

FORMATHANE®



Anchor Danly
The Brands You Trust



TABLE OF CONTENTS

PAGE NUMBER

| | |
|--------------------------------------|----|
| General Information | 2 |
| Physical Properties | 3 |
| Die-Cover Film | 4 |
| Light Duty Springs & Tube Stock | 5 |
| Medium Duty Springs & Tube Stock | 6 |
| Heavy Duty Springs | 7 |
| Precision-Cast Sheets, Slabs & Discs | 8 |
| Precision-Cast Bars, Blocks & Rods | 10 |
| Headed NAAMS Strippers | 12 |
| Closed End Strippers | 14 |
| Metric Sizes | 15 |
| Automotive Metric Springs | 16 |

General Information



We are proud to offer the latest achievement in urethane engineering: FORMATHANE - a special family of superior urethane compounds formulated to withstand the rigors of the metalforming and fabricating operating environment.

They are cast in industry-familiar shapes and sizes, and are available in the most popular durometers (hardnesses).

FORMATHANE products are manufactured by C.U.E., Inc., USA. C.U.E., Inc. is ISO 9001 certified and one of the world leaders in cast urethanes with over 40 years of experience.

C.U.E., Inc. is proud to offer its FORMATHANE products to the Metal Stamping and Metal Fabricating industries exclusively through us.



What is FORMATHANE?

FORMATHANE is a high-quality line of advanced urethane compounds and products, chemically engineered for the metalforming and fabricating industry.

What makes FORMATHANE more than just another urethane?

First, the knowledge and experience that we have gained through our business life has been directed into FORMATHANE. Next, FORMATHANE starts with the finest raw materials, then processes them using state-of-the-art casting equipment to produce urethane compounds with consistent physical and dynamic properties.

The result

FORMATHANE compounds offer the ultimate in tensile strength, abrasion and tear resistance, load-bearing capabilities, and compression-set properties.

■ **DIE COVER FILM** ■ **SHEETS** ■ **BARS** ■
■ **RODS** ■ **STRIPPERS** ■ **SPRINGS** ■

Custom Molding

When you need a specialized FORMATHANE part, contact us.

Availability

- Many options – to cover all applications.
- Quick delivery – most are stocked for shipment in one or two days.

FORMATHANE® is a trademark of C.U.E., Inc.

Physical Properties

| Property | ASTM Test Method | Compound | | | |
|---------------------------|------------------|------------|------------|------------|------------|
| | | PO-670 | PO-650 | CU-290 | PO-652 |
| Color | | Black | Red | Yellow | Tan |
| Hardness Shore A | D 2240 | 70 | 85 | 90 | 95 |
| Ultimate Tensile Strength | D 412 | 5000 psi | 6000 psi | 6500 psi | 5800 psi |
| Elongation at Break | D 412 | 550% | 600% | 475% | 525% |
| 100% Modulus | D 412 | 450 psi | 750 psi | 1100 psi | 1450 psi |
| 300% Modulus | D 412 | 900 psi | 1700 psi | 2200 psi | 2500 psi |
| Tear Strength, Split | D 470 | 55 lb/in. | 120 lb/in. | 110 lb/in. | 150 lb/in. |
| Tear Strength, Die C | D 624 | 325 lb/in. | 500lb/in. | 500 lb/in. | 600lb/in. |
| Compression Modulus, 5% | D 575 | 50 psi | 130 psi | 150 psi | 180 psi |
| Compression Modulus, 10% | D 575 | 110 psi | 280 psi | 350 psi | 450 psi |
| Compression Modulus, 15% | D 575 | 170 psi | 400 psi | 475 psi | 660 psi |
| Compression Modulus, 20% | D 575 | 250 psi | 530 psi | 700 psi | 920 psi |
| Compression Modulus, 25% | D 575 | 340 psi | 750 psi | 1000 psi | 1330 psi |
| Specific Gravity at 75° F | D 792 | 1.244 | 1.248 | 1.251 | 1.259 |
| Resilience (rebound) | D 2632 | 26.2% | 42.6% | 39.4% | 45.4% |
| NBS Abrasion Index | D 1630 | 205 | 250 | 140 | 385 |

Physical property data is based on standard laboratory tests and conditions and, therefore, does not necessarily duplicate real-world conditions. Data are not intended to and do not create any warranties, either expressed or implied. Potential users should perform independent testing to determine the suitability of materials for their intended application.

FORMATHANE Compounds ± 5 A Tolerance

PO-670 BLACK

- ◆ 70 A Durometer (soft)
- ◆ 35% recommended deflection
- ◆ A very low load-bearing capacity compound with a high tensile strength
- ◆ A popular material for low-impact applications

PO-650 RED

- ◆ 85 A Durometer (medium hard)
- ◆ 30% recommended deflection
- ◆ A medium load-bearing capacity compound suitable for light-gauge metals
- ◆ High abrasion and wear characteristics ideal for forming pads and wear pads

CU-290 YELLOW

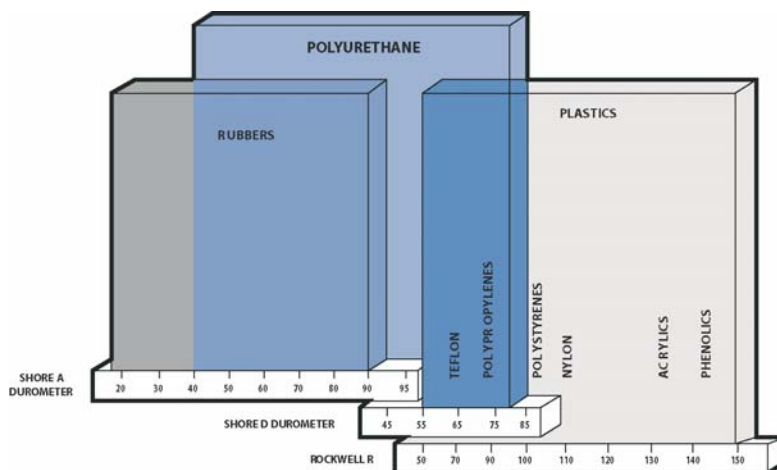
- ◆ 90 A Durometer (hard)
- ◆ 25% recommended deflection
- ◆ A high load-bearing capacity compound with a medium tear strength and cut resistance
- ◆ Recommended for medium-gauge metals

PO-652 TAN

- ◆ 95 A Durometer (very hard)
- ◆ 15% recommended deflection
- ◆ A very high load-bearing capacity compound with high tear strength and cut resistance
- ◆ Ideal for springs, strippers and all general metalforming operations

