



To: Grove Products
17 Marguerite Ave
P O Box 240
Leominster, MA 01453

Date: 3-30-2022
Job No: 41039697
Lab No: Auburn
Order No: 5065200S

Material: SHIMS
Specifications: Customer P O
31122jk

Attn:

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Compression Test

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

DIMENSIONS	TYPE	MATERIAL	COLOR	PIECE #1 LBS	PIECE #2 LBS
1/16 x 1 7/8 x 3 1/8	short stack	hips	black	120,000	120,000
1/16 x 1 7/8 x 3 5/8	regular stack	mips	black	125,000	124,000
1/16 x 1 7/8 x 4 1/8	xl stack	hips	black	130,000	130,000
1/16 x 1 7/8 x 5 1/8	giant stack	hips	black	145,000	145,500
1/32 x 1 7/8 x 3 1/8	mini stack	hips	green	135,000	135,000
1/16 x 1 1/2 x 2	horseshoe	hips	blue	50,000	50,000
1/8 x 1 1/2 x 2	horseshoe	hips	red	24,000	26,000
3/16 x 1 1/2 x 2	horseshoe	hips	orange	20,000	20,000
1/4 x 1 1/2 x 2	horseshoe	polypropylene	black	13,000	13,000
3/8 x 1 1/2 x 2	horseshoe	abs	white	10,000	12,000
1/2 x 1 1/2 x 2	horseshoe	abs	brown	15,000	12,000
1/32 x 1 1/2 x 3 1/2	horseshoe	abs	green	147,000	145,000
1/16 x 1 1/2 x 3 1/2	horseshoe	hips	blue	50,000	50,000
1/8 x 1 1/2 x 3 1/2	horseshoe	polypropylene	red	50,000	50,000
3/16 x 1 1/2 x 3 1/2	horseshoe	hips	orange	25,000	25,000
1/4 x 1 1/2 x 3 1/2	horseshoe	hips	black	25,000	25,000
3/8 x 1 1/2 x 3 1/2	horseshoe	abs	white	20,000	22,000
1/2 x 1 1/2 x 3 1/2	horseshoe	polypropylene	brown	12,000	12,000
1/16 x 1 7/8 x 2 5/8	horseshoe	hips	blue	50,000	50,000
1/8 x 1 7/8 x 2 5/8	horseshoe	polypropylene	red	40,000	40,000
1/4 x 1 7/8 x 2 5/8	horseshoe	abs	black	24,000	24,000
1/16 x 2 5/16 x 3	horseshoe	hips	blue	62,000	60,000
1/8 x 2 5/16 x 3	horseshoe	polypropylene	red	40,000	40,000
1/4 x 2 5/16 x 3	horseshoe	polypropylene	black	24,000	24,000
3/8 x 2 5/16 x 3	horseshoe	polypropylene	white	16,000	17,000
1/32 x 1/4 x 1 1/2 x 3 3/8	small tapered wedge	polypropylene	black	26,000	26,000
1/32 x 3/8 x 1 1/2 x 6	large tapered wedge	abs	gray	40,000	40,000
1/16 x 1/4 x 1 1/2 x 8	8" solid wedge	abs	black	51,000	52,000
1/4 x 1/16 x 1 7/16 x 3 1/4	snap apart wedge	abs	white	15,000	14,000
3/4 x 5/16 x 2 x 4	tw-24 wedge	hips	gray	50,000	50,000
1/16 x 3 x 3 1/2	keyslot	hips	blue	56,000	56,500
1/8 x 3 x 3 1/2	keyslot	hips	red	50,000	50,500
1/4 x 3 x 3 1/2	keyslot	hips	black	31,000	31,000
1/32 x 3 x 4	horseshoe	polypropylene	green	30,000	32,000
1/16 x 3 x 4	horseshoe	polypropylene	blue	50,000	48,000
1/8 x 3 x 4	horseshoe	hips	brown	22,500	23,000



