



**WILLIAMS MIDSTREAM NATURAL GAS LIQUIDS
SPECIFICATIONS
NGL MIX
TRUCK & RAIL UNLOADING**

SPECIFICATION POINT	TEST METHOD <small>(Note 1)</small>	SPECIFICATIONS
Carbon Dioxide	GPA 2177	Maximum 0.35 L.V.%
Methane <small>(Note 2)</small>	GPA 2177	Maximum 0.50 L.V.%
Ethane and Lighter	GPA 2177	Maximum 10.00 L.V.%
Aromatics	GPA 2186	Maximum 10.00 L.V. % of Pentanes Plus
Olefins	GPA 2163	Maximum Total Olefins, 1.00 L.V.% of the total stream Maximum Propylene, 5.00 L.V.% of the Propane Maximum Butylene, 0.35 L.V.% of the Butanes Maximum Butadiene, 0.01 L.V.% of the Butane
Vapor Pressure @ 100°F	Calculated <small>(Note 3)</small>	Maximum 210 psig
Corrosion	ASTM D-1838	Maximum Number 1 Copper Strip @ 100°F <small>(Note 4)</small>
Volatile Sulfur	ASTM D-2784, D-6667, or D-5623	Maximum 150 ppm _w
Hydrogen Sulfide	ASTM D-2420 or D-5623	Pass
Carbonyl Sulfide	ASTM D-5623	Maximum 15 ppm _w of the Propane
Distillation, End Point Temperature	ASTM D-86	Maximum 375°F @ 14.7 psia <small>(Note 5)</small>
Color, Saybolt Number	ASTM D-156	Minimum +27 <small>(Note 5)</small>
Water Content	Inspection	No Free Water at 34°F
Halides (including Fluorides)	UOP-619	Maximum 1 ppm _w of the Normal Butane
Contaminants	NGL Mix shall be commercially free from dirt, rust, scale, sand, dust, gums, and gum-forming substances, oil, catalyst poisons, impurities, and other objectionable substances which may be injurious to the system or which may interfere with its transmission through the system. Product will not contain contaminants such as glycol, inhibitors, amine, oxygen, oxygenates, nitrogen, halides, chlorides, arsine/arsenic, mercury, or any compound added to the product to enhance the ability to meet these specifications. Particulate content shall be less than 10 micron in size.	

Notes:

1. The most current version of the published industry test method will be referenced. Other appropriate industry approved test methods may be substituted if all parties are in agreement.
2. Includes Nitrogen and Oxygen
3. Gomez-Nieto and Thodos Vapor Pressure Correlation
4. The use of corrosion masking agents is strictly prohibited
5. Distillation and Color to be run on that portion of the mixture having a boiling point of 70°F and above at atmospheric pressure