

## Specification

### Ethanol absolute (Ph. Eur., USP) pure, pharma grade

**A4230**

<b>Refractive Index:</b>	n <sub>20</sub> /D 1.3611 (abs.)
<b>Physical Description:</b>	Liquid
<b>Product Code:</b>	A4230
<b>Product Name:</b>	Ethanol absolute (Ph. Eur., USP) pure, pharma grade
<b>Headline Comment:</b>	This ethanol is intended for consumers in Germany only. The product may only be purchased at AppliChem Darmstadt.
<b>Specifications:</b>	<p>Assay (v/v): min. 99.5 %</p> <p>Assay (w/w): min. 99.2 %</p> <p>Appearance: passes test</p> <p>Volatile impurities (GC): passes test</p> <p>Identity: passes test</p> <p>Non-volatile matter: max. 25 mg/L</p> <p>Density (d 15.56°C/15.56°C): max. 0.7962</p> <p>Density (d 20°C/20°C): 0.790 - 0.793</p> <p>Acidic/alkaline react. subst.: max. 0.003 % (as AcOH)</p> <p>Sum of further impurities: max. 0.03 %</p> <p>Acetaldehyde and Acetal: max. 0.001 % (v/v)</p> <p>Benzene: max. 0.0002 % (v/v)</p> <p>Methanol: max. 0.02 % (v/v)</p> <p>Absorption (5 cm/water HPLC grade)</p> <p>240 nm: max. 0.40</p> <p>250 - 260 nm: max. 0.30</p> <p>270 - 340 nm: max. 0.10</p> <p>Elemental impurities (according to ICH Q3D):</p> <p>Class 2A (Co): max. 5 ppm</p> <p>Class 3 (Li): max. 55 ppm</p> <p>Class 1 (Pb): max. 0.5 ppm</p> <p>Class 1 (As): max. 1.5 ppm</p> <p>Class 2B (Pd): max. 10 ppm</p> <p>Class 2B (Ir): max. 10 ppm</p>



#### AppliChem GmbH

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<p>Class 2B (Os): max. 10 ppm  Class 2B (Ru): max. 10 ppm  Class 3 (Ba): max. 140 ppm  Class 3 (Mo): max. 25 ppm  Class 3 (Cr): max. 25 ppm  Class 3 (Cu): max. 250 ppm  Class 3 (Sn): max. 600 ppm  Class 1 (Cd): max. 0.5 ppm  Class 2B (Au): max. 10 ppm  Class 2B (Rh): max. 10 ppm  Class 1 (Hg): max. 1.5 ppm  Class 2A (V): max. 10 ppm  Class 2A (Ni): max. 20 ppm  Class 2B (Tl): max. 0.8 ppm  Class 2B (Pt): max. 10 ppm  Class 2B (Se): max. 15 ppm  Class 2B (Ag): max. 15 ppm  Class 3 (Sb): max. 120 ppm</p>	
<b>Hazard pictograms</b>	 
<b>UN:</b>	1170
<b>Class/PG:</b>	3/II
<b>ADR:</b>	3/II
<b>IMDG:</b>	3/II
<b>IATA:</b>	3/II
<b>WGK:</b>	1

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<b>Storage:</b>	RT
<b>Signal Word:</b>	Danger
<b>GHS Symbols:</b>	GHS02 GHS07
<b>H Phrases:</b>	H225 H319
<b>P Phrases:</b>	P210 P233 P241 P280 P305+P351+P338 P501
<b>Molecular Formula:</b>	CH <sub>3</sub> CH <sub>2</sub> OH
<b>M:</b>	46.07 g/mol
<b>CAS:</b>	64-17-5
<b>EINECS:</b>	200-578-6
<b>CS:</b>	22071000
<b>Index Nr.:</b>	603-002-00-5

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