/Fe ratio:	4.8:1		
	Mn	46.5% - 49%		
	Fe	9% - 11%	Mn	→ MnO x 1.291
	SiO ²	4% - 6%	Mn	→ MnO ₂ x 1.582
	Al ₂ O ₃	0.2% - 0.33%	Mn	→ Mn ₃ O ₄ x 1.3883
	Cl	0.01%		
	S	0.1% - 0.16%	MnO	→ Mn x 0.7746
	CaO	5% - 7%	MnO ₂	→ Mn x 0.6319
	MgO	0.50% - 1%	Mn ₃ O ₄	→ Mn x 0.7203
	K ² O	0.01% - 0.05%		
	BaO	0.3% - 0.5%		
	NA ² O	0.05% - 0.09%		

PHYSICAL PROPERTIES:

Particle Size:	+45 micron 3-4%l
Moisture:	+ -1%
Bulk Density:	1.53 – 1.55gm/cm ² Tapped
pH:	8.2
Solubility Test:	500g Manganor Umber – 1000cc Water pH 8.24
	At 20°C : Day 1 – 8.75
	Day 3 – 8.31
	Day 7 – 8.35

APPLICATION:

Ceramic Pigment

PACKING:

40kg, 3-ply paper bags. 1 ton per pallet.
 Or
 1000/1500 kg polypropylene bulk bags

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