

# Product Specification

**Ethanol, Grain derived, 190 Proof****Lot Number:** SAMPLE**Product Number:** RSOE0010**Manufacture Date:** N/A**Recommended Retest Date:** N/A

| Name          | CAS#      | Grade |
|---------------|-----------|-------|
| Ethyl Alcohol | 64-17-5   | USP   |
| Water         | 7732-18-5 | USP   |

| Test                                 | Specification    | Result | NIST SRM# |
|--------------------------------------|------------------|--------|-----------|
| Acidity (as Acetic Acid)             | max 0.003        | N/A    |           |
| Alkalinity (as NH <sub>3</sub> )     | max 3            | N/A    |           |
| Assay                                | min 94.9 % (v/v) | N/A    |           |
| Fusel Oil                            | To Pass Test     | N/A    |           |
| IR Identification                    | To Pass Test     | N/A    |           |
| Ketones/Isopropanol                  | To Pass Test     | N/A    |           |
| Lead (Pb)                            | max 0.50 mg/Kg   | N/A    | 3128      |
| Methanol                             | < 200            | N/A    |           |
| Nonvolatile Residue                  | max 0.003 %      | N/A    |           |
| Organic Impurities (Other)           | < 1000           | N/A    |           |
| Organic Impurities (Sum)             | < 5000           | N/A    |           |
| Solubility in Water                  | To Pass Test     | N/A    |           |
| Specific Gravity @ 15.56°C           | max 0.8161       | N/A    |           |
| Specific Gravity @ 25.0°C            | max 0.8096       | N/A    |           |
| Substances Darkened by Sulfuric Acid | To Pass Test     | N/A    |           |
| Substances Reducing Permanganate     | To Pass Test     | N/A    |           |

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number  | Size / Package Type | Shelf Life (Unopened Container) |
|--------------|---------------------|---------------------------------|
| RSOE0010-55E | 55 gal poly drum    | 36 months                       |
| RSOE0010-5E4 | 5 gal metal drum    | 36 months                       |

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)

This document is designed to comply with ISO Guide 31 "Reference Materials --  
Contents of Certificates and Labels."

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