Hardness Scales

DUROMETER COMPARISONS OF MATERIALS



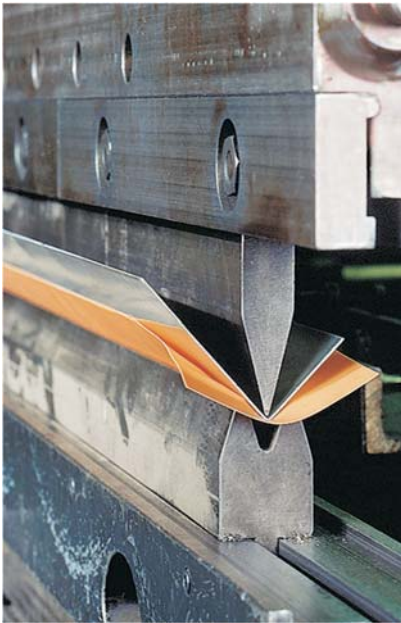
ORDERING DIFFERENT DUROMETERS

Standard part numbers in this catalog represent 95 A Tan, unless otherwise specified. To order other durometers, you must specify the first letter of the product color after the part number.

EXAMPLE: If you want an 85A Red durometer spring, you will add an "R" to the end of the part number ML316-100R.

70 A Durometer Black = B 90 A Durometer Yellow = Y
85 A Durometer Red = R 95 A Durometer Tan is standard

Die-Cover Film



Ideal for your press-brake forming application.

With FORMATHANE Die-Cover Film, you can form decorative and pre-painted metals without die marks while using your existing metal dies. Join the many metal fabricators who have improved their productivity by reducing or eliminating the refinishing work required to remove die marks.



Note the die marks on the bottom angle formed with steel dies, compared to the unblemished top angle, formed with the same dies and FORMATHANE Die-Cover Film.

| Size | .020" Thickness Part Number | .031" Thickness Part Number |
|-------------------|-----------------------------|-----------------------------|
| 4" on 50' rolls | DCF04-050652 | DCF04-050652031 |
| 4" on 100' rolls | DCF04-100652 | DCF04-100652031 |
| 6" on 50' rolls | DCF06-050652 | DCF06-050652031 |
| 6" on 100' rolls | DCF06-100652 | DCF06-100652031 |
| 8" on 100' rolls | DCF08-100652 | DCF08-100652031 |
| 12" on 100' rolls | DCF12-100652 | DCF12-100652031 |
| 36" on 10' | DCF36-010652 | DCF36-652031 |

How does it work?

This film acts as a buffer between the sharp edges of the die and the polished or pre-painted metal piece being formed, protecting this metal from die marks. Simply cover the lower metal die with our FORMATHANE die cover film.

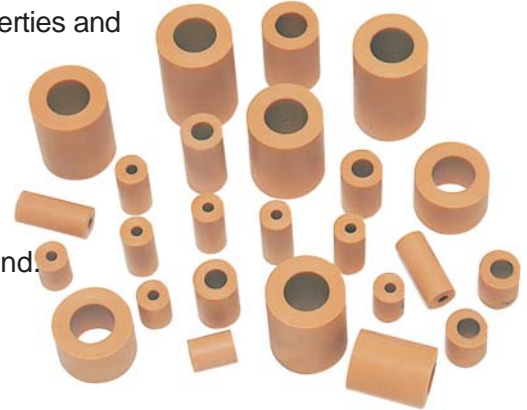
Hit after hit... you won't find a tougher, longer-lasting die cover film!

"I use this die-cover film to eliminate tool marks on a decorative polished aluminum job. I have hit over 50,000 parts on a single piece of your film." (90° bend; 0.187" thick)

Light Duty Springs & Tube Stock

The use of urethane springs in stamping and punching dies is not new to the metal fabricating industry. However, the unique physical properties and quality engineered into our FORMATHANE springs, tubes and strippers is new. We encourage you to compare... and put FORMATHANE to the test.

- Springs and strippers are stocked in our 95 Shore 'A' durometer compound.
- Tubes are available in any standard FORMATHANE compound.



FORMATHANE Light Duty Springs

| Fits Punch Dia. | Outside Dia. | Length | 95 A TAN Part Number | Pounds Required to deflect | | | Bulge at 1/2" |
|-----------------|--------------|--------|----------------------|----------------------------|------|------|---------------|
| | | | | 1/8" | 1/4" | 1/2" | |
| 3/16" | 11/16" | 1" | ML316-100 | 225 | 398 | 1234 | 0.35 |
| | | 1-1/4" | ML316-125 | 219 | 375 | 1036 | 0.25 |
| | | 1-1/2" | ML316-150 | 215 | 359 | 904 | 0.20 |
| | | 12" | ML316-12L | - | - | - | - |
| 1/4" | 3/4" | 1" | ML104-100 | 240 | 447 | 1101 | 0.41 |
| | | 1-1/4" | ML104-125 | 224 | 410 | 975 | 0.30 |
| | | 1-1/2" | ML104-150 | 208 | 367 | 790 | 0.24 |
| | | 1-3/4" | ML104-175 | 195 | 344 | 703 | 0.23 |
| | | 12" | ML104-12L | - | - | - | - |
| 5/16" | 13/16" | 1" | ML516-100 | 288 | 491 | 1189 | 0.42 |
| | | 1-1/4" | ML516-125 | 264 | 448 | 1037 | 0.31 |
| | | 1-1/2" | ML516-150 | 248 | 419 | 936 | 0.24 |
| | | 1-3/4" | ML516-175 | 237 | 398 | 863 | 0.19 |
| | | 2" | ML516-200 | 228 | 383 | 809 | 0.15 |
| | | 12" | ML516-12L | - | - | - | - |
| 3/8" | 7/8" | 1" | ML308-100 | 293 | 495 | 1027 | 0.26 |
| | | 1-1/4" | ML308-125 | 272 | 457 | 957 | 0.22 |
| | | 1-1/2" | ML308-150 | 258 | 431 | 910 | 0.20 |
| | | 1-3/4" | ML308-175 | 248 | 413 | 876 | 0.18 |
| | | 2" | ML308-200 | 240 | 399 | 851 | 0.17 |
| | | 12" | ML308-12L | - | - | - | - |
| 1/2" | 1" | 1" | ML102-100 | 340 | 567 | 1143 | 0.41 |
| | | 1-1/4" | ML102-125 | 279 | 478 | 1025 | 0.39 |
| | | 1-1/2" | ML102-150 | 239 | 418 | 946 | 0.37 |
| | | 1-3/4" | ML102-175 | 231 | 397 | 878 | 0.24 |
| | | 2" | ML102-200 | 213 | 369 | 834 | 0.21 |
| | | 12" | ML102-12L | - | - | - | - |
| | | 24" | ML102-24L | - | - | - | - |

