

SPECIFICATION

Ethanol
for Electronics Industry

REQUIREMENT	SPECIFICATION
Appearance	Colorless clear liquid
Solubility in water	to pass test
Density (20°C)	0.789~0.791g/ml
Refractive index 20°C	1.360~1.363
Water	max.0.4%
Residue after evaporation	max.2ppm
Acidity (as CH ₃ COOH)	max.10ppm
Alkalinity (as NH ₃)	max.1ppm
Methanol (CH ₃ OH)	max.10ppm
Aldehydes and ketones (as CH ₃ COCH ₃)	max.10ppm
Fusel oil (as C ₅ H ₁₂ O)	max.40ppm
Benzene and other organic impurities (as C ₆ H ₆)	max.30ppm
Substances reducing permanganate	to pass test
Substances darkened by sulfuric acid	to pass test
Assay (capillary GC)	min.99.5%
Silver (Ag)	max.1ppb
Aluminium (Al)	max.1ppb
Barium (Ba)	max.1ppb
Calcium (Ca)	max.1ppb
Cadmium (Cd)	max.1ppb
Cobalt (Co)	max.1ppb
Chromium (Cr)	max.1ppb
Copper (Cu)	max.2ppb
Iron (Fe)	max.1ppb
Potassium (K)	max.1ppb
Lithium (Li)	max.1ppb
Magnesium (Mg)	max.1ppb
Manganese (Mn)	max.1ppb
Sodium (Na)	max.10ppb

Nickel (Ni)	max.1 ppb
Lead (Pb)	max.1 ppb
Strontium (Sr)	max.1 ppb
Zinc (Zn)	max.1 ppb
Particles (0.5 μ m or more)	under investigation