



ATUL LIMITED
(Aromatics Division)

QC/SPEC/FP/10

Rev: 05

Date: 05/07/2015

Finished products Specification:

Name of Chemical : Manganese Sulphate Monohydrate (Feed Grade)

Chemical Formula : $MnSO_4 \cdot H_2O$

CAS No : 10034-96-5

Mole Wt : $169.02 \text{ gm} \cdot \text{Mol}^{-1}$ (Active Content)

Atul Item Code : 0411003009

Sr. No.	Test Description	Unit	Specification		Test Method Ref.
			Minimum	Maximum	
1	Appearance	--	White to Pink color powder		Visual
2	Purity as $MnSO_4 \cdot H_2O$ (on dry base)	%	98.7	--	Complexometric Titration
3	Manganese as Mn (on dry base)	%	32.0	--	Stoichiometrically
4	Iron content as Fe	ppm	50	--	Visual Comparative Spectrophotometer
5	Moisture	%	--	0.30	IR Balance Oven
6	Water Insoluble @ 5.0 pH	%	--	0.10	Gravimetrically
7	Bulk Density	Gm/Cm ³	0.90	1.70	Physical measurement
8	pH of 10% aq. Solution	--	5.5	7.0	pH Meter
9	Solubility in water	--	Highly soluble in water		Visual
10	Impurity (Undesirable substance)				
a	Arsenic as As	ppm	--	2	ICP AAS XRF Others appropriate
b	Cadmium as Cd	ppm	--	2	ICP AAS XRF Others appropriate
c	Lead as Pb	ppm	--	10	ICP AAS XRF Others appropriate
d	Mercury as Hg	ppm	--	0.3	ICP AAS XRF Others appropriate
e	Dioxin	ng/Kg	--	1.0	HPLC MS
f	Sum of Dioxin & Dioxin like PCBs	ng/Kg	--	1.5	HPLC MS
11	Microbiological Data				
a	Total Viable Count in cfu/gm	cfu/gm	--	200	Microbiological plate
b	Yeast & Mould Count in cfu/gm	cfu/gm	--	20	Microbiological plate
c	E.Coli in cfu/gm	cfu/gm	--	Absent	Microbiological plate
d	Salmonella in cfu/gm	cfu/gm	--	Absent	Microbiological plate

Reviewed By

Approved By

Issued By

COMPANY INFORMATION DISTRIBUTOR		
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activities	Distribution and export of chemicals and raw materials	
VAT number	BE0405317567	NL001375945B01
recall procedure available	Yes	
emergency number (24/365)	+32 (0)56 77 69 44	+31 (0)78 6544 944
QUALITY SYSTEMS		
ISO 9001	Yes	Yes
ISO 14001	Yes	Yes
ISO 22000	Yes	Yes
FSSC 22000	Yes	Yes
GMP+ -feed	Yes	Yes
OHSAS18001	-	Yes
ESAD	Yes	Yes
other	-	AEO