



**WILLIAMS MIDSTREAM NATURAL GAS LIQUIDS
SPECIFICATIONS
PROPANE**

SPECIFICATION POINT	TEST METHOD (Note1)	SPECIFICATIONS
Propane	ASTM D-2163	Minimum 90.00 L.V.%
Propylene	ASTM D-2163	Maximum 5.00 L.V.%
Butanes	ASTM D-2163	Maximum 2.50 L.V.%
Vapor Pressure	ASTM D-1267 or D-6897	Maximum 208 psig @ 100°F
Volatile Residue	ASTM D-1837	Maximum -37°F @ 95% Evaporation
Residual Matter	ASTM D-2158	Maximum 0.05 ml Residue @ 100°F Evaporation Oil Stain Observed = Pass An acceptable product shall not yield a persistent oil ring when 0.3 ml of solvent residue mixture is added to the filter paper in 0.1 ml increments and examined in daylight after 2 minutes
Corrosion	ASTM D-1838	Maximum Number 1 Copper Strip @ 100°F (Note 2)
Volatile Sulfur	ASTM D-2784, D-6667, or D-5623	Maximum 123 ppm _w
Hydrogen Sulfide	ASTM D-2420 or D-5623	Maximum 2 ppm _w (Pass)
Carbonyl Sulfide	ASTM D-5623	Maximum 20 ppm _w
Water Content	ASTM D-2713	Minimum 60 Second Freeze Valve
Contaminants	Propane 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 20 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. The use of corrosion masking agents is strictly prohibited