Tolerances:

Outside Diameters 11/16" - 1/2" ± 0.015"

1-5/8" - 2-3/4" ± 0.020"

Inside Diameters 3/16" - 1-1/2" - 0.005" / - 0.020"

Length (All) +0.015" / + 0.046"

NOTE: Please refer to the durometer/color/ordering information on page 3.

| Fits Punch Dia. | Outside Dia. | Length | 95 A TAN Part Number | Pounds Required to deflect | | | Bulge at 1/2" |
|-----------------|--------------|--------|----------------------|----------------------------|-----------|------|---------------|
| | | | | 1/8" | 1/4" | 1/2" | |
| 5/8" | 1-1/8" | 1" | ML508-100 | 414 | 677 | 1224 | 0.43 |
| | | 1-1/4" | ML508-125 | 369 | 609 | 1169 | 0.34 |
| | | 1-1/2" | ML508-150 | 339 | 564 | 1133 | 0.28 |
| | | 1-3/4" | ML508-175 | 317 | 531 | 1107 | 0.23 |
| | | 2" | ML508-200 | 301 | 507 | 1087 | 0.20 |
| | | 12" | ML508-12L | - | - | - | - |
| | | 24" | ML508-24L | - | - | - | - |
| | | 3/4" | 1-3/8" | 1-1/4" | ML304-125 | 507 | 859 |
| 1-1/2" | ML304-150 | | | 471 | 800 | 1623 | 0.41 |
| 1-3/4" | ML304-175 | | | 446 | 758 | 1550 | 0.34 |
| 2" | ML304-200 | | | 427 | 726 | 1495 | 0.29 |
| 2-1/4" | ML304-225 | | | 412 | 702 | 1452 | 0.25 |
| 2-1/2" | ML304-250 | | | 400 | 682 | 1418 | 0.22 |
| 12" | ML304-12L | | | - | - | - | - |
| 24" | ML304-24L | | | - | - | - | - |
| 7/8" | 1-5/8" | 1-1/4" | ML708-125 | 719 | 1234 | 2619 | 0.53 |
| | | 1-1/2" | ML708-150 | 678 | 1125 | 2363 | 0.52 |
| | | 1-3/4" | ML708-175 | 631 | 1057 | 2213 | 0.47 |
| | | 2" | ML708-200 | 618 | 1032 | 2141 | 0.35 |
| | | 2-1/4" | ML708-225 | 591 | 1000 | 2072 | 0.28 |
| | | 2-1/2" | ML708-250 | 549 | 927 | 1846 | 0.25 |
| | | 2-3/4" | ML708-275 | 541 | 899 | 1741 | 0.21 |
| | | 3" | ML708-300 | 520 | 889 | 1720 | 0.18 |
| | | 12" | ML708-12L | - | - | - | - |
| | | 24" | ML708-24L | - | - | - | - |
| 1" | 1-3/4" | 1-1/4" | ML1000-125 | 854 | 1412 | 2782 | 0.55 |
| | | 1-1/2" | ML1000-150 | 790 | 1314 | 2588 | 0.45 |
| | | 1-3/4" | ML1000-175 | 744 | 1244 | 2450 | 0.38 |
| | | 2" | ML1000-200 | 710 | 1192 | 2346 | 0.33 |
| | | 2-1/4" | ML1000-225 | 683 | 1151 | 2265 | 0.29 |
| | | 2-1/2" | ML1000-250 | 662 | 1119 | 2201 | 0.26 |
| | | 2-3/4" | ML1000-275 | 644 | 1092 | 2148 | 0.23 |
| | | 12" | ML1000-12L | - | - | - | - |
| | | 24" | ML1000-24L | - | - | - | - |

Medium Duty Springs & Tube Stock



The Advantages of FORMATHANE vs. Metal Springs/Strippers

- FORMATHANE generates higher blank-holding pressure for any given diameter size... allowing closer center-to-center spacing to overcome die space limitations.
- FORMATHANE is quieter in operation and helps to dampen punch vibration.
- FORMATHANE will not fracture under load, so both operators and dies are protected from shrapnel.
- FORMATHANE adjusts for die misalignment automatically and installs easily, saving set-up time.
- FORMATHANE is nonmagnetic and non-marring.
- FORMATHANE is resistant to corrosion and most oils and chemicals used in the metalforming environment.

FORMATHANE Medium Duty Springs

See page 15 for Springs in metric sizes.

| Fits Punch Dia. | Outside Dia. | Length | 95 A TAN Part Number | Pounds Required to deflect | | | Bulge at 3/8" |
|-----------------|--------------|--------|----------------------|----------------------------|------|------|---------------|
| | | | | 1/8" | 1/4" | 3/8" | |
| 3/16" | 13/16" | 1 | MM316-100 | 334 | 634 | 1125 | 0.24 |
| | | 1-1/4" | MM316-125 | 307 | 569 | 983 | 0.19 |
| | | 1-1/2" | MM316-150 | 289 | 526 | 889 | 0.16 |
| | | 12" | MM316-12L | - | - | - | - |
| 1/4" | 7/8" | 1" | MM104-100 | 359 | 671 | 1294 | 0.27 |
| | | 1-1/4" | MM104-125 | 329 | 603 | 1131 | 0.22 |
| | | 1-1/2" | MM104-150 | 309 | 558 | 1022 | 0.19 |
| | | 12" | MM104-12L | - | - | - | - |
| 3/8" | 1" | 1" | MM308-100 | 436 | 802 | 1501 | 0.31 |
| | | 1-1/4" | MM308-125 | 396 | 716 | 1265 | 0.23 |
| | | 1-1/2" | MM308-150 | 370 | 659 | 1108 | 0.18 |
| | | 1-3/4" | MM308-175 | 351 | 618 | 996 | 0.15 |
| | | 2" | MM308-200 | 337 | 587 | 912 | 0.12 |
| | | 12" | MM308-12L | - | - | - | - |
| 1/2" | 1-1/8" | 1" | MM102-100 | 531 | 958 | 1709 | 0.36 |
| | | 1-1/4" | MM102-125 | 486 | 866 | 1475 | 0.28 |
| | | 1-1/2" | MM102-150 | 456 | 805 | 1318 | 0.22 |
| | | 1-3/4" | MM102-175 | 434 | 762 | 1207 | 0.18 |
| | | 2" | MM102-200 | 418 | 729 | 1123 | 0.16 |
| | | 12" | MM102-12L | - | - | - | - |
| | | 24" | MM102-24L | - | - | - | - |
| 5/8" | 1-1/4" | 1" | MM508-100 | 584 | 1058 | 1855 | 0.38 |
| | | 1-1/4" | MM508-125 | 578 | 982 | 1624 | 0.31 |
| | | 1-1/2" | MM508-150 | 459 | 797 | 1310 | 0.28 |
| | | 1-3/4" | MM508-175 | 445 | 749 | 1232 | 0.21 |
| | | 2" | MM508-200 | 427 | 709 | 1185 | 0.17 |
| | | 12" | MM508-12L | - | - | - | - |
| | | 24" | MM508-24L | - | - | - | - |

