



# Esso Energy Unleaded ULS

## Marketing Technical Bulletin

### Product

Esso Unleaded Premium ULS Motor Gasoline

### Appearance

Clear liquid, pale yellow in colour

### Specification \*

BS EN 228: 2008

\* Esso Unleaded Premium Gasoline also complies with The Motor Fuel (Composition and Content) Regulations 1999 and HM C&E requirements for "Ultra Low Sulphur Petrol".

### Application

Spark ignition engines (chiefly automotive vehicles), marine engines (pleasure craft), mobile power sources (power generators), chain saws, lawn mowers and other horticultural equipment. **DO NOT USE FOR AVIATION PURPOSES.**

### Quality Data

Parameter (BS Methods)	Units	BS or HM Customs & Excise Limit		Esso Typical
		Min	Max	
Octane Number - Research (RON)	-	95.0	-	95.7
Octane Number - Motor (MON)	-	85.0	-	85.4
Lead content	mg/l	-	5	Nil
Density @ 15 °C	kg/m <sup>3</sup>	720	775	730
Sulphur content	mg/kg	-	10	8
Oxidation stability	min	360	-	>360
Gum content (solvent washed)	mg/100ml	-	5	<0.5
Copper strip corrosion	Rating	Class 1	-	Class 1
Appearance	Visual	Clear and bright	-	Clear and bright
Hydrocarbon type content				
Olefins	% (V/V)	-	18.0	10.8
Aromatics	% (V/V)	-	35.0	32.4
Benzene content	% (V/V)	-	1.0	0.4
Ethanol content	% (m/m)	-	5	0 or 4.8%
MTBE / Ethers containing 5 or more carbon atoms	% (V/V)	--	15.0	0.2
Vapour Pressure @ 37.8°C	KPa	70.0 (W) 45.0 (S)	100.0 (W) 70.0 (S)	94 (W) 66 (S)
Vapour Lock Index - Intermediate	-	-	1250	1219 (SIn) 1220 (AIn)
Distillation: Evaporated @ 70°C	% (V/V)	22.0 (W) 20.0 (S)	50.0 (W) 48.0 (S)	45 (W) 39 (S)
Evaporated @ 100°C	% (V/V)	46.0	71.0	63
Evaporated @ 150°C	% (V/V)	75.0	-	93
Final boiling point	°C	-	210	181
Distillation residue	% (V/V)	-	2	0.9

**Note:** Volatility Limits quoted are the legal dates for distribution from the refinery:

### Seasonality Dates

Grade	Ex Service Station
W Winter Grade	16 October to 15 April inclusive
SIn Intermediate Grade (Spring)	16 April to 31 May inclusive
S Summer Grade	1 June to 31 August inclusive
AIn Intermediate Grade (Autumn)	1 September to 15 October inclusive

### Additional Technical Information

Specific Energy		Units	All Grades
Gross		MJ/kg	47.50
Net		MJ/kg	44.32

Calculated using BS2869



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*'Typicals' are expected qualities based on recent historical production data and should therefore not be considered a guarantee of quality*

***For Health & Safety information refer to the most current version of the product MSDS***