3/16 x 3 x 4	horseshoe	hips	orange	20,000	20,000
1/4 x 3 x 4	horseshoe	hips	black	24,000	25,000
3/8 x 3 x 4	horseshoe	abs	white	32,000	32,500
1/2 x 3 x 4	horseshoe	polypropylene	brown	15,500	16,500
5/8 x 3 x 4	horseshoe	abs	purple	40,000	40,500
3/4 x 3 x 4	horseshoe	hips	blue	20,000	20,000
1/16 x 2 x 2	flat	abs	black	40,000	41,500
1/8 x 2 x 2	flat	abs	black	50,000	49,500
1/4 x 2 x 2	flat	hips	black	45,000	45,000
3/8 x 2 x 2	flat	abs	white	16,000	16,000
1/2 x 2 x 2	flat	hips	brown	20,000	21,000
1/16 x 2 x 4	flat	hips	black	40,000	40,000
1/8 x 2 x 4	flat	abs	black	50,000	52,000
1/4 x 2 x 4	flat	abs	gray	35,000	35,000
3/8 x 2 x 4	flat	abs	white	25,000	25,000
1/2 x 2 x 4	flat	hips	brown	22,500	23,000
1/16 x 3 x 3	flat	hips	black	75,000	77,500
1/8 x 3 x 3	flat	abs	black	60,000	60,000
1/4 x 3 x 3	flat	hips	black	18,000	20,000
3/8 x 3 x 3	flat	abs	white	35,000	34,500
1/2 x 3 x 3	flat	abs	brown	36,000	36,500
1/16 x 3 x 4	flat	hips	black	63,000	65,000
1/8 x 3 x 4	flat	hips	black	50,000	50,000
1/4 x 3 x 4	flat	hips	black	18,000	18,000
3/8 x 3 x 4	flat	abs	white	25,000	25,000
1/2 x 3 x 4	flat	hips	brown	20,000	19,500
1/16 x 4 x 4	flat	hips	black	150,000	150,000
1/8 x 4 x 4	flat	hips	black	50,000	50,000
1/4 x 4 x 4	flat	hips	black	100,000	100,000
3/8 x 4 x 4	flat	abs	white	30,000	30,000
1/2 x 4 x 4	flat	hips	brown	20,000	20,000
1/16 x 8 x 8	flat	hips	black	200,000	20,000
1/16 x 8 x 8	flat	abs	black	200,000	200,000
1/4 x 8 x 8	flat	abs	black	100,000	100,000
1/2 x 8 x 8	flat	hips	black	200,000	20,000
1/2 x 10 x 10	flat	abs	black	200,000	20,000
1/16 x 2 x 6	flat	hips	black	200,000	200,000
1/8 x 2 x 6	flat	abs	black	200,000	20,000
1/4 x 2 x 6	flat	abs	black	75,000	75,000
1/16 x 3 x 6	flat	hips	black	50,000	51,000
1/32 x 4 x 6	scored	hips	green	125,000	125,000
1/16 x 4 x 6	scored	hips	black	100,000	100,000
1/8 x 4 x 6	scored	abs	black	125,000	126,000
1/4 x 4 x 6	scored	abs	black	75,000	75,000
1/8 x 4 x 6	flat	hips	black	200,000	200,000
1/4 x 4 x 6	flat	abs	black	100,000	101,000
3/8 X 4 X 6	flat	hips	white	30,000	28,500
1/2 x 4 x 6	flat	hips	Brown	35,000	40,000
1/16 x 4 x 6	microgrid	hips	yellow	25,000	25,000





1/8 x 4 x 6	microgrid	hips	red	20,000	19,000
1/4 x 4 x 6	microgrid	abs	black	25,000	25,000
1/2 x 4 x 6	microgrid	hips	brown	62,500	63,000
1/16 x 4 x 6 w3/4 slot	horseshoe	hips	blue	70,000	71,000
1/8 x 4 x 6 w3/4 slot	horseshoe	hips	red	65,000	65,000
1/4 x 4 x 6 w3/4 slot	horseshoe	abs	black	26,000	30,000
3/8 x 4 x 6 w3/4 slot	horseshoe	hips	white	25,000	25,000
1/2 x 4 x 6 w3/4 slot	horseshoe	abs	brown	65,000	65,000
1/16 x 6 x 6	flat	hips	black	200,000	20,000
1/8 x 6 x 6	flat	abs	black	150,000	150,000
1/4 x 6 x 6	flat	abs	black	100,000	100,000
3/8 x 6 x 6	flat	abs	black	75,000	75,000
3/8 x 6 x 6	flat	hips	white	50,000	51,000
1/16 x 4 x 6	raised ribbed	hips	yellow	25,000	25,000
1/8 x 4 x 6	raised ribbed	hips	gray	30,000	30,000
1/4 x 4 x 6	raised ribbed	abs	black	50,000	50,000
spreader		hips	yellow	50,000	50,000

In witness whereof, I have hereunto set my hand this
30TH Day of March, 2022

Mistras Services

Bill Davis, Mech. Test Technician