



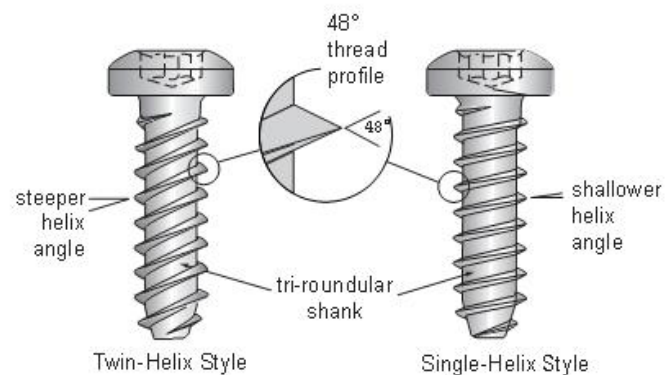
# PLASTITE® 48 THREAD-FORMING FASTENERS

## THREAD-FORMING FASTENERS

The Plastite® 48 fastener combines a unique tri-lobular body with a 48° thread profile to maximize performance and reliability. Two thread-forming styles are available to meet the specific requirements of a wide range of thermoplastics.

## FEATURES & BENEFITS

- ▶ Tri-roundular configuration allows displaced material to cold flow back into relief areas
- ▶ Minimizes radial stress
- ▶ Reduces possibility of boss failure
- ▶ Eliminates need for inserts and lock washers
- ▶ Allows design of thinner bosses
- ▶ 48° thread profile allows threads to penetrate deeply into plastic material
- ▶ Generates strong mating threads
- ▶ Resists vibration loosening
- ▶ Reduces probability of strip-out and pull-out
- ▶ Twin lead design and steep helix angle provides greater shear area in softer plastics (with a flexural modulus up to 850,000 p.s.i.)
- ▶ Increases holding power
- ▶ Allows faster seating of fastener
- ▶ Single lead design and narrow helix angle lowers drive torque and failure torque in stiffer thermoplastics (with flexural modules between 850,000 and 1,300,000 p.s.i.)
- ▶ Creates less stress on the boss



## SPECIFICATIONS

- ▶ Sizes: #00 -5/16"; other sizes may be available upon request
- ▶ Head Styles: Can be used with any external or internal head designs; pan, hex washer, and flat styles standard
- ▶ Drive System: Can use any system, including TORX PLUS® Drive
- ▶ Finish: As required

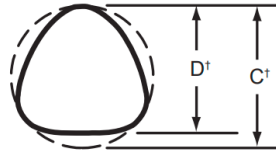
## APPLICATIONS

- ▶ Twin Helix Style: Thermoplastics with a flexural modulus up to 850,000 p.s.i.
- ▶ Single Helix Style: Thermoplastics with a flexural modulus between 850,000 p.s.i. and 1,400,000 p.s.i.





**DIMENSIONAL DATA**



† C dimension measured with Tri-Flute Micrometer  
D diameter measured with Standard Micrometer

**Inch Sizes**

NOM. SIZE	THREAD PITCH (PER INCH)	C DIMENSION MAX-MIN (IN.)	D DIMENSION MAX-MIN (IN.)	SCREW LENGTH TOLERANCE	
				UNDER 3/4" (IN.)	OVER 3/4" (IN.)
#00	51	.0496 - .0466	.0475 - .0445	±0.15	±0.15
#0	42	.0665 - .0635	.0635 - .0605	±0.15	±0.15
#1	32	.081 - .078	.078 - .075	±0.30	±0.30
#2	28	.092 - .086	.089 - .083	±0.30	±0.30
#3	24	.110 - .104	.106 - .100	±0.30	±0.30
#4	20	.127 - .121	.123 - .117	±0.30	±0.50
#6	19	.147 - .141	.143 - .137	±0.30	±0.50
#7	18	.166 - .160	.160 - .154	±0.30	±0.50
#8	16	.185 - .179	.179 - .173	±0.30	±0.50
#9	15	.199 - .193	.193 - .187	±0.30	±0.50
#10	14	.212 - .206	.208 - .202	±0.30	±0.50
#12	14	.232 - .226	.226 - .220	±0.30	±0.50
1/4"	10	.276 - .270	.268 - .262	±0.50	±0.50
5/16"	9	.345 - .335	.335 - .325	±0.50	±0.50

