

**CASING TECHNICAL DATA SHEET**  
**4.5 x 0.337 EPL80 GBCD**

Reviewed by: Sr. Quality Engineer  
 Approved by: Corporate Director-QEHS

TDS Date (MM/DD/YY)

1-20-25

**PIPE BODY DATA**

Nominal Outside Diameter  
 Nominal Wall Thickness  
 Remaining Body Wall (RBW)  
 Type of Thread  
 Grade  
 Coupling Type

Label Weight  
 Plain End Weight  
 Pipe Minimum Yield  
 Pipe Maximum Yield  
 Pipe Minimum Tensile  
 Standard Drift Diameter (min)  
 Alternate Drift Diameter (min)  
 Pipe Body Plain End Yield  
 Pipe Body Internal Yield  
 Collapse Pressure - Standard  
 Collapse Pressure - High

Unit	Imperial	Metric	Unit
in	4.500	114.30	mm
in	0.337	8.56	mm
	95.0%	95.0%	
	GBCD	GBCD	
	EPL80	EPL80	
	11th Edition	11th Edition	
	15.10	15.10	
lb/ft	15.00	22.32	kg/m
ksi	82	565	MPa
ksi	95	655	MPa
ksi	95	655	MPa
in	3.701	94.00	mm
in	N/A	N/A	mm
lb	361,000	163,750	kg
psi	11,670	80,460	kPa
psi	N/A	N/A	kPa
psi	11,990	82,670	kPa

**CONNECTION DATA**

Coupling Minimum Yield  
 Coupling Maximum Yield  
 Coupling Minimum Tensile  
 Coupling or Joint Outside Diameter (nom)  
 Coupling Thread Fracture Strength  
 Pipe Thread Fracture Strength  
 Pull Out Strength  
 Nominal Make-Up Torque or Make-up Torque Range  
 Coupling Internal Yield  
 Internal Yield of Joint

ksi	See Next Page	See Next Page	MPa
ksi	See Next Page	See Next Page	MPa
ksi	See Next Page	See Next Page	MPa
in	See Next Page	See Next Page	mm
lb	See Next Page	See Next Page	kg
lb	See Next Page	See Next Page	kg
lb	See Next Page	See Next Page	kg
ft-lb	See Next Page	See Next Page	N-m
psi	See Next Page	See Next Page	kPa
psi	See Next Page	See Next Page	kPa

**WELDED TUBE GENERAL INPUT CRITERIA**

Coupling Color Code  
 Coupling Color Code for the Band  
 Pipe Color Code Identification  
 Additional Color Band (approx.10' from box end)

2" Band(s)

Red
One Brown
One Red, One Brown
White

**Note:**

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**GB Connection Performance Properties Sheet**

Rev. 0 (07/01/2024)

ENGINEERING THE RIGHT CONNECTIONS

**Casing:** 4.5 OD, 15.1 ppf  
**Casing Grade\*\*:** WTC EP L80 (95% RBW)

**Connection:** GB CD Butt 5.250  
**Coupling Grade:** API L-80

**PIPE BODY GEOMETRY**

Nominal OD (in.)	4 1/2	Wall Thickness (in.)	0.337	Drift Diameter (in.)	3.701
Nominal Weight (ppf)	15.10	Nominal ID (in.)	3.826	API Alternate Drift Dia. (in.)	N/A
Plain End Weight (ppf)	15.00	Plain End Area (in. <sup>2</sup> )	4.407		

**PIPE BODY PERFORMANCE\*\***

Material Specification	WTC EP L80 (95% RBW)	Min. Yield Str. (psi)	82,000	Min. Ultimate Str. (psi)	95,000
<b>Collapse</b>		<b>Tension</b>		<b>Pressure</b>	
API (psi)	11,330	Pl. End Yield Str. (kips)	361	Min. Int. Yield Press. ** (psi)	11,670
High Collapse (psi)	-	<b>Torque</b>		<b>Bending</b>	
		Yield Torque (ft-lbs)	33,700	Build Rate to Yield (°/100 ft)	83.5

**GB CD Butt 5.250 COUPLING GEOMETRY**

Coupling OD (in.)	5.250	Makeup Loss (in.)	4.0625
Coupling Length (in.)	8.125	Critical Cross-Sect. (in. <sup>2</sup> )	6.570

**GB CD Butt 5.250 CONNECTION PERFORMANCE RATINGS/EFFICIENCIES**

Material Specification	API L-80	Min. Yield Str. (psi)	80,000	Min. Ultimate Str. (psi)	95,000
<b>Tension</b>		<b>Efficiency</b>		<b>Bending</b>	
Thread Str. (kips)	385	Internal Pressure (%)	100%	Build Rate to Yield (°/100 ft)	69.8
Min. Tension Yield (kips)	499	External Pressure (%)	100%	<b>Yield Torque</b>	
Min. Tension Ult. (kips)	593	Tension (%)	100%	Yield Torque (ft-lbs)	14,110
Joint Str. (kips)	385	Compression (%)	100%		
		Ratio of Areas (Cplg/Pipe)	1.49		

**MAKEUP TORQUE**

Min. MU Tq. (ft-lbs)	4,690	Max. MU Tq. (ft-lbs)	9,380	Running Tq. (ft-lbs)	See GBC RP
				Max. Operating Tq. (ft-lbs)*	13,400

Units: US Customary (lbm, in., °F, lbf)

1 kip = 1,000 lbs

\* See Running Procedure for description and limitations.

See attached: Notes for GB Connection Performance Properties.

GBC Running Procedure (GBC RP): [www.gbconnections.com/pdf/RP-GB-DWC-Connections.pdf](http://www.gbconnections.com/pdf/RP-GB-DWC-Connections.pdf)

Blanking Dimensions: [www.gbconnections.com/pdf/GB-DWC-Blanking-Dimensions.pdf](http://www.gbconnections.com/pdf/GB-DWC-Blanking-Dimensions.pdf)

Connection yield torque rating based on physical testing or extrapolation therefrom

\*\* Casing properties applicable to WTC EP L80 (95% RBW) grade with min. yield 82 ksi.

