



Monroe Rubber & Plastic, Inc.

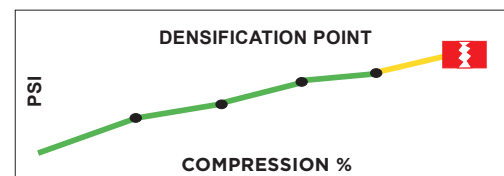
# FUNCTIONAL RANGE OF MOTION

The only moving parts on a cutting die are the ejection materials.

LOWEST PSI AT COMPRESSION

HIGHEST PSI AT COMPRESSION

Products	Firmness	Typical Application		Compression/Deflection Force (PSI) at Various Percentages of Compression										Shore Value* For Reference Only	
		Rotary	Flat	10%	20%	25%	30%	40%	50%	60%	70%	80%	90%	00	A
KRUSE™	Xtra Soft	✓	✓	4	5	5.4	5.9	7.2	9.3	13.6	25	65		45-55	5-15
MR 50	Xtra Soft	✓		6	8.5	9	9.6	11.5	15	22.5	43.5	120		55-65	10-20
10000	Soft	✓	✓	7	9.6	10.5	11.5	13.8	17.6	25.6	47.4	132		65-75	15-25
12000	Soft	✓	✓	8	11.5	13	14.4	18	23.5	36.5	77.5	190		60-70	15-25
MR 1100	Medium	✓	✓	10.2	15	16.8	18.4	22.5	29	44.5	82	205		65-75	15-25
22000	Medium	✓	✓	11.3	16	17.8	19.5	24	31	46.3	90.4	220		65-75	15-25
Super Strip - 27	Medium	✓	✓	14.5	20.5	22.4	24.3	28.9	36	51.2	92.4			65-75	15-25
MR 24	Medium	✓		13.6	20.3	22.7	25	32.2	44	77	191			70-80	20-30
Red Rhino™	Medium	✓	✓	15.5	23	25.2	27.6	33	41.5	60	114	250		70-80	20-30
MR 35	Firm	✓	✓	19.5	29.8	33	36	43.3	55	80.5	155			75-85	25-35
MR 75	Firm		✓	22.4	33	36.2	39.5	47.7	61	113.5	165			70-80	20-30
MR 40	Firm	✓	✓	25.7	40	44.7	49.3	60.6	95	125	225			75-85	25-35
Green G'rilla™	Firm		✓	31	49.4	56	62	78.2	106.4	166	291			80-90	35-45
BK-85	Firm	✓	✓	32.4	52.5	59.5	66	82.8	110.5	167	300			80-90	35-45
Super Strip - 45 (std.)	Xtra Firm	✓	✓	39.5	59.7	66.2	72.5	86.8	110	154.2	267			80-90	35-45
Super Strip - 65	Xtra Firm	✓	✓	63.4	106.8	122.7	137.9	173.8	232.7					85-95	45-55
13500 Cork	Xtra Firm		✓	60.9	99.2	119.9	145.3	225.9						-	-



As with any moving mechanical or compressible part, there is a maximum functional range of motion. Once that range is exceeded, the item no longer functions properly, which will lead to failure.

This chart shows each product's maximum functional range of motion in green. Once the functional range is exceeded, it enters the yellow densification point, where the rubber becomes solid and can no longer compress. Go beyond this point, and the rubber will fail, breaking apart. For the ejection rubber to work properly, it must remain within the green.

**\*Durometer shore** is the measure of the hardness of a material's surface. Since it only measures a small point of the material surface with limited penetration, the test method is less accurate in determining ejector performance. Our focus is on "Performance"! Compression Force Deflection, measured in pounds per square inch (PSI), is the accurate test method to measure material firmness at varying compressive levels—a true representation of performance as an ejector in an application.

Simplifying the complex science of die ejection.

Monroe Rubber & Plastic, Inc. | monroerubber.com | 800.521.0109

revision date: 11-28-23

See reverse side for part numbers and colors.

Learn More About Functional Range of Motion



## MONROE RUBBER & PLASTIC – COLOR OPTIONS

The below x's indicate products readily available. All products can be manufactured in any of the below colors but will require a minimum quantity commitment for each order and a slightly longer lead time.

Product Line	White	Black	Gray	Red	Tan	Orange	Blue	Brick Red	Green	Dark Green
KRUSE™		x	x							
MR 50	x	x		x			x			
10000		x	x	x	x	x	x			
12000		x	x	x	x	x	x			
MR 1100		x								
22000	x	x	x	x	x	x	x		x	
MR 24		x								
Red Rhino™		x		x			x			
MR 35									x	
MR 75						x	x	x		
MR 40	x					x	x			
Green G'rilla™										x
BK 85	x	x					x			

### PRODUCT COLORS - PART NUMBERS

#### Stripper Foam

■ Blk - 7100

#### KRUSE™

■ Blk - MRK100  
■ Gry - MRK300

#### MR 50

□ Wht - MR50000  
■ Blk - MR50100  
■ Red - MR50500  
■ Blue - MR50900

#### 10000

■ Blk - 10100  
■ Gry - 10300  
■ Red - 10500  
■ Tan - 10700  
■ Or - 10800  
■ Blu - 10900

#### 12000

■ Blk - 12100  
■ Gry - 12300  
■ Red - 12500  
■ Tan - 12700  
■ Or - 12800  
■ Blu - 12900

#### MR 1100

■ Blk - 27100

#### 22000

□ Wht - 22000  
■ Blk - 22100  
■ Gry - 22300  
■ Red - 22500  
■ Tan - 22700  
■ Or - 22800  
■ Blu - 22900  
■ Grn - 22G00

#### MR 24

■ Blk - MR24100

#### Red Rhino™

■ Blk - 24100  
■ Red - 26500  
■ Blu - 26900

#### MR 35

■ Grn - 35600

#### MR 75

■ Or - MR75800  
■ Blu - MR75900  
■ Brk Red - MR7500

#### MR 40

□ Wht - 27000  
■ Or - 27800  
■ Blu - 27900

#### Green G'rilla™

■ Drk Grn - MR26600

#### BK-85

□ Wht - MR26000  
■ Blk - MR26100  
■ Blu - MR26900

#### Super Strip 27-65 Density

□ Wht 27 - 42000  
□ Wht 45 - 40000  
□ Wht 65 - RG000

#### 13500 Cork

■ Cork - 13500



**Monroe Rubber & Plastic, Inc.**

An employee owned and  
operated company.

### The Science of Die Ejection

**Our only focus:** Engineering, manufacturing and  
supplying die ejection materials.

*No one else can say that.*

**Product names and part numbers do not reference durometer values. Please  
refer to our website ([monroerubber.com](http://monroerubber.com)) for further technical information  
including our Functional Range of Motion chart and calculator.**