



# DRILL PIPE PERFORMANCE DATA SHEET

IMPERIAL UNIT

Pipe Size & Weight: 3.50 15.50 lb/ft EU  
 Pipe Grade: G105  
 Range: 2  
 Tool Joint: 4.875 X 2.438 NC38

DRILL PIPE DIMENSIONS & MATERIALS				DRILL PIPE WEAR & MECHANICAL PERFORMANCES			
PIPE		New (Nominal)	API Premium	PIPE		NEW (Nominal)	API Premium
Pipe Outside Diameter (OD)	in	3.500	3.320	Internal Pressure Capacity	psi	30,308	27,710
Pipe Inside Diameter (ID)	in	2.602	2.602	Collapse Capacity	psi	30,194	26,049
Wall Thickness	in	0.449	0.359	Cross Sectional Area Pipe Body	in Sq	4.304	3.342
Calculated Plain End Weight	lbs/ft	14.625	11.355	Section Modulus	in Cu	2.923	2.239
Pipe Body Min Yield Strength	psi	105,000	105,000	Polar Section Modulus	in Cu	5.847	4.477
Tensile Strength	lbs	580,955	451,115	Tool Joint / Pipe Body Torsional Ratio		0.585	0.765
Torsional Strength	ft-lbs	38,000	29,063	Cross Sectional Area OD	in Sq	9.621	8.659
80% Torsional Strength	ft-lbs	30,400	23,250	Cross Sectional Area ID	in Sq	5.317	5.317
TOOL JOINT, 120 Ksi Material Yield Strength				DRILL PIPE ASSEMBLY			
Connection Type		NC38		Approx. Length	ft	31.50	
Material Yield Strength	ksi	120		Adjusted Weight	lbs/ft	17.65	
Outside Diameter (OD)	in	4.875		Drift Size	in	2.313	
Inside Diameter (ID)	in	2.438		Maximum Upset OD	in	3.875	
Pin Tong Length	in	11.000		Fluid Displacement	gal/ft	0.270	
Box Tong Length	in	12.500		Fluid Capacity	gal/ft	0.266	
Pin shoulder Angle	deg	35					
Tensile Strength	lbs	568,100					
Torsional Strength	ft-lbs	22,000					
Max. Make-Up Torque	ft-lbs	13,000					
Min. Make-up Torque	ft-lbs	11,000					
Balanced OD	in	4.846					

Premium properties are calculated based on uniform Outside Diameter and Wall Thickness  
 Torque performances are calculated with coefficient of friction factor , 0.08.  
 API recommends a torsional ratio of 0.8 or greater  
 The use of the information is based on the readers discretion. No warranty is implied or expressed by Tasman Oil Tools with the use of information contained herein.  
 The information contained in this Performance Data Sheet is subject to revision without notice.