



BUREAU VERITAS
Certification



MANMOHAN MINERALS & CHEMICALS PVT. LTD.

Dated : 02/01/2017 REV.No: 05

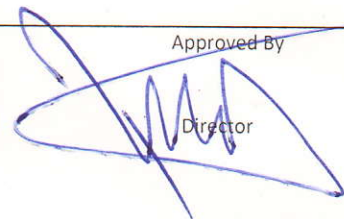
| Specification of the product MANGANESE/MANGANOUS OXIDE 60% FEED GRADE - MnO | | | | |
|--|--|---|---------------------------------------|---------------------------------|
| Chemical Information: | | Technical Data | | |
| Molecular Weight | : 71 | Density : 1.80 - 1.90 kg/dm ³ | | |
| C.A.S. Number | : 1344-43-0 | Solubility : Water-insoluble/ Acid Soluble | | |
| HS CODE | : 2820 90 00 | | | |
| Characteristic | Manmohan's Standard Specification | Manmohan's Typical Analysis | Test Method | European Standard Specification |
| Total Manganese (Mn) | 60% Min. | ABOVE 61% | by Potentiometric titration- Volhards | 60% Min. |
| Manganese Oxide (MnO) | 78% Min. | ABOVE 79% | by Potentiometric titration- Volhards | --- |
| Iron as Fe | 8% max. | 6% | IS - 1473 - 2004 | --- |
| Silica as SiO ₂ | 8% max. | 6% | IS - 1473 - 2004 | --- |
| Alumina as Al ₂ O ₃ | 5% max. | 3% | IS - 1473 - 2004 | --- |
| Manganese Dioxide (MnO ₂) | 2% max. | 2% | IS - 1473 - 2004 | --- |
| Moisture | 1% max. | 0.50% | ASTM D2216 | --- |
| Lead (Pb) | 200 ppm max. | 60 ppm | by ICP -Mass Spectrometry | 200 ppm max. |
| Arsenic (As) | 100 ppm max | 60 ppm | by ICP -Mass Spectrometry | 100 ppm max. |
| Cadmium (Cd) | 30 ppm max. | 1.50 ppm | by ICP -Atomic Emission Spectrometry | 30 ppm max. |
| Mercury (Hg) | 1 ppm max. | NOT DETECTED | by ICP -Mass Spectrometry | 1 ppm max. |
| Appearance | Fine greenish-brown powder | Fine greenish-brown powder | Visual | Fine greenish-brown powder |
| Density | 1.80 – 1.90 kg/dm ³ | 1.80 – 1.90 kg/dm ³ | | 1.80 – 1.90 kg/dm ³ |
| Screen analysis 100 mesh (BSS) | 95-100% Passing | 95-100% Passing | | 95-100% Passing |
| Shelf Life | 3 Years | 3 Years | | 3 Years |
| Dioxin | : 1.0 ng/kg TEQ | Max EPA 1613B | | |
| Sum Dioxin and Dioxin-like PCBs | : 1.5 ng/kg TEQ | Max EPA 1613B and EPA 1668B | | |
| Non Dioxin-like PCBs | : 10 ug/kg TEQ | Max EPA 1668(modified) | | |
| TOXICITY | : MnO is not hazardous | | | |
| HANDLING | : Avoid dust formation, which may cause respiratory, skin, eye irritation | | | |
| STORAGE | : Store in dry, well - ventilated area | | | |
| PACKING | : 25 Kgs, 50 Kgs. Nett Bags, 1000 Kg Jumbo bags OR 1250 Kgs.Jumbo Bags on pallets 24/ 25 MT per 20' Box container | | | |
| PRODUCT ORIGIN | : INDIA | | | |

Approved By


Manager
Q A



Approved By


Director

Manufacturers & Exporters of Manganese Oxide

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FAMIqs

FAMI QS Certified since 2010.
Certificate No.: IND 13.6614.
Registration No.: FAM-0423.