TD-106-1 Rev No. 5

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## PRODUCT STANDARD **SWITCHGEAR HYDERABAD**

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## ZEOLITE MOLECULAR SIEVE AND ACTIVATED ALUMINA

#### 1. Introduction:

Molecular Sieve and activated alumina are the adsorptive materials used in Oxygen generation plant to adsorb Nitrogen, Moisture and traces of Argon present in Air and release or allow oxygen to pass through the material.

### 2. Technical Specification and Variant table:

Variant No.	Desiccant Description	Material code		
01	Li Zeolite Molecular Sieve	SG9780011013		
02	Activated Alumina	SG9780011021		
03	Ca Zeolite Molecular Sieve	SG9880011031		

Molecular Sieve should deliver >93% Oxygen purity. Unit of Measure in Kgs.

### Var.01: Li Zeolite Molecular Sieve

Bead Size : 1.2-2.0 mm Nitrogen adsorption capacity (25°C and 1 atm) : 19.5 Nl/kg

Selectivity N2/O2 (25°C and 1 atm) : 6.0 Crush Strength : 30N

Particle Size : > 1.2 mm : 98 %> 2.0mm : 2 %

Loss on ignition (1 hour at 950°C) : 2.8 % Water content : 0.5 %

Bulk density : 600-660 kg/m3

### Var.02: Activated Alumina (Al<sub>2</sub>O<sub>3</sub>)

Bead Size : 3-5 mm Water adsorption capacity : 6 %

(10% relative humidity)

Water adsorption capacity : 14 %

(50% relative humidity)

Water adsorption capacity : 21 %

(60% relative humidity)

Crush strength : 190 N Loss on ignition (1 hour at 950°C) : 4-7 %

Bulk density  $: 720-880 \text{ kg/m}^3$ 

	Refer to record of revisions:	Prepared: K. SANGEETHA	Approved: RAVI J	Date: 17.05.2021
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### Var.03: Ca Zeolite Molecular Sieve

Particle Size : 1.5-2.0 mmCrush Strength : 16-30 NWater content : < 1.5 % by Wt. Bulk density : 600-660 kg/m3

**3. Application:** For PVSA Oxygen generation unit.

### 4. Quality assurance Inspection and Testing Requirement:

- i) Chemical analysis and Oxygen purity percentage Test report / certificates to be furnished by the manufacturer.
- ii) COC to be furnished by the manufacturer (for catalogue items)

#### 5. Packing:

Packing shall be as per manufacturer standard practices.

#### 6. Guarantee:

The desiccants shall be provided with Guarantee against faulty / defective material for 18 months from the date of dispatch or 12 months from the date of commissioning whichever is earlier.

#### 7. Documents Required:

Following documents and drawings shall be furnished by manufacturer:

- Technical Datasheet
- O&M manual containing datasheet, test certificates, catalogue etc.

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## **RECORD OF REVISIONS**

REV.NO	DATE	REVISION DETAILS	REVISED	APPROVED

Refer to record of revisions:	101717	17.03.2021