

<b>PEMBINA NORTH PIPELINE PETROLEUM SPECIFICATIONS</b> Effective : Aug 10, 2015	<b>Units</b>	<b>Test Method</b>	<b>ETHANE PLUS</b>
Density at 15°C and in the liquid phase at vapor pressure	kg/m <sup>3</sup>		529–400
Vapour Pressure at 15°C	kPag		◀3500
Vapour Pressure at 37.8°C	kPag	ASTM D1267	N/A
Receipt Temperature	°C °C		20 (max.) 0.0 (min.)
Carbon Dioxide to Ethane Ratio	% of Ethane in mol%	GPA-2177	◀6.0
Methane to Ethane Ratio	% of Ethane in mol%	GPA-2177	◀2.5
Methane to Propane Ratio	% of Propane mol%	GPA-2177	N/A
Ethane to Propane Ratio	% of Propane mol%	GPA-2177	N/A
Copper Strip		ASTM D-1838	N/A
Moisture Content			No Free Water at -29oC & 9930 Kpa
Colour		ASTM D1500	◀ 0.5
Total Sulphur	wppm S	ASTM D5623	◀90
Hydrogen Sulfide	wppm S	ASTM D5623	◀10
Carbonyl Sulphide	wppm S	ASTM D5623	◀60
Contaminants - solids using a 5 micron filter, millipore test apparatus and accepted lab practices)	mg/l		◀20 <sup>(1)</sup>
<b>NOTES:</b> 1) Includes but not limited to sand, dust, asphaltene, crude oil, gum and gum forming substances. In addition to the above specifications, Ethane Plus and Propane Plus Mixes must be commercially free from sand, dust, gums and gum forming substances, catalyst poisons, oxygenates, impurities and other objectional or deleterious substances which may be injurious to process equipment or pipelines, or which may interfere with the product's transmission through pipelines. The symbol "◀" designates less than and "▶" designates greater than.			