

## Ethene 3.5

<b>Product Designation</b>	Ethene 3.5
<b>Physical state</b>	gaseous, compressed
<b>Chemical symbol</b>	C <sub>2</sub> H <sub>4</sub>
<b>Purity</b>	99,95 vol.%
<b>Other names</b>	Ethylene Ethylene R-1150 Ethylene

<b>Impurities</b>	<b>Maximum value</b>
Nitrogen + oxygen	100 vol. ppm
Moisture	10 vol. ppm
Hydrocarbons	500 vol. ppm

### Delivery formats

In steel cylinders

<b>Descriptions</b>	<b>cylinders/container volumes</b>	<b>Filling pressure</b>	<b>Content</b>
Ethene 3.5 T10 RCyl: 3,2 kg	10 l	72 bar	3,20 kg
Ethene 3.5 T50 RCyl: 16,0 kg	50 l	72 bar	16,00 kg

Unless otherwise stated, these refer to vapour pressure at 288,15K (15°C) and to content at 288,15K (15°C) and 1,013 bar.

### Other delivery formats

- on request
- Alumini® 12, 200 Ethene 2.5
- in steel cylinders and bundles: Ethene 2.5 and 3.5

<b>Properties</b>	highly flammable
<b>Valve connection</b>	DIN 477 No. 1   (W 21.80 x 1/14 LH)
<b>Shoulder colour</b>	flame red (RAL 3000)
<b>Suitable pressure regulators</b>	WEGA range: see brochure: "Good on Top: Pressure Regulators for Specialty Gases".

### Typical applications

- in metrology as a reference gas
- in the chemical industry, for example polyethylene manufacture

## Ethene 3.5

### Conversions

1 m <sup>3</sup>	at 288.15 K (15°C); 1 bar	=	1,179 kg
1 m <sup>3</sup>		=	2,072 l liquid
1 kg		=	0,848 m <sup>3</sup>
1 kg		=	1,757 l liquid
1 l liquid	at T boiling point; 1 bar	=	0,483 m <sup>3</sup>
1 l liquid		=	0,569 kg

### Physical data:

Molar Mass	Molar mass	28,05 g mol <sup>-1</sup>
Sublimation point	Sublimation temperature	-- K (°C)
	Heat of sublimation	-- kJ kg <sup>-1</sup>
	Density	-- kg m <sup>-3</sup>
Gaseous state	Density (at 273.15 K and 1.013 bar)	1,26 kg m <sup>-3</sup>
	Density Ratio to Air (at 288.15 K and 1.013 bar)	0,98
	Specific heat (at 298.15 K and 1.013 bar)	1,54 kJ kg <sup>-1</sup> K <sup>-1</sup>
	Thermal Conductivity (at 288.15 K and 1.013 bar)	0,0188 J s <sup>-1</sup> m <sup>-1</sup> K <sup>-1</sup>
Critical Point	Temperature	282,65 (9,5) K (°C)
	Pressure	50,76 bar
	Density	218 kg m <sup>-3</sup>
Triple Point	Temperature	104 (-169,2) K (°C)
	Vapour Pressure	0,0012 bar
	Heat of Fusion	119,5 kJ kg <sup>-1</sup>
Additional operating	Ignition Point	698 (424,9) K (°C)
	Ignition Range in Air	2,4-32,6 vol.%
	Calorific Value to DIN 51850	63414 kJ kg <sup>-3</sup>

The provided data, values and information corresponds to the state of knowledge at the time of printing. They assert no claim for accuracy or completeness and in this respect do not absolve the user from their duty of verification.  
Status: 04.2013