



## European Gasoline Blend Components

Complex mixtures of (mainly unsaturated) C5 - C10 hydrocarbons

### General

The gasoline blending component products of the Aromatics Business of Dow are mixtures of (mainly unsaturated) C5 to C10 components. They originate from high temperature cracking of petroleum fractions and are separated by distillation of benzene from pyrolysis gasoline.

The main application of these products is to be blended into gasoline sold as motor fuel.

### Available Grades

BLEND TN 100	- A mixture of Toluene, Xylenes and other aromatics.
BLEND TN 120	- A mixture of C5 and C9-C10 hydrocarbons
BLEND TN 160	- A mixture of C8 – C10 hydrocarbons
BLEND TN 200	- A mixture of C8 – C12 hydrocarbons

### Physical Properties

The gasoline blending products show a variety of appearances ranging from a clear to a yellow liquid with a moderate to strong aromatic or camphor like odor. The products are immiscible / insoluble in water. The products originate from petroleum cracker operations, hence as supplied are low in sulfur, but the composition may vary in time.

The tables below summarize product typical properties and typical compositions.

### Product Typical Properties

Test Parameter	BLEND TN 100	BLEND TN 120	BLEND TN 160	BLEND TN 200
Color	20 (APHA)	4 (Gardner)	6 (Gardner)	8 (Gardner)
Specific Gravity (15 °C) (Water=1)	> 0.85	0.74 – 0.78	0.908 – 0.925	0.91 – 0.94
Vapor Pressure (20 °C)	~ 12 mmHg	~ 640 mmHg	~ 10 mmHg	<7.5 mmHg (40°C)
Relative Vapor Density (Air=1)		~ 4	~ 5	
Oxidation Stability <sup>see note 3</sup> (min.)	>360	> 360	> 360	> 360
Initial Boiling Point (°C)	>100	30	125	145
10 % Boiling Point (°C)	120	37	163	148
50 % Boiling Point (°C)	130	50	175	158
90 % Boiling Point (°C)	150	172	189	188
Final Boiling Point (°C)		180	210	210
Reid Vapor Pressure (psi)	< 5	10 -14	5	< 5
Existent Gums (mg/100 ml)	< 5	2 – 5	0 – 5	>1000
Sulfur (ppm)	5	10 – 50	10 – 50	10 – 50
Doctor Test	Pass	Pass	Pass	Pass
Octane Number (MON)	~90	81 – 84	84 – 87	86 – 88
Octane Number (RON)	~103	96 – 98	105 - 108	100 – 102
Appearance	Clear liquid	Clear to slightly yellow liquid	Clear to yellow liquid	Light brown liquid

Note 1: Data above are based on average production data from 2004. As the products originate from petroleum cracker operations these values may vary during the year as result of changing operational conditions of the cracker.

Note 2: The data above are typical values, not to be construed as specifications. Users should confirm results by their own tests.

Note 3: Oxidation Stability is measured in a 1:5 blend with isooctane.

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## Product Typical Composition

Component	BLEND TN 100	BLEND TN 120	BLEND TN 160	BLEND TN 200
C4 / C5 components		20 – 30 %		
Benzene	< 3 %	<1 %	< 0.5 %	< 0.5 %
Toluene	50 – 65 %	0.5 %	< 0.9 %	< 0.9 %
Ethylbenzene	9 – 20 %	0.5 - 2.5 %	1 – 10 %	0 – 10 %
Xylenes	7 – 20 %	1-7 %	2 – 15 %	0 – 15 %
Styrene	0.1 %	2 - 10 %	5 – 20 %	15 – 35 %
alpha-Methylstyrene		0 - 0.5 %		0 - 2 %
Dicyclopentadiene		5 - 15 %	15 – 30 %	1 – 20 %
Methylstyrenes (vinyltoluenes)				4 – 10 %
Indene				3 - 10 %
Methylindenes				1 – 3.5 %
Naphthalene				0 – 6 %

Note 1: All data are given in %-w/w unless stated otherwise.

Note 2: Data above are based on average production data from 2004. As the products originate from petroleum cracker operations these values may vary during the year as result of changing operational conditions of the cracker.

Note 3: The data above are typical values, not to be construed as specifications. Users should confirm results by their own test.

## Production Locations

- Terneuzen (The Netherlands)

## Suggested Applications

All products in this datasheet are suitable to be blended into gasoline (depending on the gasoline product specifications).

BLEND TN 160 and BLEND TN 200 may also be used as a source of dicyclopentadiene, styrene or other resin formers such as vinyltoluene and indene. Please contact Dow Aromatics' Technical Services & Development Department (see our website for details) to discuss such possibilities.

## More Information

For more information about the aromatic products of Dow (i.e. Sales Specifications, (Material) Safety Data Sheets, Availability, Technical Services & Development, Regulatory Status and other information) please visit our website at:

[www.dowaromatics.com](http://www.dowaromatics.com)

### Customer Information Center:

North America: 1-800-258-2436  
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