MOTOR GASOLINE

BHARAT STAGE IV

TEST	METHOD	SPECIFICATION	
Grade		**MG 91**	**MG 95**
Density @ 15°C, kg/m^3	IS 1448 P :16	720 - 775	720 - 775
Colour, Visual		Orange	Red
Copper Strip Corrosion (3 hrs. @ 50°C)	IS 1448 P :15	Not more than 1	Not more than 1
Existent gum (gm/m^3)	IS 1448 P :29	Max. 40	Max. 40
Lead Content (as Pb), gm/litre	IP 352	Max. 0.005	Max. 0.005
Research Octane Number (RON)	IS 1448 P :27	Min. 91	Min. 95
Motor Octane Number (MON)	IS 1448 P :26	Min. 81	Min. 85
Reid Vapour Pressure @ 38°C, kPa[(1)]	IS 1448 P :39	Max. 60	Max. 60
Distillation	IS 1448 P :18		
Recovery upto 70°C, %v		10-45	10-45
Recovery upto 100°C, %v		40-70	40-70
Recovery upto 150°C, %v		Min. 75	Min. 75
FBP, °C		Max. 210	Max. 210
Residue, %v		Max. 2	Max. 2
Benzene content,% v	ASTM D3606	Max. 1	Max. 1
Total Sulphur, mg/Kg	ASTM D 2622/5453	Max. 50	Max. 50
Vapour Lock Index (VLI): a) Summer [(1)]	Note (2)	Max. 750	Max. 750
b) Other months		Max. 950	Max. 950
Oxidation Stability, minutes	IS 1448 P : 28	Min. 360	Min. 360
Olefin content, %v	IS 1448 P : 23	Max. 21	Max. 18
Aromatics content, %v	IS 1448 P : 23	Max. 35	Max. 35
Oxygen content, %wt.	ASTM D 4815	Max. 2.7	Max. 2.7
Oxygenates content, %v	ASTM D 4815		
a) Methanol		Nil	Nil
b) Ethanol		Max. 5	Max. 5
c) Iso-propyl alcohol		Max. 10	Max. 10
d) Iso-butyl alcohol		Max. 10	Max. 10
e) Tertiary-butyl alcohol		Max. 7	Max. 7
f) Ethers containing 5 or more carbon atoms per molecule		Max. 15	Max. 15
g) Other oxygenates		Max. 8	Max. 8
TEST	**METHOD**	**SPECIFICATION**	
Grade		**MG 91**	**MG 95**
Engine intake system cleanliness [(3)]	As per IS 2796	Report - MFA used	Report - MFA used
Water Tolerance of gasoline alcohol			

blends, temperature for phase separation, °C,			
a) Summer[1]		Max. 10	Max. 10
b) Winter [4]		Max. 0	Max. 0

Conforms to BIS spec IS:2796-2008 For Motor Gasoline

NOTES:

1) Summer shall be the period from May to July.

2) VLI = 10RVP + 7E70

3) Use of multi-functional 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 credentials from internationally accepted test laboratories/authorities.

4) In winter it is expected that temperature may be lower than 0°C in the northern hilly region and hence phase separation shall not take place till -10°C.