

## 32221 Ethanol Puriss. p.a., absolute, ≥99.8% (GC)

### Specyfikacja:

Property	Value
APPEARANCE (COLOR)	Colorless
REFRACTIVE INDEX N20/D	1.3614 - 1.3618
BOILING RANGE (ASTM)	78 - 79 DEG C
SOLUBILITY	IN WATER: PASSES TEST
WATER (COULOMETR.)	0 - 0.2 %
RESIDUE (EVAPORATION)	0 - 0.001 %
TEST BY UV SPECTROSCOPY	PASSES TEST
IDENTIFICATION A	PASSES TEST
IDENTIFICATION B	PASSES TEST
REDUCING SUBSTANCES	<= 0.0003 % KMnO4 red. matter (as O)
ALDEHYDES	FURFURAL: PASSES TEST
APPEARANCE (FORM)	Liquid
VOLATILE IMPURITIES	PASSES TEST
HEAVY METALS	0 - 1 PPM
MISCELLANEOUS TESTS	ACETONE AND 2-PROPANOL ACC. TO ACS: PASSES TEST
ALUMINIUM (ICP)	0 - 0.5 ppm
BARIUM (ICP)	0 - 0.1 ppm
BORON (ICP)	0 - 0.02 ppm
CALCIUM (ICP)	0 - 0.5 ppm
CADMIUM (ICP)	0 - 0.05 ppm
COBALT (ICP)	0 - 0.02 ppm
CHROMIUM (ICP)	0 - 0.02 ppm
COLOR (IN APHA)	0 - 10 APHA
COPPER (ICP)	0 - 0.02 ppm
IRON (ICP)	0 - 0.1 ppm
MAGNESIUM (ICP)	0 - 0.1 ppm
MANGANESE (ICP)	0 - 0.02 ppm
NICKEL (ICP)	0 - 0.02 ppm
LEAD (ICP)	0 - 0.1 ppm
TIN (ICP)	0 - 0.1 ppm
ZINC (ICP)	0 - 0.1 ppm
SUBSTANCES DARK BY H2SO4	PASSES TEST
CARBONYL COMPOUNDS	<= 0.003 % (as CO)
TITRATABLE ACID	FREE ACID (as CH3COOH): <= 0.0005 %
REMARKS	Ethanol absolute puriss. p.a.. Reag. ACS. Reag. ISO. Reag. Ph. Eur.
EXPIRATION DATE PERIOD	53 MONTHS
TITRATABLE BASE	FREE ALKALI (as NH3) <= 0.0001 %
PURITY (GC AREA %)	99.8 - 100 % Vol. <= 0.001 % ACETONE
REMARKS ON GC	<= 0.05 % ISO-AMYL ALCOHOL <= 0.02 % METHANOL <= 0.003 % 2-PROPANOL
HIGHER BOILING IMPURITIES (GC)	<= 0.01 % (HIGHER ALCOHOLS)
SPECIFIC GRAVITY	0.79 - 0.791

## Właściwości fizyczne:

Property	Value
Impurities	≤0.05% iso-amyl alcohol
Bp	78 °C(lit.)
Cation traces	Fe: ≤0.1 mg/kg
Suitability	passes test for reaction against H <sub>2</sub> SO <sub>4</sub>
Assay	≥99.8% (GC)
Expl. lim.	19 %, 60 °F
Autoignition temp.	683 °F
Refractive index	<i>n</i> <sub>20/D</sub> 1.3614-1.3618
Density	0.790 - 0.791 g/cm <sup>3</sup>
Vapor pressure	44.6 mmHg ( 20 °C)
Grade	puriss. p.a.
Mp	-114 °C(lit.)
Vapor density	1.59 (vs air)
Quality	sales not in Germany <sup>1</sup>
Boiling point	78 - 79 °C
Freezing point	-115 °C

## Informacje dot. bezpieczeństwa:

Property	Value
Flashpoint	12 °C
Hazard Class	3
Package Group	II
UN ID	1170