| Fits Punch Dia. | Outside Dia. | Length | 95 A TAN Part Number | Pounds Required to deflect | | | Bulge at 3/8" |
|-----------------|--------------|--------|----------------------|----------------------------|------------|------|---------------|
| | | | | 1/8" | 1/4" | 3/8" | |
| 3/4" | 1-1/2" | 1-1/4" | MM304-125 | 792 | 1406 | 2390 | 0.35 |
| | | 1-1/2" | MM304-150 | 723 | 1279 | 2105 | 0.28 |
| | | 1-3/4" | MM304-175 | 674 | 1188 | 1902 | 0.23 |
| | | 2" | MM304-200 | 637 | 1119 | 1749 | 0.20 |
| | | 2-1/4" | MM304-225 | 609 | 1066 | 1631 | 0.17 |
| | | 2-1/2" | MM304-250 | 586 | 1024 | 1536 | 0.15 |
| | | 2-3/4" | MM304-275 | 567 | 989 | 1458 | 0.13 |
| | | 12" | MM304-12L | - | - | - | - |
| | | 24" | MM304-24L | - | - | - | - |
| | | 7/8" | 1-3/4" | 1-1/2" | MM708-150 | 1037 | 1885 |
| 1-3/4" | MM708-175 | | | 933 | 1685 | 2780 | 0.30 |
| 2" | MM708-200 | | | 856 | 1535 | 2464 | 0.26 |
| 2-1/4" | MM708-225 | | | 795 | 1418 | 2218 | 0.22 |
| 2-1/2" | MM708-250 | | | 747 | 1324 | 2021 | 0.19 |
| 2-3/4" | MM708-275 | | | 707 | 1248 | 1860 | 0.16 |
| 3" | MM708-300 | | | 674 | 1184 | 1726 | 0.14 |
| 12" | MM708-12L | | | - | - | - | - |
| 24" | MM708-24L | | | - | - | - | - |
| 1" | 2" | | | 1-1/4" | MM1000-125 | 1308 | 2427 |
| | | 1-1/2" | MM1000-150 | 1060 | 1983 | 3330 | 0.34 |
| | | 1-3/4" | MM1000-175 | 965 | 1791 | 2911 | 0.30 |
| | | 2" | MM1000-200 | 949 | 1680 | 2624 | 0.25 |
| | | 2-1/4" | MM1000-225 | 813 | 1517 | 2367 | 0.23 |
| | | 2-1/2" | MM1000-250 | 805 | 1482 | 2262 | 0.22 |
| | | 2-3/4" | MM1000-275 | 768 | 1400 | 2121 | 0.18 |
| | | 3" | MM1000-300 | 755 | 1378 | 1985 | 0.16 |
| | | 4" | MM1000-400 | 750 | 1368 | 1963 | 0.11 |
| | | 12" | MM1000-12L | - | - | - | - |
| | | 24" | MM1000-24L | - | - | - | - |

Tolerances:

Outside Diameters 11/16" - 1-1/2" ± 0.015"

1-5/8" - 2-3/4" ± 0.020"

Inside Diameters 3/16" - 1-1/2" - 0.005" / - 0.020"

Length (All) + 0.015" / + 0.046"

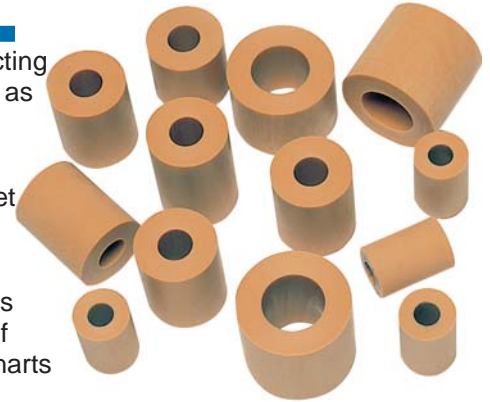
NOTE: Please refer to the durometer/color/ordering information on page 3.

Heavy Duty Springs

FORMATHANE springs are available for light, medium and heavy duty service. Selecting the proper service level for your application will depend on a number of factors, such as stock thickness, space limitations and the amount of deflection desired.

The I.D. of all FORMATHANE springs and strippers are molded slightly undersize to provide for a "press fit" onto the punch body. This feature eliminates the need for a set screw or stripper bolt when installing our springs - helping to reduce set-up time.

Hysteresis (internal heat build-up) is the most common cause of premature urethane spring failure. Since the amount of heat generated is a result of the number of strokes per hour combined with the amount of spring deflection, minimizing the percentage of deflection will extend the working life of the spring. Carefully review our load range charts when making your spring selections to avoid over-compression.



NOTE: Please refer to the durometer/color/ordering information on page 3.

