



## PLASTIC SHIM COMPRESSION TEST

The below listed shims were loaded in Compression until permanent deformation occurred with results as follows \*\*:

Part Number	Dimensions – Inches	Color	Piece # 1 LBS / shim	Piece # 2 LBS / shim
402-1 x 1/16	1-1/2 x 2 x 1/16	Blue	28,000	31,000
402-1 x 1/8	1-1/2 x 2 x 1/8	Red	21,000	21,000
402-1 x 1/4	1-1/2 x 2 x 1/4	Black	9,500	10,000
402-2 x 1/16	2-5/16 x 3 x 1/16	Blue	50,000	50,000
402-2 x 1/8	2-5/16 x 3 x 1/8	Red	40,000	42,000
402-2 x 1/4	2-5/16 x 3 x 1/4	Black	20,000	20,000
402-3 x 1/16	1-1/2 x 3-1/2 x 1/16	Blue	50,000	50,000
402-3 x 1/8	1-1/2 x 3-1/2 x 1/8	Red	25,000	23,000
402-3 x 1/4	1-1/2 x 3-1/2 x 1/4	Black	12,000	12,000
402-3 x 3/8	1-1/2 x 3-1/2 x 3/8	White	14,000	15,000
402-4 x 1/16	1-7/8 x 2-5/8 x 1/16	Blue	33,000	34,000
402-4 x 1/8	1-7/8 x 2-5/8 x 1/8	Red	22,000	21,500
402-4 x 1/4	1-7/8 x 2-5/8 x 1/4	Black	15,000	15,000
402-6 x 1/32	3 x 4 x 1/32	Green	125,000	125,000
402-6 x 1/16	3 x 4 x 1/16	Blue	85,000	80,000
402-6 x 1/8	3 x 4 x 1/8	Red	55,000	55,000
402-6 x 3/8	3 x 4 x 1/4	Black	40,000	42,000
402-6 x 1/4	3 x 4 x 3/8	White	40,000	40,000
402-6 x 1/2	3 x 4 x 1/2	Brown	30,000	30,000
402-6W x 1/4	3 x 4 x 1/4 to 1/16	Tan	100,000	100,000
444-1 x 1/4	1-1/2 x 3-3/8 x 1/4 to 1/32	Black	25,000	25,000
444-2 x 3/8	1-1/2 x 6 x 3/8 to 1/32	Black	50,000	50,000
444-3 x 1/4	1-1/2 x 8 x 1/4 to 1/16	Black	75,000	75,000
424-1 x 1/16	1-7/8 x 3-1/8 x 1/16	Black	115,000	110,000
424-2 x 1/16	1-7/8 x 3-5/8 x 1/16	Black	130,000	130,000
424-3 x 1/16	1-7/8 x 5-1/8 x 1/16	Black	140,000	145,000
424-1 x 1/32	1-7/8 x 3-1/8 x 1/32	Black	135,000	135,000
460-2 x 2 x 1/16	2 x 2 x 1/16	Black	95,000	95,000
460-2 x 2 x 1/8	2 x 2 x 1/8	Black	60,000	62,500
460-2 x 2 x 1/4	2 x 2 x 1/4	Black	45,000	45,000
460-2 x 4 x 1/16	2 x 4 x 1/16	Black	90,000	91,000
460-2 x 4 x 1/8	2 x 4 x 1/8	Green	75,000	75,000
460-2 x 4 x 1/4	2 x 4 x 1/4	Black	30,000	30,000
460-3 x 3 x 1/16	3 x 3 x 1/16	Black	75,000	80,000
460-3 x 3 x 1/8	3 x 3 x 1/8	Black	60,000	62,000
460-3 x 3 x 1/4	3 x 3 x 1/4	Grey	45,000	40,000

\*\* NOTE: These measurements do not represent mill certifications. They are tests done on individual samples of one specific production run. Fabricator and/or installer should determine acceptable workloads. These measurements should be used for reference only. Horseshoe shim material is polypropylene. Other materials vary (High Impact Poly Styrene or Glass Filled ABS)

## MATERIAL PROPERTIES

	Method	Polypropylene	High Impact Polystyrene
Tensile strength at break, p.s.i.	D638 <sup>b</sup>	4500-6000	5200-7500
Elongation at break, %	D638 <sup>b</sup>	100-600	1.2-2.5
Tensile yield strength, p.s.i.	D638 <sup>b</sup>	4500-5400	
Comprehensive strength (rupture or yield), p.s.i.	D695	5500-8000	6000-8000
Flexural strength (rupture or yield), p.s.i.	D790	6000-8000	10,000-14,600
Tensile modules, 10 <sup>3</sup> , p.s.i.	D638 <sup>b</sup>	165-225	330-475
Comprehensive modules, 10 <sup>3</sup> , p.s.i.	D695	150-300	480-490
Flexural modulus, 10 <sup>3</sup> , p.s.i.	73°F D790 200°F D790 250°F D790 300°F D790	170-250 50 35	380-490
Izod impact, ft-lb/in of notch (1/8" thick specimen)	D256A	0.4-1.2	0.35-0.45
Hardness Rockwell Shire/Barcol	D785	R80-102 D2240/D2583	M60-75