

## Motor Spirit / Gasoline

IndianOil Motor Spirit / Gasoline meets the requirements of  
IS 2796 : 2000 (3<sup>rd</sup> Revision) with Amendment (No 1 thru 5)

IndianOil Motor Spirit/Gasoline is Orange/Red Coloured.  
XTRAPREMIUM Gasoline Contains extra doses of MFA

SI No	Characteristics	Requirement			Method Of Test
		BS II	BS II	BS III	
i)	Grade	MS 88	MS 93	MS 91	
ii)	Colour, Visual	Orange	Red	Orange	
iii)	Density at 15°C KG/m <sup>3</sup>	710-770	710-770	720-775	P: 16* / ISO 3675 / (ASTM D 4052)
iv)	Distillation				P: 18* / ISO 3405 / (ASTM D 86)
	a) Recovery up to 70 °C (E-70) Percent by volume	10-45	10-45	10-45	
	b) Recovery up to 100°C (E-100) Percent by volume	40-70	40-70	40-70	
	c) Recovery up to 150 °C (E-150) Percent by volume	-	-	75	
	d) Recovery up to 180 °C (E-180) Percent by volume	90	90	-	
	e) Final Boiling point, °C Max	215	215	210	
	f) Residue, percent by volume. Max	2	2	2	
v)	Research Octane Number (RON), Min	88	93	91	P:27 / ISO 5164 / ASTM D 2699
vi)	Motor Octane Number (MON), Min	-	-	81	P:26 / ISO 5163 / ASTM D 2700
vii)	Anti-Knock Index(AKI), Min	84	88	-	(RON + MON)/2
viii)	Existent Gum, g/m <sup>3</sup> , Max	40	40	40	P:29 / ISO 6246 / ASTM D 381
ix)	Potential Gum <sup>(1)</sup> , g/m <sup>3</sup> , Max	50	50	-	P: 147 <sup>(1)</sup>
x)	SulphurTota, Percent by mass, Max	0.050	0.050	0.015	P:34* / ASTM D 1266 / (P:83, ISO 4260 D 2785, D 5453, D 2622, ISO 14596 D3120, ISO 20847)
xi)	Lead Content (as Pb), g/l, Max	0.013	0.013	0.005	P:80* / IP224 / IP352 / (ASTM 3237)
xii)	Reid Vapour Pressure (RVP) <sup>(2)</sup> at 38°C kPa	35-60 (35-67)	35-60 (35-67)	60(67) Max	P:39* <sup>3</sup> / ISO 3007 / ASTM D 323 / (EN 13016, ASTM D 5191)
xiii)	Vapour Lock Index(VLI) (VLI=10RVP+7 E 70)3, Max a) Summer <sup>(5)</sup> b) Other months	750 (900) 950 (1050)	750 (900) 950 (1050)	750 (900) 950 (1050)	
xiv)	Benzene content, Percent by volume max	3	3	1	ASTM D 3606 <sup>(4)</sup> , (ASTM D 5580, D 6277, D6730)
xv)	Copper strip corrosion (for 3 h @ 50 <sup>o</sup> C), Max	Not more than No. 1	Not more than No. 1	Class 1	P:15 / ISO 2160 / ASTM D 130
xvi)	Water tolerance of gasoline-alcohol blends, Temperature for phase separation, °C, Max a)Summer b)Winter	10 0	10 0	10 0	
xvii)	Engine intake system cleanliness <sup>(7)</sup>	Report MFA used	Report MFA used	Report MFA used	As per IS 2796
xviii)	Olefin content, percent by volume, Max	-	-	21	P:23* / D 1319 / (ASTM D 6730)
xix)	Oxidation stability, minutes, Min	-	-	360	P:28 / (ISO 7536 / ASTM D 525 / IP 40)

xx)	Aromatic content, percent by volume max	-	-	42	P:23 / ASTM D 1319 / ASTM D 6730 / (ASTM D 5580, D 6730)
xxi)	Oxygen content, percent by mass max	-	-	2.7	EN 1601 / IP408 / ASTM D 4815
xxii)	Oxygenates, percent by volume, max Ethanol <sup>(3)</sup>	5	5	5	ASTM D 4815

#### NOTES

- 1 The Test shall be carried out on the gasoline before addition of multifunctional detergent/dispersants additives, as these may interface with the test
- 2 Limits given in ( ) shall be applicable to 5 percent v/v ethanol-blended gasoline only. Those areas where blending ethanol in gasoline is compulsory, the dosage of ethanol shall be 4.75 +/- 0.25v/v.
- 3 For the gasoline-alcohol blends, the dry vapour test method given in Annex A shall be followed.
- 4 It is applicable only for non-alcoholic motor gasoline.
- 5 Winter shall be the period from November to February in Central and Northern State of India (both months inclusive ) and rest of the months of the year shall be called as summer.
- 6 In winter it is expected that temperature may be lower than 0°C in Northern hilly region and hence phase separation shall not take place till -10°C
- 7 Use of multifunctional additives (MFA) is a requirement for assuring adequate fuel system and intake system cleanliness performance in engines. Refiners/Marketers of motor gasoline have to ensure the MFA has proper credential from internationally accepted test laboratories/authorities.

\* In case of dispute referee method shall be used.

Last Updated on September 26, 2007