



**Laboratory** Bharat Petroleum Corporation Ltd., QA Laboratory, Manglia Depot,  
A. B. Road, Manglia, Indore, Madhya Pradesh

**Accreditation Standard** ISO/IEC 17025: 2005

**Discipline** Chemical Testing **Issue Date** 21.07.2015

**Certificate Number** T-3498 **Valid Until** 20.07.2017

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	<b>Ethanol</b>	Miscibility with Water	IS 15464 : 2004 (RA 2009) Annexure C	Qualitative (Yes / No)
		Relative Density at 15.6/15.6 °C	IS 15464: 2004 Annexure A	0.60 to 0.85
<b>8.</b>	<b>SKO/HSD</b>	Flash Point (Abel)	IS 1448 (Part 20): 1998 (RA 2008) IP 170-09	18 °C to 70 °C
<b>9.</b>	<b>FO</b>	Flash Point (Pensky Marten)	IS 1448 (Part 21): 1992 (RA 2008) ASTM D 93: 2012	60 °C to 350 °C
		Kinematic Viscosity at 50 °C	IS 1448 (Part 25): 1976(RA 2007) ASTM D 445: 2014	100 cSt to 400 cSt
		Relative Density at 15.6/15.6 °C	IS 1448 (Part 16): 1990 (RA 2007)	850 to 1000
<b>10.</b>	<b>HSD</b>	Pour Point	IS 1448 (Part 10/Sec I): 2012 ASTM D 97: 2012	(-) 38 °C to (+) 30 °C
		Kinematic Viscosity at 40 °C	ASTM D 7042: 2014	1.0 cSt to 200 cSt
		Kinematic Viscosity at 40 °C	IS 1448 (Part 25): 1976 (RA 2007) ASTM D 445: 2014	1.0 cSt to 400 cSt
		Cetane Index (Calculated)	ASTM D4737-10	Upto 65
<b>11.</b>	<b>SKO</b>	Smoke point	IS 1448 (Part 31): 1968 (RA 2008) ISO 3014: 1993	5 mm to 35 mm
		Colour - Saybolt, Units	IS 1448 (Part 14): 1960 (RA 2011)	(-) 16 to (+) 30

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
12.	MS/HSD/SKO/FO	Sulphur	ISO 20847-04 ASTM D 4294:10	(0.0005 to 5.0) % by wt.
13.	HSD/ FO	Water Content	IS 1448 (Part 40): 1987 (RA 2011) ASTM D 95: 13	(0 to 25) % by Vol.
<b>II. LUBRICANTS</b>				
1.	Lubricants	Appearance	WI-02 Dated 01.09.2014	Qualitative (Visual)
		Colour	WI-04-A Dated 01.09.2014	Qualitative (Visual)
		Colour - ASTM	ASTM D 1500: 2012 IS 1448 (Part 12): 2013	0 to 8.0
		Crackle Test	WI-03A	Qualitative
		Cu Strip Corrosion rating	IS 1448 (Part 15): 2004 (RA 2011)	1a to 4c
		Density	IS 1448 (Part 16): 1990 (RA 2011) ASTM D 1298: 2012	660 kg/m <sup>3</sup> to 1000 kg/m <sup>3</sup> or 0.660 gm/ml to 0.1000gm/ml
		Flash Point (COC)	ASTM D-92: 2012b IS 1448 (Part 69): 2013	Upto 380 °C
		Flash Point (Pensky Marten)	IS 1448 (Part 21): 1992 (RA 2008) ASTM D 93: 2012	60 °C to 350 °C
		Kinematic Viscosity at 40 °C	IS 1448 (Part 25): 1976 (RA 2007) ASTM D 445: 2014	1.0 cSt to 400 cSt
		Kinematic Viscosity at 100 °C	IS 1448 (Part 25): 1976 (RA 2007) ASTM D 445: 2012	1.0 cSt to 50 cSt

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