FORMATHANE Heavy Duty Springs

| Fits Punch Dia. | Outside Dia. | Length | 95 A TAN Part Number | Pounds Required to deflect | | | Bulge at 3/8" |
|-----------------|--------------|--------|----------------------|----------------------------|------|------|---------------|
| | | | | 1/8" | 1/4" | 3/8" | |
| 1/4" | 1" | 1 | MH104-100 | 418 | 808 | 1543 | 0.28 |
| | | 1-1/4" | MH104-125 | 389 | 721 | 1266 | 0.19 |
| | | 1-1/2" | MH104-150 | 354 | 648 | 1082 | 0.17 |
| | | 1-3/4" | MH104-175 | 331 | 587 | 933 | 0.15 |
| | | 12" | MH104-12L | - | - | - | - |
| 3/8" | 1-1/8" | 1" | MH308-100 | 613 | 1109 | 2071 | 0.34 |
| | | 1-1/4" | MH308-125 | 554 | 983 | 1729 | 0.27 |
| | | 1-1/2" | MH308-150 | 514 | 899 | 1501 | 0.22 |
| | | 1-3/4" | MH308-175 | 486 | 839 | 1338 | 0.19 |
| | | 2" | MH308-200 | 465 | 794 | 1216 | 0.16 |
| | | 12" | MH308-12L | - | - | - | - |
| 1/2" | 1-1/4" | 1" | MH102-100 | 597 | 1155 | 2188 | 0.35 |
| | | 1-1/4" | MH102-125 | 532 | 1001 | 1793 | 0.27 |
| | | 1-1/2" | MH102-150 | 489 | 898 | 1529 | 0.22 |
| | | 1-3/4" | MH102-175 | 458 | 824 | 1341 | 0.18 |
| | | 2" | MH102-200 | 435 | 769 | 1200 | 0.15 |
| | | 12" | MH102-12L | - | - | - | - |
| | | 24" | MH102-24L | - | - | - | - |
| 5/8" | 1-3/8" | 1" | MH508-100 | 796 | 1409 | 2462 | 0.39 |
| | | 1-1/4" | MH508-125 | 721 | 1269 | 2129 | 0.31 |
| | | 1-1/2" | MH508-150 | 671 | 1175 | 1907 | 0.26 |
| | | 1-3/4" | MH508-175 | 636 | 1108 | 1749 | 0.23 |
| | | 2" | MH508-200 | 609 | 1058 | 1630 | 0.20 |
| | | 12" | MH508-12L | - | - | - | - |
| 3/4" | 1-3/4" | 1-1/4" | MH304-125 | 1167 | 2130 | 3682 | 0.34 |
| | | 1-1/2" | MH304-150 | 1056 | 1909 | 3191 | 0.28 |
| | | 1-3/4" | MH304-175 | 976 | 1751 | 2841 | 0.24 |
| | | 2" | MH304-200 | 917 | 1632 | 2578 | 0.21 |
| | | 2-1/4" | MH304-225 | 870 | 1540 | 2373 | 0.19 |
| | | 2-1/2" | MH304-250 | 833 | 1466 | 2210 | 0.17 |
| | | 2-3/4" | MH304-275 | 803 | 1406 | 2076 | 0.15 |
| | | 12" | MH304-12L | - | - | - | - |
| | | 24" | MH304-24L | - | - | - | - |

| Fits Punch Dia. | Outside Dia. | Length | 95 A TAN Part Number | Pounds Required to deflect | | | Bulge at 3/8" |
|-----------------|--------------|--------|----------------------|----------------------------|------------|------|---------------|
| | | | | 1/8" | 1/4" | 3/8" | |
| 7/8" | 2" | 1-1/2" | MH708-150 | 1364 | 2467 | 4079 | 0.32 |
| | | 1-3/4" | MH708-175 | 1253 | 2254 | 3630 | 0.27 |
| | | 2" | MH708-200 | 1170 | 2095 | 3294 | 0.24 |
| | | 2-1/4" | MH708-225 | 1105 | 1970 | 3032 | 0.21 |
| | | 2-1/2" | MH708-250 | 1054 | 1871 | 2823 | 0.18 |
| | | 2-3/4" | MH708-275 | 1011 | 1790 | 2652 | 0.17 |
| | | 3" | MH708-300 | 976 | 1722 | 2509 | 0.15 |
| | | 12" | MH708-12L | - | - | - | - |
| | | 24" | MH708-24L | - | - | - | - |
| | | 1" | 2-1/4" | 1-1/2" | MH1000-150 | 1480 | 2777 |
| 1-3/4" | MH1000-175 | | | 1363 | 2529 | 4129 | 0.28 |
| 2" | MH1000-200 | | | 1275 | 2343 | 3790 | 0.25 |
| 2-1/4" | MH1000-225 | | | 1207 | 2199 | 3525 | 0.22 |
| 2-1/2" | MH1000-250 | | | 1152 | 2083 | 3314 | 0.20 |
| 2-3/4" | MH1000-275 | | | 1077 | 1958 | 3061 | 0.18 |
| 3" | MH1000-300 | | | 1014 | 1853 | 2851 | 0.16 |
| 4" | MH1000-400 | | | 841 | 1566 | 2272 | 0.12 |
| 12" | MH1000-12L | | | - | - | - | - |
| 24" | MH1000-24L | | | - | - | - | - |
| 1-1/4" | 2-1/2" | 2" | MH1104-200 | 1674 | 36009 | 4637 | 0.30 |
| | | 2-1/4" | MH1104-225 | 1562 | 2810 | 4264 | 0.26 |
| | | 2-1/2" | MH1104-250 | 1473 | 2650 | 3966 | 0.23 |
| | | 2-3/4" | MH1104-275 | 1400 | 2520 | 3721 | 0.21 |
| | | 3" | MH1104-300 | 1339 | 2411 | 3518 | 0.19 |
| | | 12" | MH1104-12L | - | - | - | - |
| | | 24" | MH1104-24L | - | - | - | - |
| 1-1/2" | 2-3/4" | 2" | MH1102-200 | 1656 | 3081 | 4795 | 0.28 |
| | | 2-1/4" | MH1102-225 | 1575 | 2917 | 4440 | 0.27 |
| | | 2-1/2" | MH1102-250 | 1561 | 2794 | 4157 | 0.26 |
| | | 2-3/4" | MH1102-275 | 1495 | 2666 | 3917 | 0.25 |
| | | 3" | MH1102-300 | 1300 | 2424 | 3586 | 0.21 |
| | | 12" | MH1102-12L | - | - | - | - |
| | | 24" | MH1102-24L | - | - | - | - |

Tolerances:

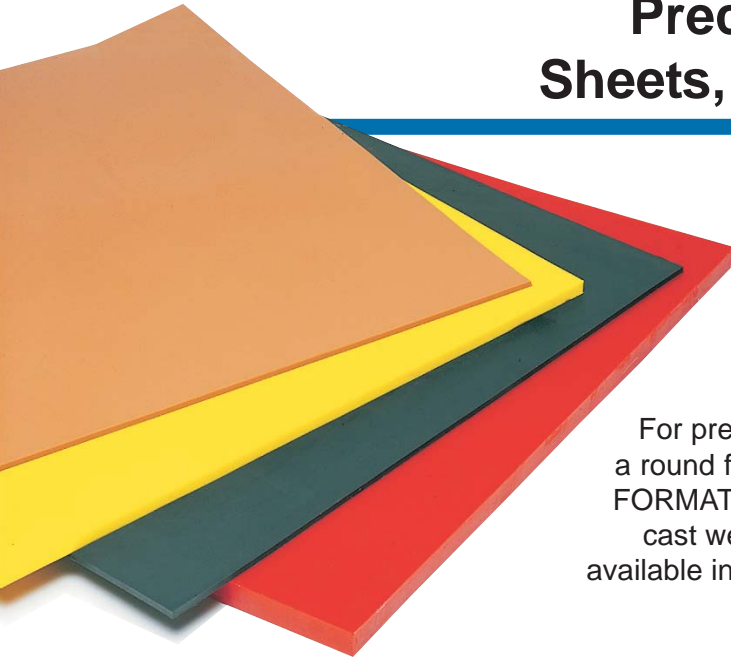
Outside Diameters 11/16" - 1-1/2" ± 0.015"

1-5/8" - 2-3/4" ± 0.020"

Inside Diameters 3/16" - 1-1/2" - 0.005" / - 0.020"

Length (All) + 0.015" / + 0.046"

Precision-Cast Sheets, Slabs & Discs



For press designs using a round forming chamber, FORMATHANE precision-cast wear pad discs are available in eight diameters.

