

Laboratory **Bharat Petroleum Corporation Ltd., QA Laboratory Kandla, Kandla Installation, Kandla Terminal, Taluka Gandhidham, Dist. Kutch, Gujarat**

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

Certificate Number **TC-7031 (in lieu of T-3896)**

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Validity **22.04.2018 to 21.04.2020**

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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CHEMICAL TESTING

I. PETROLEUM PRODUCTS				
1.	Motor Gasoline (MS)	Appearance	BPCL/WI-02-Amd 0 dated 01.10.2015	Qualitative (Descriptive by visual)
		Colour	BPCL/WI-03, Amd 0 dated 01.10.2015	Qualitative (Descriptive by visual)
		Density at 15 °C	IS 1448 (Part 16) ASTM D1298	660.0 kg/m ³ to 1000 kg/m ³ 0.660 gm/ml to 1.0 gm/ml
		Aromatics Content	IS 1448 (Part 23)	5 % to 50 % by volume
		Olefins Content	ASTM D 1319-15	0.3 % to 40 % by volume
		Cu Strip Corrosion Rating	IS 1448 (Part 15)	Qualitative (1a to 4c) by rating
		Distillation:		
		-Temperature	IS 1448 (Part 18)	30 °C to 400 °C
		-Volume Recovery	ASTM D 86	Upto 100 %
		Gum Content (Solvent -Washed)	IS 1448 (Part 29)	Upto 40 g/m ³
2.	Automotive Diesel Fuel(ADF), High Speed Diesel (HSD)	Research Octane Number (RON)	IS 1448 (Part 27) ASTM D2699	80 units to 100 units
		Total Sulphur	IS 1448 (Part 153) ASTM D:4294 ISO 20847 ISO 8754 (IP:336)	0.0017 % to 4.6 % by mass
		Ethanol Content	IS 2796 (Annexure c)	Up to 20 % by Volume
		Appearance	BPCL/WI-02-Amd 0 dated 01.10.2015	Qualitative (Descriptive by visual)
		Colour	BPCL/WI-03, Amd 0 dated 01.10.2015	Qualitative (Descriptive by visual)
		Cetane Index, (Calculated)	ASTM D-4737	40 to 65

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		Cu Strip Corrosion	IS 1448 (Part 15)	Qualitative (1a to 4c) by rating
		Density at 15 °C	IS 1448 (Part 16) / ASTM D1298	660.0 kg/m ³ to 1000 kg/m ³ 0.660 gm/ml to 1.0 gm/ml
		Distillation: -Temperature -Volume Recovery	IS 1448 (Part 18) / ASTM D 86	30 °C to 400 °C Upto 100 %
		Flash Point (Abel)	IS 1448 (Part 20)/ IP 170	17 °C to 70 °C
		Kinematic Viscosity at 40 °C	IS 1448 (Part 25)	1.0 cSt to 15 cSt
		Kinematic Viscosity at 40 °C	ASTM D7042	1.0 cSt to 15 cSt
		Pour Point	IS 1448 (Part 10 & Sec 2)	-39 °C to +36 °C
		Total Sulphur	IS 1448 (Part 153) / ASTM D:4294 /ISO 20847/ ISO 8754 (IP:336)	0.0017 % to 4.6 % by mass
		Water Content	IS 1448 (Part-40) / ASTM D 95-13e	Upto 25 % by Volume.
3.	High Flash High Speed Diesel (HFHSD)	Flash Point (Pensky Marten)	IS 1448 (Part-21) / ASTM D 93-16	40 °C to 300 °C
		Kinematic Viscosity at 40°C	IS 1448 (Part-25)	1.0 cSt to 15 cSt
		Kinematic Viscosity at 40°C	ASTM D7042	1.0 cSt to 15 cSt
		Pour Point	IS 1448 (Part 10 & Sec 2)	-39 °C to +36 °C
4.	Fuel Oil (FO)	Appearance	BPCL/WI-02-Amd 0 dated 01.10.2015	Qualitative (Descriptive by visual)
		Colour	BPCL/WI-03, Amd 0 dated 01.10.2015	Qualitative (Descriptive by visual)
		Density at 15 °C	IS:1448 (Part 16) / ASTM D1298	660.0 kg/m ³ to 1000 kg/m ³ 0.660 gm/ml to 1.0 gm/ml

