

**SCHEDULE-R****GUARANTEED TECHNICAL PARTICULARS for****FRESH TRANSFORMER OIL TYPE II-UNINHIBITED CONFIRMING IS:335:2018 and any amendment thereof.**

|  |   |   |
|--|---|---|
|  | <b>Name of Manufacturer</b>                 |   |
|  | <b>Country of Manufacturer and shipment</b> |   |
|  | <b>Type of oil</b>                          | FRESH TRANSFORMER OIL TYPE-II (UNINHIBITED) |

|          | <b>Property</b>  | <b>Test Method</b>      | <b>Limiting value as per TS</b>   | <b>Guaranteed value</b> |
|----------|--|-------------------------|---|-------------------------|
| <b>A</b> | <b><u>Function</u></b>   |                         |   |                         |
|          | 1 Viscosity at 40°C  | IS 1448 (Part 25)       | 15mm <sup>2</sup> /s, (Max)   |                         |
|          | 2 Viscosity at 0°C   | IS 1448 (Part 25)       | 1800mm <sup>2</sup> /s, (Max)   |                         |
|          | 3 Pour Point   | IS 1448 (Part 10/Sec 2) | — 10°C, (Max)   |                         |
|          | 4 Water Content (for drum supply)  | IEC 60814               | 40 mg/kg, (Max)<br><i>for delivery in drums</i>                                     |                         |
|          | 5 Breakdown Voltage  | IS 6792                 | 30 kV/ 70 kV <sup>5)</sup> , (Min)<br>5) After laboratory treatment (see 6.4 of IS) |                         |
|          | 6 Density at 20°C  | IS 1448 (Part 16)       | 0.895 g/ml, (Max)   |                         |
|          | 7 DDF at 90°C  | IS 16086                | 0.005, (Max)  |                         |
| <b>B</b> | <b><u>Refining/stability</u></b>   |                         |   |                         |
|          | 8 Appearance   | -                       | Clear, free from sediment and suspended matter                                      |                         |
|          | 9 Acidity  | IEC 62021-1             | 0.01 mg KOH/g, (Max)  |                         |
|          | 10 Interfacial Tension at 27°C   | ASTMD971                | 0.04 N/m (Min)  |                         |
|          | 11 Corrosive Sulphur   | DIN 51353               | Not corrosive   |                         |
|          | 12 Potentially corrosive sulphur   | IS 16310                | Not corrosive   |                         |
|          | 13 DBDS  | IS 16497 (Part 1)       | Not detectable (<5mg/kg)  |                         |
|          | 14 Inhibitors according to IS 13631/IEC 60666  | IS 13631                | (U) Un uninhibited oil<br>Not Detectable (<0.01%)                                   |                         |
|          | 15 Metal Passivator additives according to IS 13631/IEC 60666                            | IS 13631                | Not detectable (<5mg/kg)  |                         |
|          | 16 2-Furfural and related compounds content  | IS 15668                | Not detectable (<0.05 mg/kg) for each individual compound                           |                         |
| <b>C</b> | <b><u>Performance</u></b>  |                         |   |                         |
|          | 17 Oxidation stability   |                         |   |                         |
|          | (a) Total Acidity  | 1.9.4 of IS 12422       | 1.2 mg KOH/g, (Max)   |                         |
|          | (b) Sludge   | 1.9.1 of IS 12422       | 0.8%, (Max)   |                         |
|          | (c) DDF at 90°C  | 1.9.6 of IS 12422       | 0.500, (Max)  |                         |
| <b>D</b> | <b><u>Health, Safety and Environment (HSE)</u></b>                                       |                         |   |                         |
|          | 18 Flash Point   | IS 1448 (Part 21)       | 135°C, (Min)  |                         |
|          | 19 PCA content   | IP 346                  | 3% (Max)  |                         |
|          | 20 PCB content   | IS 16082                | Not detectable (<2 mg/kg)   |                         |
| <b>E</b> | <b><u>Reference to standard to which the drums conform</u></b>                           |                         |   |                         |
|          | 21 Standard to which the drum confirms   |                         | IS:1783 and any amendment thereof   |                         |
|          | 22 Capacity of the standard drum   |                         | 210 Ltr aprox   |                         |
|          | 23 Colour and type of paint painted on the outside surface of the drum                   |                         | coated with suitable primer and finishing paint                                     |                         |
|          | 24 Whether the inside surface of the drum is painted and if so, particulars of the same. |                         | Coated with suitable coating resistant to insulating oil.                           |                         |
|          | 25 Particulars of the arrangement of making the drum air tight moisture and dust proof.  |                         | drum effectively sealed immediately after filling the oil                           |                         |
|          | 26 Whether the oil and drum bearing ISI certification mark                               |                         |   |                         |
|          | 27 Volume of the oil in each drum in litres.   |                         |   |                         |