FORMATHANE Discs & Wear Pads

Thickness tolerance $\pm .015"$

| 85 A RED Part # | Diameter Tolerance | Size |
|-----------------|--------------------|------------------------|
| MD-09-025R | $\pm 1/8"$ | 9" dia. x 0.25" thick |
| MD-12-025R | $\pm 1/8"$ | 12" dia. x 0.25" thick |
| MD-15-025R | $\pm 1/8"$ | 15" dia. x 0.25" thick |
| MD-20-025R | $\pm 3/16"$ | 20" dia. x 0.25" thick |
| MD-25-025R | $\pm 3/16"$ | 25" dia. x 0.25" thick |
| MD-26-025R | $\pm 3/16"$ | 26" dia. x 0.25" thick |
| MD-27-025R | $\pm 1/4"$ | 27" dia. x 0.25" thick |
| MD-32-025R | $\pm 1/4"$ | 32" dia. x 0.25" thick |

Discs are stocked in PO-650 Red (85 A Durometer).

FORMATHANE sheets are available in a wide range of sizes, thickness and hardnesses to meet your metalforming requirements. Forming blocks, pressure pads, wear pads or throw pads – whatever your application – a FORMATHANE sheet or slab will fill your needs.

NOTE: Please refer to the durometer/color/ordering information on page 3.

FORMATHANE Precision-Cast Sheets - 95 A TAN

| Thickness Tolerance W x L | 1/16" $\pm .005"$ | 1/8" $\pm .010"$ | 3/16" $\pm .015"$ | 1/4" $\pm .015"$ | 3/8" $\pm .015"$ | 1/2" $\pm .015"$ | 5/8" $\pm .020"$ | 3/4" $\pm .020"$ |
|---------------------------|-------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|
| 1 x 48" | MS-0148-006 | MS-0148-013 | MS-0148-019 | MS-0148-025 | MS-0148-038 | MS-0148-050 | MS-0148-063 | MS-0148-075 |
| 2 x 48" | MS-0248-006 | MS-0248-013 | MS-0248-019 | MS-0248-025 | MS-0248-038 | MS-0248-050 | MS-0248-063 | MS-0248-075 |
| 3 x 48" | MS-0348-006 | MS-0348-013 | MS-0348-019 | MS-0348-025 | MS-0348-038 | MS-0348-050 | MS-0348-063 | MS-0348-075 |
| 4 x 48" | MS-0448-006 | MS-0448-013 | MS-0448-019 | MS-0448-025 | MS-0448-038 | MS-0448-050 | MS-0448-063 | MS-0448-075 |
| 6 x 6" | MS-0606-006 | MS-0606-013 | MS-0606-019 | MS-0606-025 | MS-0606-038 | MS-0606-050 | MS-0606-063 | MS-0606-075 |
| 6 x 12" | MS-0612-006 | MS-0612-013 | MS-0612-019 | MS-0612-025 | MS-0612-038 | MS-0612-050 | MS-0612-063 | MS-0612-075 |
| 6 x 18" | MS-0618-006 | MS-0618-013 | MS-0618-019 | MS-0618-025 | MS-0618-038 | MS-0618-050 | MS-0618-063 | MS-0618-075 |
| 6 x 24" | MS-0624-006 | MS-0624-013 | MS-0624-019 | MS-0624-025 | MS-0624-038 | MS-0624-050 | MS-0624-063 | MS-0624-075 |
| 6 x 36" | MS-0636-006 | MS-0636-013 | MS-0636-019 | MS-0636-025 | MS-0636-038 | MS-0636-050 | MS-0636-063 | MS-0636-075 |
| 6 x 48" | MS-0648-006 | MS-0648-013 | MS-0648-019 | MS-0648-025 | MS-0648-038 | MS-0648-050 | MS-0648-063 | MS-0648-075 |
| 12 x 12" | MS-1212-006 | MS-1212-013 | MS-1212-019 | MS-1212-025 | MS-1212-038 | MS-1212-050 | MS-1212-063 | MS-1212-075 |
| 12 x 18" | MS-1218-006 | MS-1218-013 | MS-1218-019 | MS-1218-025 | MS-1218-038 | MS-1218-050 | MS-1218-063 | MS-1218-075 |
| 12 x 24" | MS-1224-006 | MS-1224-013 | MS-1224-019 | MS-1224-025 | MS-1224-038 | MS-1224-050 | MS-1224-063 | MS-1224-075 |
| 12 x 36" | MS-1236-006 | MS-1236-013 | MS-1236-019 | MS-1236-025 | MS-1236-038 | MS-1236-050 | MS-1236-063 | MS-1236-075 |
| 12 x 48" | MS-1248-006 | MS-1248-013 | MS-1248-019 | MS-1248-025 | MS-1248-038 | MS-1248-050 | MS-1248-063 | MS-1248-075 |
| 18 x 18" | MS-1818-006 | MS-1818-013 | MS-1818-019 | MS-1818-025 | MS-1818-038 | MS-1818-050 | MS-1818-063 | MS-1818-075 |
| 18 x 24" | MS-1824-006 | MS-1824-013 | MS-1824-019 | MS-1824-025 | MS-1824-038 | MS-1824-050 | MS-1824-063 | MS-1824-075 |
| 18 x 36" | MS-1836-006 | MS-1836-013 | MS-1836-019 | MS-1836-025 | MS-1836-038 | MS-1836-050 | MS-1836-063 | MS-1836-075 |
| 18 x 48" | MS-1848-006 | MS-1848-013 | MS-1848-019 | MS-1848-025 | MS-1848-038 | MS-1848-050 | MS-1848-063 | MS-1848-075 |
| 24 x 24" | MS-2424-006 | MS-2424-013 | MS-2424-019 | MS-2424-025 | MS-2424-038 | MS-2424-050 | MS-2424-063 | MS-2424-075 |
| 24 x 36" | MS-2436-006 | MS-2436-013 | MS-2436-019 | MS-2436-025 | MS-2436-038 | MS-2436-050 | MS-2436-063 | MS-2436-075 |
| 24 x 48" | MS-2448-006 | MS-2448-013 | MS-2448-019 | MS-2448-025 | MS-2448-038 | MS-2448-050 | MS-2448-063 | MS-2448-075 |
| 36 x 36" | MS-3636-006 | MS-3636-013 | MS-3636-019 | MS-3636-025 | MS-3636-038 | MS-3636-050 | MS-3636-063 | MS-3636-075 |

