

**Tecmangam[®]**

(Monohydrated Manganese Sulfate)

TECHNICAL BULLETIN

<u>CHEMICAL ANALYSIS</u>	<u>TYPICAL</u>	<u>GUARANTEE</u>
MANGANESE SULFATE MONOHYDRATED (MnSO ₄ ·H ₂ O)	98.4 - 99.0%	-
EQUIVALENT AS MANGANESE SULFATE (MnSO ₄)	87.9 - 88.5 %	-
EQUIVALENT AS MANGANESE (Mn)	32.0 - 32.2 %	32 % min.
SULFUR (S)	19.0 - 19.5 %	-
MOISTURE (H ₂ O)	0.15 - 0.30%	0.5% max.
INSOLUBLE MATTER IN WATER	0.05 - 0.20%	-
pH	4 - 6	

SOME TRACE ELEMENTS

IRON(Fe)	less than 150 ppm
ARSENIC(As)	less than 0.5 ppm
LEAD(Pb)	less than 10.0 ppm
MERCURY(Hg)	less than 0.5 ppm
CHROMIUM [total] (Cr)	less than 100.0 ppm
CADMIUM(Cd)	less than 5.0 ppm

PHYSICAL DATA

POWDER

BULK DENSITY (LOOSE)	0.80-1.10 g/cm ³ (50-68 Lb/Ft ³)		
APPEARANCE	WHITE TO CREAM COLORED POWDER		
WATER SOLUBILITY	99.8% Minimum		
SOLUBLE MANGANESE AS (Mn)	100 % FROM TOTAL Mn		
GRANULOMETRY	(TYLER) MESH	%	DIAMETER (mm)
	+100	20.0	Greater than 0.15
	+200	20.0	Greater than 0.075
	+325	20.0	Greater than 0.045
	-325	40.0	Smaller than 0.045

MINI-GRANULAR

BULK DENSITY (LOOSE)	1.35-1.60 g/cm ³ (84-100 Lb/Ft ³)		
APPEARANCE	WHITE TO CREAM COLORED GRANULES		
WATER SOLUBILITY	99.8% Minimum		
SOLUBLE MANGANESE AS (Mn)	100 % FROM TOTAL MANGANESE		
GRANULOMETRY	(TYLER) MESH	%	DIAMETER
	-20 +80	90.0	0.85 a 0.18 mm

MAXI-GRANULAR

BULK DENSITY (LOOSE)	1.30-1.50 g/cm ³ (81-94 Lb/Ft ³)		
APPEARANCE	WHITE TO CREAM COLORED GRANULES		
WATER SOLUBILITY	99.8% Minimum		
SOLUBLE MANGANESE AS (Mn)	100 % FROM TOTAL Mn		
GRANULOMETRY	(TYLER) MESH	%	DIAMETER
	-5 +16	90.0	4.00 a 1.00 mm

JANUARY 2009

QUALITY CONTROL DEPARTMENT

DOMICILIO CONOCIDO CARRET. TAMPICO-VALLES KM. 28 C.P. 92018 TAMOS, MPIO. PANUCO, VER. MEXICO
APARTADO POSTAL 1099 EN TAMPICO, TAM.

TEL. 52(833) 357-5801, 357-5802 FAX 52(833) 357-5811

E-mail: salvador.flores@erametgroup.com silvia.balderas@erametgroup.com csmx@erametgroup.com