



PRODUCT SPECIFICATIONS SHEET

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|--------------|-------------------------------------|
| Product Name | Ethyl Alcohol 95% (190 Proof) Grain |
| Grade | FCC Grade |
| Catalog # | 111FCC190 |

| TEST | MONO-GRAPH | SPECIFICATION | TYPICAL RESULT | UNITS |
|---|-------------|--|----------------|-------|
| Assay (by specific gravity@25°C) | FCC | NLT 94.9% | 95.01 | % |
| Specific Gravity @ 15.56oC | FCC | Not more than 0.8161 @ 15.56°C | 0.8158 | N/A |
| Specific Gravity @ 25.0oC | FCC | Not more than 0.8096 @ 25.0°C | 0.8092 | N/A |
| Proof | 27CFR 30.23 | Lot Analysis | 190.0 | N/A |
| Acidity (as acetic acid) | FCC | NMT 0.5 mL of 0.02N sodium hydroxide is required to restore the pink color. (NMT 0.003%) | Pass | N/A |
| Alkalinity (as NH3) | FCC | NMT 0.2 mL of 0.02N sulfuric acid is required to restore the red color. (NMT 3 mg/kg) | Pass | N/A |
| Organic Impurities - Fusel Oil | FCC | No foreign odor is perceptible when the last traces of alcohol leave the paper. | Pass | N/A |
| Identification by Infrared Absorption | FCC | Conforms to IR Spectra | Pass | N/A |
| Organic Impurities - Ketones, Isopropyl Alcohol | FCC | No precipitate forms within 3 min. | Pass | N/A |
| Inorganic Impurities - Lead | FCC | NMT 0.5 mg/kg | LT 0.5 mg/kg | N/A |
| Organic Impurities - Methanol | FCC | 200 ppm max. | 9 | ppm |
| Nonvolatile Residue | FCC | NMT 0.003% | 0.000 | % |
| Organic Impurities - Any other single impurity | FCC | 1000 ppm max. | 0 | ppm |
| Solubility in Water | FCC | No haze or turbidity develops | Pass | N/A |
| Organic Impurities - Substances Darkened by Sulfuric Acid | FCC | The mixture is colorless or has no more color than either the | Pass | N/A |



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| | | acid or the sample before mixing. | | |
| Organic Impurities - Substances Reducing Permanganate | FCC | The pink color does not entirely disappear. | Pass | N/A |
| Organic Impurities - Sum of all impurities | FCC | 5000 ppm max. | 9 | ppm |

This product is for further commercial manufacturing, laboratory or research use, and may be used as an excipient or a process solvent for pharmaceutical purposes. It is not intended for use as an active ingredient in drug manufacturing nor as a medical device or disinfectant. Appropriate/legal use of this product is the responsibility of the user.