

Sub: Data for SDOTE case in vendor registration portal for Aluminium Powder

Ref: PV letter no. 3210/Gen/PV/M1, dt. 07/05/2026

With reference to the above, the required data for manufacturing technology and testing/inspection facility of Aluminium Powder (material no. 12003007) is given below:

1. **Manufacturing technology (in Brief):** Aluminium Powder is manufactured by Air Atomization of virgin Aluminium Ingot of purity  $\geq 99.7\%$ . Key process steps for Air Atomization of Aluminium are Melting, Superheating, Atomization, Solidification & cooling, Collecting & grading. The essential Machinery and components required are Melting & holding furnace, Atomization chamber, Atomizing Nozzle, Preheating Unit & powder Handling system.

2. **Test requirements and test apparatus:** The Aluminium Powder shall be supplied in the form of a dull grey powder, free from grit, foreign matter and visible impurities. Samples taken from any portion of the batch/lot/consignment of the material shall conform to the following test requirements.

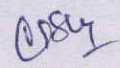
| Sl. No. | Characteristics                                | Passing standard | Apparatus required for testing                                                                                                        |
|---------|------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 01      | Matter soluble in Ether, percent by mass, max. | 0.05             | a) Reflux condenser<br>b) Claissen flask                                                                                              |
| 02      | Volatile matter, percent by mass, max.         | 0.2              | Weighing bottles & Oven<br>OR<br>Mettler digital volatile matter analyzer model-HR 83 or Equivalent                                   |
| 03      | Free metallic Aluminium percent by mass, min.  | 98               | a) Glass tube<br>b) Decomposition vessel (75 g bottle)<br>c) Nitrometer<br>OR<br>a) Eudiometer<br>b) Fusion tube<br>c) Reaction flask |
| 04      | Apparent Density, g/ml, Min                    | 1                | Graduated glass cylinder with stopper                                                                                                 |
| 05      | Average particle size, ( $\mu$ )               | 15-20            | CILAS particle size analyzer or Equivalent/ Fisher Sub -Sieve Sizer                                                                   |

3. The manufacturer must have the facility for manufacturing Aluminium Powder and should have all plant & Machinery along with requisite test facility for better quality control which has to be demonstrated to the capacity verification team nominated by OFI at the time of capacity verification.

  
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(Member)

  
OIC/QC(Lab)  
(Member)

  
OIC/QC(Mat)  
(Member)

  
DO/GMP  
(Chairman)

To  
GO/PV(Direct)