**Metric Sizes**

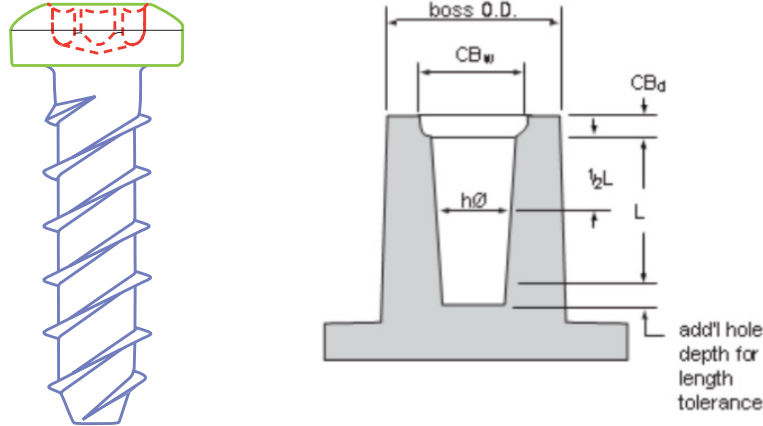
NOM. SIZE	THREAD PITCH	C DIMENSION MAX-MIN (IN.)	D DIMENSION MAX-MIN (IN.)	SCREW LENGTH TOLERANCE	
				UNDER 3/4" (IN.)	OVER 3/4" (IN.)
1.12	0.50	1.26 - 1.18	1.21 - 1.13	±0.38	±0.38
1.59	0.60	1.69 - 1.61	1.61 - 1.54	±0.38	±0.38
1.91	0.79	2.06 - 1.98	1.98 - 1.91	±0.76	±0.76
2.26	0.91	2.34 - 2.18	2.26 - 2.11	±0.76	±0.76
2.63	1.06	2.79 - 2.64	2.69 - 2.54	±0.76	±0.76
3.12	1.27	3.23 - 3.07	3.12 - 2.97	±0.76	±1.27
3.63	1.34	3.73 - 3.58	3.63 - 3.48	±0.76	±1.27
4.06	1.41	4.22 - 4.06	4.06 - 3.91	±0.76	±1.27
4.55	1.59	4.70 - 4.55	4.55 - 4.39	±0.76	±1.27
4.90	1.69	5.05 - 4.90	4.90 - 4.75	±0.76	±1.27
5.28	1.81	5.38 - 5.23	5.28 - 5.13	±0.76	±1.27
5.74	1.81	5.89 - 5.74	5.74 - 5.59	±0.76	±1.27
6.81	2.54	7.01 - 6.86	6.81 - 6.65	±1.27	±1.27
8.51	2.82	8.76 - 8.51	8.51 - 8.26	±1.27	±1.27

Plastite 48® fasteners are not available in true metric sizes. The chart above provides nominal inch dimensions converted to millimeters.



**HOLE SIZES PER PERCENTAGE OF THREAD ENGAGEMENT**

The length of engagement (L) should be 2 to 3 times the fastener's C dimension. Testing should be done to determine optimal thread engagement on any application with a lower length of engagement.



**Plastite 48**

	100%		90%		80%		70%		60%	
SIZE	IN.	MM	IN.	MM	IN.	MM	MM	IN.	MM	IN.
#00-51	.0377	0.957	.0386	0.980	.0395	1.003	.0404	1.026	.0413	1.049
#0-42	.0498	1.265	.0510	1.295	.0523	1.328	.0535	1.359	.0548	1.392
#1-32	.0621	1.577	.0632	1.605	2.48	1.641	.0658	1.671	.0671	1.704
#2-28	.0743	1.887	.0757	1.923	2.90	1.958	.0785	1.994	.0799	2.029
#3-24	.0855	2.172	.0873	2.217	3.31	2.261	.0908	2.306	.0925	2.350
#4-20	.0970	2.464	.1000	2.540	4.13	2.591	.1050	2.667	.1070	2.718
#6-19	.1180	2.997	.1200	3.048	4.96	3.124	.1250	3.175	.1280	3.251
#7-18	.1370	3.480	.1390	3.531	5.78	3.607	.1440	3.657	.1460	3.708
#8-16	.1440	3.658	.1480	3.759	6.61	3.835	.1550	3.937	.1580	4.013
#9-15	.1570	3.988	.1590	4.039	6.23	4.089	.1640	4.166	.1660	4.216
#10-14	.1700	4.318	.1740	4.420	.1770	4.496	.1810	4.597	.1850	4.699
#12-14	.1880	4.775	.1920	4.877	.1960	4.978	.1990	5.055	.2030	5.156
1/4"-10	.2180	5.537	.2230	5.664	.2280	5.791	.2330	5.918	.2380	6.045
5/16"-9	.2840	7.214	.2910	7.391	.2980	7.569	.3050	7.747	.3110	7.899