

| Sr.No.              | PROPERTY             | TEST METHOD           | GUARANTEED DATA                              |                                    |
|---------------------|----------------------|-----------------------|--|------------------------------------|
|                     |                      |                       | Minimum                                      | Maximum                            |
| <b>1 - Function</b> |                      |                       |  |                                    |
| 1                   | Viscosity at 40 °C   | ISO 3104              |  | 12 mm <sup>2</sup> /s              |
|                     | Viscosity at - 30 °C | ISO 3104              |  | 1800 mm <sup>2</sup> /s            |
| 2                   | Pour Point           | ISO 3016              |  | - 40 °C                            |
| 3                   | Water Content        | IEC 60814             |  | 30 mg/kg (Bulk)<br>40 mg/kg (Drum) |
| 4                   | Breakdown Voltage    | IEC 60156             | 30 kV (Delivered)<br>70 kV (After Treatment) |                                    |
| 5                   | Density at 20 °C     | ISO 3675 or ISO 12185 |  | 895 kg/m <sup>3</sup>              |
|                     | Density at 29.5 °C   | ISO 3675 or ISO 12185 |  | 0.890 g/ml                         |
| 6                   | DDF at 90 °C         | IEC 60247             |  | 0.005                              |

| <b>2 - Refining / Stability</b> |  |  | Minimum  | Maximum         |
|---------------------------------|--|--|--|-----------------|
| 7                               | Colour                                       | ISO 2049   |  | L 0.5           |
| 8                               | Appearance                                   |  | Clear, free from sediment & suspended matter                     |                 |
| 9                               | Acidity                                      | IEC 62021-1 or IEC 62021-2   |  | 0.01 mg KOH /gm |
| 10                              | Interfacial Tension                          | IEC 62961 or ASTM D971   | 43 mN/m  |                 |
| 11                              | Total Sulphur Content                        | ISO 8754 or ISO 20847  |  | 0.05 %          |
| 12                              | Corrosive Sulphur                            | DIN 51353  | Not corrosive  |                 |
|                                 | Corrosive Sulphur                            | ASTM D 1275 B  | Not corrosive  |                 |
| 13                              | Potentially Corrosive Sulphur                | IEC 62535  | Not corrosive  |                 |
| 14                              | DBDS   | IEC 62697-1  | Not detectable (< 5 mg/kg)                                       |                 |
| 15                              | Inhibitors of IEC 60666                      | IEC 60666  | (I) Inhibited Oil : 0.08 % to 0.40 %                             |                 |
| 16                              | Metal Passivator Additives of IEC 60666      | IEC 60666  | Not detectable (< 5 mg/kg), or as agreed upon with the purchaser |                 |
| 17                              | Other additives                              |  | Does not contain any additive                                    |                 |
| 18                              | 2 - Furfural & related compounds content     | IEC 61198  | Not detectable (< 0.05 mg/kg) for each individual compound       |                 |
| 19                              | Stray Gassing under thermos oxidative stress | Procedure in clause A .4 (Oil Saturated with air ) in the presence of copper |  |                 |
|                                 | Hydrogen (H <sub>2</sub> )                   |  | Non Stray Gassing (< 50) µl/l                                    |                 |
|                                 | Methane (CH <sub>4</sub> )                   |  | Non Stray Gassing (< 50) µl/l                                    |                 |
|                                 | Ethane (C <sub>2</sub> H <sub>6</sub> )      |  | Non Stray Gassing (< 50) µl/l                                    |                 |

| <b>3 - Performance</b> |                               |                           | Minimum | Maximum      |
|------------------------|-------------------------------|---------------------------|---------|--------------|
| 20                     | Oxidation Stability at 120 °C | IEC 61125                 |         |              |
|                        |                               | Test duration             |         |              |
|                        |                               | (I) Inhibited Oil : 500 h |         |              |
| a)                     | Total acidity                 | 4.8.4 of IEC 61125 : 2018 |         | 0.3 mg KOH/g |
| b)                     | Sludge                        | 4.8.1 of IEC 61125 : 2018 |         | 0.05 %       |
| c)                     | DDF at 90 °C                  | 4.8.5 of IEC 61125 : 2018 |         | 0.050        |

| <b>4 - Health , Safety and Environment</b> |             |           | Minimum                    | Maximum |
|--|-------------|-----------|----------------------------|---------|
| 21   | Flash point | ISO 2719  | 135 °C                     |         |
| 22   | PCA content | IP 346    |                            | 3 %     |
| 23   | PCB content | IEC 61619 | Not detectable (< 2 mg/kg) |         |

- TRANSOL HGPX has an excellent Electrical and Oxidation Stability Properties. It is specially manufactured from highly Refined Base Oil.  
 - The Product fully complies with IEC 60296:2020, TYPE A, Inhibited Standard Grade Oil Edition 5.0