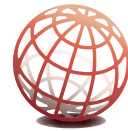


Technical Data

POWDER

MANGANESE SULFATE
MONOHYDRATE



ORIGNATION, INC.

O2D

CAS No. 7785-87-7 | Formula $MnSO_4 \cdot H_2O$

Product Description:

Appearance is a pale pink powder. Manganese sulfate is a high-quality inorganic compound, commercially significant source of manganese.

Dry Matter	99.9%
Moisture	0.1%
Ash	89.8%

Guaranteed Analysis	Specification	Typical
Manganese, as Mn, wt %	31.5 Minimum	32.0
Sulfur, as S, wt %	18.5 Minimum	18.8
Manganese sulfate, as $MnSO_4$, wt %	96.9 Minimum	99.0

Calcium, as Ca, wt %	0.19%
Potassium, as K, wt %	0.48%
Sodium, as Na, wt %	0.02%
Zinc, as Zn, wt %	0.09%

Heavy Metals*	Analysis 1	Analysis 2	Analysis 3
Mercury, as Hg	nd mg/kg	nd mg/kg	nd mg/kg
Zinc, as Zn	653 mg/kg	834 mg/kg	779 mg/kg
Selenium, as Se	1.30 mg/kg	1.54 mg/kg	3.11 mg/kg
Lead, as Pb	29.3 mg/kg	30.5 mg/kg	32.1 mg/kg
Nickel, as Ni	621 mg/kg	579 mg/kg	774 mg/kg
Molybdenum, as Mo	nd mg/kg	nd mg/kg	nd mg/kg
Cobalt, as Co	590 mg/kg	280 mg/kg	819 mg/kg
Cadmium, as Cd	0.93 mg/kg	0.74 mg/kg	3.24 mg/kg
Arsenic, as As	1.73 mg/kg	nd mg/kg	3.28 mg/kg

Physical Properties (cumulative % retained)

Retained on a #60 Screen, %	250 um	20.10
Retained on a #100 Screen, %	150 um	30.50
Retained on a #120 Screen, %	125 um	15.60
Retained on a #200 Screen, %	75 um	24.70
Retained on a #270 Screen, %	53 um	9.10

Bulk Density	69.4 lbs./cu. ft.
Packaging Options	50lb poly bags 1000kg bulk bags

Water Solubility**	98.0%
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*Midwest Laboratories, Inc.
**Cumberland Valley Analytical Services

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