

## EURO STANDARD UNLEADED GASOLINE<sup>3</sup>

### USE: FUEL FOR SPARK IGNITION ENGINES

PROPERTY	MU	LIMITS		TEST METHOD
		Min.	Max.	
Density at 15 °C	Kg/m <sup>3</sup>	720	775	ASTM D 4052-09 <sup>2</sup> / ASTM D 1298-99(05) <sup>2</sup> SR EN ISO 3675:02 <sup>2</sup> / SR EN ISO 3675:02 <sup>2</sup> / C91:05 <sup>2</sup> EN ISO 3675:98 <sup>2</sup> / ISO 3675:98 <sup>2</sup> SR EN ISO 12185:02 <sup>2</sup> / EN ISO 12185:96 <sup>2</sup> / ISO 12185:96 <sup>2</sup>
Antiknock value:				ASTM D 2699-09 <sup>2</sup> / ASTM D 2700-09 <sup>2</sup>
RON		95,0	-	SR EN ISO 5164:06 <sup>2</sup> / EN ISO 5164:05 <sup>2</sup> / ISO 5164:05 <sup>2</sup>
MON		85,0	-	SR EN ISO 5163:06 <sup>2</sup> / EN ISO 5163:05 <sup>2</sup> / ISO 5163:05 <sup>2</sup>
Lead content	mg/l	-	5	SR EN 237:05 <sup>2</sup> / EN 237:04 <sup>2</sup> / ASTM D 3237-06 <sup>2</sup>
Benzene content	% (v/v)	-	1.00	SR EN 12177:01 <sup>2</sup> / SR EN 12177:01 / AC:02 <sup>2</sup> EN 12177:98 <sup>2</sup> / SR EN 22854 :09 <sup>2</sup> / ASTM D 6839-02(07)
Type of hydrocarbons content:				
Olefins	% (v/v)	-	18.0	SR EN 15553:07 <sup>2</sup> / EN 15553:07 <sup>2</sup> / SR EN 22854:09 <sup>2</sup> ASTM D 1319-08 <sup>2</sup> / ASTM D 6839-02(07)
Aromatics		-	42.0	
Distillation:				
Evaporated at 70 °C (E70)	% (v/v)			
- Summer <sup>1</sup>		20.0	48.0	ASTM D 86-09 <sup>2</sup>
- Winter <sup>1</sup>		22.0	50.0	SR EN ISO 3405:11 <sup>2</sup>
Evaporated at 100 °C, E100	% (v/v)	46.0	71.0	EN ISO 3405:11 <sup>2</sup>
Evaporated at 150 °C, E150	% (v/v)	75.0	-	ISO 3405:11 <sup>2</sup>
Final boiling point	°C	-	210	
Residue of distillation	% (v/v)	-	2	
Vapour pressure				
- Summer <sup>1</sup>	kPa	45.0	60.0	SR EN 13016-1:08 <sup>2</sup> / EN 13016-1:07 <sup>2</sup>
- Winter <sup>1</sup>		60.0	90.0	ASTM D 5191-07 <sup>2</sup> / ASTM D 6378-08
Sulfur content	mg/kg	-	150	SR EN ISO 20846-04 <sup>2</sup> / EN ISO 20846-04 <sup>2</sup> / ISO 20846-04 <sup>2</sup> SR EN ISO 20884-11 <sup>2</sup> / EN ISO 20884-11 <sup>2</sup> / ISO 20884-11 <sup>2</sup> ASTM D 5453-09 <sup>2</sup> / ASTM D 2622-08 <sup>2</sup>
Oxidation stability	minutes	360	-	SR EN ISO 7536:01 <sup>2</sup> / EN ISO 7536:96 <sup>2</sup> / ISO 7536:94 <sup>2</sup> ASTM D 525-05 <sup>2</sup>
Copper strip corrosion rating (3 hrs at 50 °C)			class 1	SR EN ISO 2160-03 <sup>2</sup> / EN ISO 2160-98 <sup>2</sup> / ISO 2160-98 <sup>2</sup> ASTM D 130-04 <sup>2</sup>
Actual gums content (washed with solvents)	mg/100 ml	-	5	SR EN ISO 6246:00 <sup>2</sup> / EN ISO 6246:97 <sup>2</sup> / ISO 6246:95 <sup>2</sup> ASTM D 381-09 <sup>2</sup>
Volatility Index, VLI				Calculated
- Summer <sup>1</sup>		-	1000	
- Winter <sup>1</sup>		-	1250	
Aspect			clear and transparent	Visual inspection
Oxygen content	% (m/m)	-	2.7	SR EN 1601:00 <sup>2</sup> / EN 1601:97 <sup>2</sup> / SR EN 22854 :09 <sup>2</sup> SR EN 13132:01 <sup>2</sup> / EN 13132:00 <sup>2</sup> / DIN EN 13132:02 <sup>2</sup>
Oxygenate compounds content	% (v/v)			
Methanol		-	3.0	
Ethanol		-	5.0	SR EN 1601:00 <sup>2</sup> / EN 1601:97 <sup>2</sup> / SR EN 22854 :09 <sup>2</sup>
Iso propil alcohol		-	10.0	SR EN 13132:01 <sup>2</sup> / EN 13132:00 <sup>2</sup> / DIN EN 13132:02 <sup>2</sup>
Iso butyl alcohol		-	10.0	
Tert butyl alcohol		-	7.0	ASTM D 6839-02(07)
Ethers (5 or more C atoms)		-	15.0	
Other oxygenates		-	10.0	

**NOTES: 1)** Summer - from May, 1 to September, 30; Winter - from October, 1 to April, 30 **2)** Accredited test by RENAR **3)** In order to assure a superior cleanliness of the engine and lower fuel consumption, Rompetrol gasoline is treated with detergent and anti-corrosion additives

**Quality control:** control is done on lot.

Each batch will have max. 2,000 tones for delivery in tank wagons or tank capacity for pipelines. The lot will have product of same type.

During testing, the product must comply with all parameters depicted in standard specification for corresponding product/type. If not, the batch is rejected.

In case of litigious, the quality control will be done using the samples kept for these cases, sampling being done in accordance with the sampling procedure.

**NOTE:** A sample is analyzed in the supplier laboratory, and the second is kept for three months after delivery, at buyer's disposal, for an eventual control.

**Sampling procedure:** according to SR EN ISO 3170:2004 / SR EN ISO 3170:2004/C91:05 / ASTM D 4057-06

**Informations about handling, transportation and storage:** according to "Safety Data Sheet" FDS-2.1 T.

**Quality-environment-safety integrated Management System is certified by Germanischer Lloyd Certification** according to the following standards:

- ISO 9001:2008
- ISO 14001:2004
- BS OHSAS 18001:2007

The test lab is accredited by RENAR in compliance with SR EN ISO/CEI 17025:2005.

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