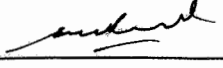

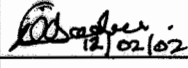


**GOVERNMENT OF INDIA
(Ministry of Railways)**

**SPECIFICATION FOR
VEEGUM GRANULES
PL. No. 81980905**

Issued by

**MECHANICAL DRAWING OFFICE
WHEEL & AXLE PLANT
YELAHANKA, BANGALORE-560 064
I N D I A**

		
Dy. CME/W-I	WM/MR	SSE/DES.
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SPECIFICATION FOR VEEGUM GRANULES**1.0 Scope:**

The specification covers manufacture and supply of Veegum Granules for the preparation of spray for graphite moulds to Wheel and Axle Plant, Yelahanka, Near Bangalore, Karnataka State, India, as per the instructions and conditions of contract and tender papers.

2.0 Description:

Veegum (Granules) is an inorganic, complex, colloidal Magnesium aluminum silicate.

3.0 Job Requirement:

3.1 Veegum (Granules) is required for the preparation of spray for graphite moulds. It should serve as an emulsion stabilizer, suspending agent, film former, binder and organic gum modifier, when added with other additives to prepare mould spray. It should improve the suspension of inert materials such as Silica Flour, clay etc.

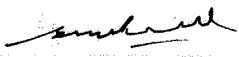


4.0 Material:

4.1 The average chemical compositions of the Veegum (Granules) is given below (For general guidance only).

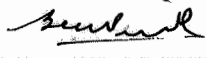


4.1.1	Silicon dioxide	:	60%
4.1.2	Magnesium oxide	:	13.0%
4.1.3	Aluminum oxide	:	9.0%
4.1.4	Ferric oxide	:	1.0%
4.1.5	Calcium oxide	:	2.0%
4.1.6	Sodium oxide	:	2.1%
4.1.7	Potassium oxide	:	1.3%
4.1.8	Loss on ignition	:	11.0%

5.0 Other Technical Data:

5.1 Composition : Magnesium Aluminium Silicate.

		
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- 5.2 Physical form : Small granules.
- 5.3 Colour : White
- 5.4 Viscosity - 5% Dispersion) 250 Cps ± 25%
- 5.5 Moisture : 8% Maximum.
- 5.6 pH of 5% dispersion : 9.5 ± 0.5
- 5.7 Bacterial count : 1000 per gram maximum.
There should not be any presence of E. Coli, S. Aureus, selmonella sp or P. aeruginosa
- 5.8 The material should be odourless and tasteless.
- 5.9 The texture should be soft and slippery.
- 5.10 It should be insoluble in water or alcohol.
- 5.11 It should form colloidal dispersion in water.
- 5.12 It should possess the property of swelling in water and this property should be reversible.
- 5.13 The material should be packed in suitable containers in re-usable/bio-degradable environment friendly containers to prevent moisture absorption and bacterial attack. Each pack shall be of 50 kg weight.
- 5.14 The material should be with a shelf life period of 48 months when stored with suitable packing as mentioned at clause 5.13.

		
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AMENDMENT SHEET

ALT.	DATE	DESCRIPTION	JOB No	APPROVED BY	
				DESI.	SIGN.
b	04.02.02	Specification re-named as "Veegum Granules, cl 5.4 on density deleted, shelf life modified and clauses re-numbered.	4087	Dy CME/WI	<i>[Signature]</i>

<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i> 12/02/02
Dy. CME/W-I	WM/MR	SSE/DES.
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