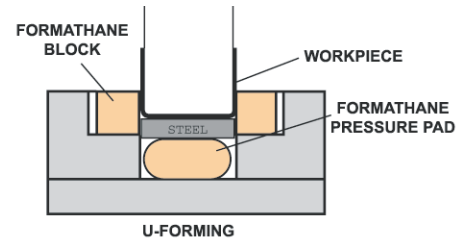
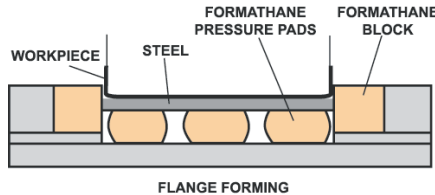
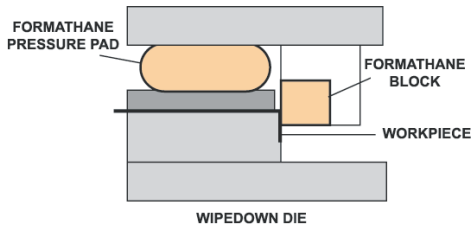
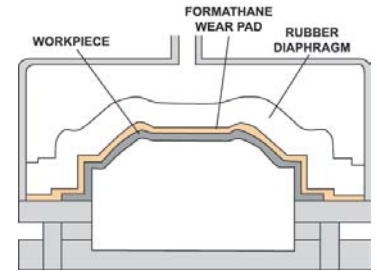
Width and length tolerance $+1/8" / -0"$

Available in any of our four standard FORMATHANE compounds.

Precision-Cast Sheets, Slabs & Discs

Proven to withstand pressures from under 5,000 psi up to 30,000 psi, our FORMATHANE urethane stands up to the tortuous pressing of the fluid-forming process. In fact, they actually assist the metalforming process by allowing intricate, mar-free shapes to be produced without additional secondary finishing operations.

Our FORMATHANE sheets offer superior cut, puncture and abrasion resistance. Our high-performance urethane compounds will not break down, leaving particulate debris on your parts or equipment. Their typical, long service life makes FORMATHANE sheets the material of choice in demanding metalforming applications.



NOTE: Please refer to the durometer/color/ordering information on page 3.

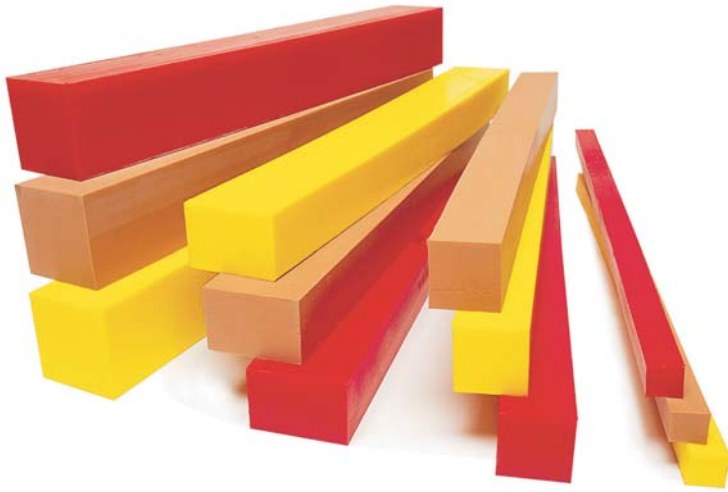
FORMATHANE Precision-Cast Sheets - 95 A TAN

