



energising life

## HIGH SPEED DIESEL OIL

### BHARAT STAGE III

TEST	METHOD	SPECIFICATION
Density @ 15°C, kg/m <sup>3</sup> <sup>(1)</sup>	IS 1448 P :16	820 to 845
Colour (ASTM) *	ASTM D 1500	Max. 5
Water Content, mg/Kg	ISO 12937	Max. 200
Flash Point (Abel), °C	IS 1448 P :20	Min. 35
Viscosity (Kinematic)@ 40°C, cSt	IS 1448 P :25	2.0 to 4.5
Pour Point, °C <sup>(2)</sup>	IS 1448 P :10	Max. 3 (Winter)
		Max. 15 (Summer)
Copper Strip Corrosion(3 hr. @ 100°C)	IS 1448 P :15	Not worse than No. 1
Total Sulphur, mg/Kg	ASTM D : 4294 / D 2622	Max. 350
Acidity (Total), mg KOH/g	IS 1448 P :2	To report
Acidity (Inorganic)	IS 1448 P :2	Nil
Ash, %w	IS 1448 P :4	Max. 0.01
Carbon residue (Ramsbottom) on 10% residue, %wt. <sup>(3)</sup>	IS 1448 P :8	Max. 0.30
CFPP, °C <sup>(2)</sup>	IS 1448 P :110	Max. 6 (Winter)
		Max. 18 (Summer)
Cetane Number <sup>(4)</sup>	IS 1448 P :9	Min. 51
Cetane Index <sup>(4)</sup>	ASTM D 4737	Min. 46
Distillation :	IS 1448 P :18	
Recovery @ 360°C, %v		Min. 95



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Lubricity wsd @ 60°C, microns	ISO 12156-1	Max. 460
Total contaminations, mg/kg	EN 12662	Max. 24
Oxidation stability, g/m <sup>3</sup>	ISO 12205 / ASTM D 2274	Max. 25
Polycyclic Aromatic Hydrocarbons (PAH), %wt.	IP 391	Max. 11

Conforms to BIS : 1460:2005 specifications for High Speed Diesel Oil.

**Note:**

- (1) For fuel processed from Assam crude, the density range is relaxed to 820-870 and 820-855 for Bharat Stage II and Bharat Stage III grades respectively.
- (2) Winter shall be the period from November to February in central and northern plains of India (both months inclusive) and rest of the months of the year shall be called as summer.
- (3) This limit is applicable prior to addition of ignition improvers, if used. In case a value exceeding the limit is obtained on finished fuels in the market, ASTM D4046/ISO 13759 shall be used to establish the presence of nitrate containing compound. In such case the present limit for carbon residue cannot be applied. However, the use of ignition improver does not exempt the manufacturer from meeting this requirement prior to the addition of additives.
- (4) For Fuel processed from Assam crude, Cetane number and Cetane index is relaxed by 3 units.

\* In addition to BIS specification BPCL(R) controls these parameters for better customer satisfaction.