# Y-GRADE PRODUCT SPECIFICATIONS

Acceptable Y-Grade shall be a mixture of constituents or component products of natural gas liquids (NGLs) composed principally of ethane, propane, butane, and natural gasolines, meeting the following product specifications:

| CHARACTERISTIC | PRODUCT SPECIFICATIONS | TEST METHOD |
|---|---|---|
| Composition: | | |
| Methane, maximum | See Note 1 | GPA 2177 |
| Aromatics, maximum | See Note 2 | GPA 2186 |
| Olefins, maximum | 1.0 L.V. % | GPA 2186 |
| Carbon Dioxide: | | |
| PPM by Volume in Liquid | 500 maximum | GPA 2177 |
| Vapor Pressure: | | |
| Psig at 100° F | 600 maximum | ASTM D-6378 |
| Corrosiveness: | | |
| Copper strip at 100° F | No. 1 | ASTM D-1838 |
| Total Sulfur: | | |
| PPM by weight, maximum | 150 | ASTM D-2784 |
| Hydrogen sulfide: | | |
| Pass/Fail | Pass | ASTM D-2420 |
| Distillation: | | |
| End point at 14.7 psia, maximum See Note 3 | 375.0° F | ASTM D-7344 |
| Color: | | |
| Saybolt Number, minimum See Note 3 | +25.0 | ASTM D-6045 |
| Existing Gum: | | |
| Washed | ≤1mg/100ml | ASTM D-381 |
| Unwashed | ≤1mg/100ml | |
| Dryness: | | |
| Free Water at 34° F | None | Visual Inspection |
| Product Temperature: | | |
| Minimum | 60° F | |
| Maximum | 100° F | |

**Note 1:** Methane not to exceed either 0.5 L.V. % of the total stream or 1.5 L.V. % of the ethane content. For accounting purposes, a maximum of 1.5 L.V. % methane in the ethane will be considered ethane. Any excess above this specification shall not be accounted for.

**Note 2:** Aromatics not to exceed either 1.0 wt. % in the total stream or 10 L.V. % in contained natural gasoline.

**Note 3:** Distillation and Color to be run on that portion of the mixture having a boiling point of 70° F and above at atmospheric pressure.

**General Contaminants Note:** The Y-Grade shall be commercially free from sand, dust, gums, gum-producing substances, oil, glycol, inhibitors, amine, caustics, chlorides, oxygenates, heavy metals, any other contaminates that make it unfit for its commonly used applications and any compound added to the product to enhance the ability to meet these specifications.

**Abbreviations: ASTM** = American Society for Testing and Materials, Standard Test Procedures; **° F** = Degrees Fahrenheit; **GPA** = Gas Processors Association; **L.V. %** = Liquid Volume Percent; **mg** = milligrams; **ml** = milliliters; **PPM** = Parts per Million; **psia** = pounds per square inch absolute; **wt. %** = percentage by weight.

*The aforementioned specifications may be modified from time to time in the sole discretion of the issuing entity.*