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		Flash Point (Pensky Marten)	IS 1448 (Part 21) / ASTM D 93-16	40 °C to 300 °C
		Kinematic Viscosity at 50 °C	IS 1448 (Part 25)	70 cSt to 400 cSt
		Sediments	IS 1448 (Part 30) / ASTM D 473	Up to 10 % by mass
		Total Sulphur	IS 1448 (Part 153) / ASTM D:4294 /ISO 20847/ ISO 8754 (IP:336)	0.0017 % to 4.6 % by mass
		Water Content	IS 1448 (Part 40) / ASTM D 95-13e	Up to 25 % by Volume.
5.	Mineral Turpentine Oil	Appearance	BPCL/WI-02-Amd 0 dated 01.10.2015	Qualitative (Descriptive by visual)
		Colour	BPCL/WI-03, Amd 0 dated 01.10.2015	Qualitative (Descriptive by visual)
		Aromatics Content	IS 1448 (Part 23)	5 % to 50 % by volume
		Olefins Content	ASTM D 1319-15	0.3 % to 40 % by volume
		Colour Saybolt	IS:1448 (Part 14)	(-) 16 units to (+)30 units
		Density at 15 °C	IS:1448 (Part 16) / ASTM D1298	660.0 kg/m ³ to 1000 kg/m ³ 0.660 gm/ml to 1.0 gm/ml
		Distillation: -Temperature -Volume Recovery	IS 1448 (Part 18) / ASTM D 86	30 °C to 400°C Upto 100 %
		Residue on Evaporation	IS 1448 (Part 29)	Upto 5 mg/100 ml
		Flash Point (Abel)	IS 1448 (Part 20)/ IP 170	17 °C to 70 °C
6.	Kerosene	Appearance	BPCL/WI-02-Amd 0 dated 01.10.2015	Qualitative (Descriptive by visual)
		Colour	BPCL/WI-03, Amd 0 dated 01.10.2015	Qualitative (Descriptive by visual)
		Colour Saybolt	IS 1448 (Part 14)	(-) 16 units to (+)30 units

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		Cu Strip Corrosion	IS 1448 (Part 15)	Qualitative (1a to 4c) by rating
		Density at 15 °C	IS 1448 (Part 16) / ASTM D1298	660.0 kg/m ³ to 1000 kg/m ³ 0.660 gm/ml to 1.0 gm/ml
		Distillation: -Temperature -Volume Recovery	IS 1448 (Part 18) / ASTM D 86	30 °C to 400°C Upto 100 %
		Flash Point (Abel)	IS 1448 (Part 20)/ IP 170	17 °C to 70 °C
		Smoke Point	IS 1448 (Part 31)	10 mm to 30 mm
		Total Sulphur	IS 1448 (Part 153) / ASTM D 4294 /ISO 20847/ ISO 8754 (IP:336)	0.0017 % to 4.6 % by mass
II.	LUBRICANTS			
1.	Lubricant	Appearance	BPCL/WI 02-Amd 0 Dated 01.10.2015	Qualitative (Descriptive by visual)
		Colour	BPCL/WI 03-Amd 0 Dated 01.10.2015	Qualitative (Descriptive by visual)
		Colour (ASTM)	ASTM D 1500/ IS 1448 (Part 12)	0 ASTM unit to 8.0 ASTM unit
		Density at 29.5°C	IS 1448 (Part 16) ASTM D1298	0.660 g/ml to 1.000 g/ml
		Flash Point (COC)	ASTM D:92/ IS 1448 (Part 69)	110 °C to 270 °C
		Flash Point (Pensky Marten)	IS 1448 (Part 21) ASTM D93	40 °C to 250 °C
		Kinematic Viscosity at 40 °C	IS 1448 (Part 25)	1.0 cSt to 270 cSt
		Kinematic Viscosity at 40 °C	ASTM D 7042	1.0 cSt to 270 cSt

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		Kinematic Viscosity at 100 °C	IS 1448 (Part 25)	1.0 cSt to 200 cSt
		Kinematic Viscosity at 100 °C	ASTM D 7042-2016	1.0 cSt to 200 cSt
		Pour Point	IS 1448 (Part 10 & Sec 2)	-39 °C to 36 °C
		Viscosity Index	ASTM D:2270 IS 1448 (Part 56)	20 to 200
		Water Content	IS 1448 (Part 40) D 95-2013 e	Upto 25 % by Volume
III.	INDUSTRIAL FINE CHEMICAL			
1.	Ethanol	Appearance	BPCL/WI 02-Amd 0 Dated 01.10.2015	Qualitative (Descriptive by visual)
		Colour	BPCL/WI 03-Amd 0 Dated 01.10.2015	Qualitative (Descriptive by visual)
		Ethanol Content at 15.6/15.6 °C	IS 15464	94 % to 100 % by volume
		Miscibility with Water	IS15464 (Annexure C)	Qualitative test (Miscible/Not miscible)
		Relative Density at 15.6/15.6°C	IS 15464 (Annexure-A)	0.6 to 0.85