| Thickness Tolerance W x L | 1" ± .020" | 1-1/4" ± .025" | 1-1/2" + .015" / - .030" | 2" + .015" / - .030" | 2-1/2" + .015" / - .035" | 3" + .015" / - .060" | 3-1/2" + .015" / - .060" | 4" + .015" / - .070" |
|---------------------------------|---------------|-------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|
| 1 x 48" | MS-0148-100 | MS-0148-125 | MS-0148-150 | MS-0148-200 | MS-0148-250 | MS-0148-300 | MS-0148-350 | MS-0148-400 |
| 2 x 48" | MS-0248-100 | MS-0248-125 | MS-0248-150 | MS-0248-200 | MS-0248-250 | MS-0248-300 | MS-0248-350 | MS-0248-400 |
| 3 x 48" | MS-0348-100 | MS-0348-125 | MS-0348-150 | MS-0348-200 | MS-0348-250 | MS-0348-300 | MS-0348-350 | MS-0348-400 |
| 4 x 48" | MS-0448-100 | MS-0448-125 | MS-0448-150 | MS-0448-200 | MS-0448-250 | MS-0448-300 | MS-0448-350 | MS-0448-400 |
| 6 x 6" | MS-0606-100 | MS-0606-125 | MS-0606-150 | MS-0606-200 | MS-0606-250 | MS-0606-300 | MS-0606-350 | MS-0606-400 |
| 6 x 12" | MS-0612-100 | MS-0612-125 | MS-0612-150 | MS-0612-200 | MS-0612-250 | MS-0612-300 | MS-0612-350 | MS-0612-400 |
| 6 x 18" | MS-0618-100 | MS-0618-125 | MS-0618-150 | MS-0618-200 | MS-0618-250 | MS-0618-300 | MS-0618-350 | MS-0618-400 |
| 6 x 24" | MS-0624-100 | MS-0624-125 | MS-0624-150 | MS-0624-200 | MS-0624-250 | MS-0624-300 | MS-0624-350 | MS-0624-400 |
| 6 x 36" | MS-0636-100 | MS-0636-125 | MS-0636-150 | MS-0636-200 | MS-0636-250 | MS-0636-300 | MS-0636-350 | MS-0636-400 |
| 6 x 48" | MS-0648-100 | MS-0648-125 | MS-0648-150 | MS-0648-200 | MS-0648-250 | MS-0648-300 | MS-0648-350 | MS-0648-400 |
| 12 x 12" | MS-1212-100 | MS-1212-125 | MS-1212-150 | MS-1212-200 | MS-1212-250 | MS-1212-300 | MS-1212-350 | MS-1212-400 |
| 12 x 18" | MS-1218-100 | MS-1218-125 | MS-1218-150 | MS-1218-200 | MS-1218-250 | MS-1218-300 | MS-1218-350 | MS-1218-400 |
| 12 x 24" | MS-1224-100 | MS-1224-125 | MS-1224-150 | MS-1224-200 | MS-1224-250 | MS-1224-300 | MS-1224-350 | MS-1224-400 |
| 12 x 36" | MS-1236-100 | MS-1236-125 | MS-1236-150 | MS-1236-200 | MS-1236-250 | MS-1236-300 | MS-1236-350 | MS-1236-400 |
| 12 x 48" | MS-1248-100 | MS-1248-125 | MS-1248-150 | MS-1248-200 | MS-1248-250 | MS-1248-300 | MS-1248-350 | MS-1248-400 |
| 18 x 18" | MS-1818-100 | MS-1818-125 | MS-1818-150 | MS-1818-200 | MS-1818-250 | MS-1818-300 | MS-1818-350 | MS-1818-400 |
| 18 x 24" | MS-1824-100 | MS-1824-125 | MS-1824-150 | MS-1824-200 | MS-1824-250 | MS-1824-300 | MS-1824-350 | MS-1824-400 |
| 18 x 36" | MS-1836-100 | MS-1836-125 | MS-1836-150 | MS-1836-200 | MS-1836-250 | MS-1836-300 | MS-1836-350 | MS-1836-400 |
| 18 x 48" | MS-1848-100 | MS-1848-125 | MS-1848-150 | MS-1848-200 | MS-1848-250 | MS-1848-300 | MS-1848-350 | MS-1848-400 |
| 24 x 24" | MS-2424-100 | MS-2424-125 | MS-2424-150 | MS-2424-200 | MS-2424-250 | MS-2424-300 | MS-2424-350 | MS-2424-400 |
| 24 x 36" | MS-2436-100 | MS-2436-125 | MS-2436-150 | MS-2436-200 | MS-2436-250 | MS-2436-300 | MS-2436-350 | MS-2436-400 |
| 24 x 48" | MS-2448-100 | MS-2448-125 | MS-2448-150 | MS-2448-200 | MS-2448-250 | MS-2448-300 | MS-2448-350 | MS-2448-400 |
| 36 x 36" | MS-3636-100 | MS-3636-125 | MS-3636-150 | MS-3636-200 | MS-3636-250 | MS-3636-300 | MS-3636-350 | MS-3636-400 |

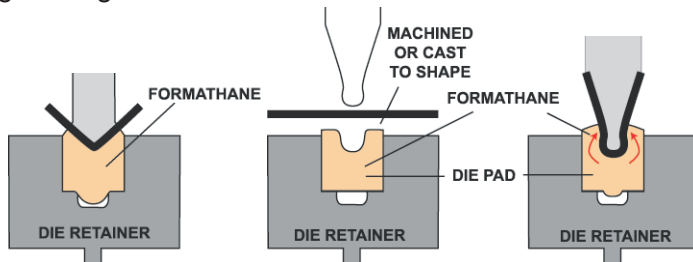
Width and length tolerance +1/8" / -0"

Available in any of our four standard FORMATHANE compounds.

Precision-Cast Bars, Blocks & Rods



As with all standard shaped items in our FORMATHANE product line, molded bars and rods are currently offered in numerous sizes to meet your metalforming needs (55 U.S. and 30 metric). The ability of FORMATHANE to deform when compressed, then recover to its original shape, makes it ideal for many metalforming applications. When a compressive load is applied, FORMATHANE reacts by distributing the force in all directions. This characteristic enables the urethane to exert pressure uniformly over the workpiece. Additionally, FORMATHANE can absorb operator and press errors, reducing damage.



- Use FORMATHANE bars as a “universal” female forming die section to eliminate the need for more expensive matched hard tooling.
- Use a FORMATHANE bar to eliminate a series of mechanical die springs or strippers in stamping dies for reduced tooling expense and shorter build time.
- Use FORMATHANE bars and blocks in pressure-pad, forming and wiping block applications for reduced tooling expense and scratch/mar-free forming.
- Use FORMATHANE bars, blocks and rods as spacers to reduce noise and vibration.
- Use FORMATHANE bar, block and rod stock to machine custom shapes for special metalforming applications.

**See page 15 for
Precision-Cast Bars
in metric sizes.**

NOTE: Please refer to the durometer/color/ordering information on page 3.

FORMATHANE Precision-Cast Bars - 95 A TAN

| Length | | 2" | 12" | 24" | 36" | 48" |
|-----------------|-----------|-------------|--------------|--------------|--------------|--------------|
| Width x Height | Tolerance | | | | | |
| 1/2" x 1/2" | ± .015" | MB-005005-2 | MB-005005-12 | MB-005005-24 | MB-005005-36 | MB-005005-48 |
| 3/4" x 3/4" | | MB-075075-2 | MB-075075-12 | MB-075075-24 | MB-075075-36 | MB-075075-48 |
| 1" x 1" | | MB-100100-2 | MB-100100-12 | MB-100100-24 | MB-100100-36 | MB-100100-48 |
| 1-1/4" x 1-1/4" | | MB-125125-2 | MB-125125-12 | MB-125125-24 | MB-125125-36 | MB-125125-48 |
| 1-1/2" x 1-1/2" | | MB-150150-2 | MB-150150-12 | MB-150150-24 | MB-150150-36 | MB-150150-48 |
| 2" x 2" | ± .030" | MB-200200-2 | MB-200200-12 | MB-200200-24 | MB-200200-36 | MB-200200-48 |
| 2" x 3" | | MB-200300-2 | MB-200300-12 | MB-200300-24 | MB-200300-36 | MB-200300-48 |
| 3" x 3" | | MB-300300-2 | MB-300300-12 | MB-300300-24 | MB-300300-36 | MB-300300-48 |
| 4" x 4" | ± .040" | MB-400400-2 | MB-400400-12 | MB-400400-24 | MB-400400-36 | MB-400400-48 |
| 5" x 5" | ± .060" | MB-500500-2 | MB-500500-12 | MB-500500-24 | MB-500500-36 | MB-500500-48 |
| 6" x 6" | | MB-600600-2 | MB-600600-12 | MB-600600-24 | MB-600600-36 | MB-600600-48 |

Length tolerance +1/8" / -0"

Available in any of our four standard FORMATHANE compounds.

Precision-Cast Bars, Blocks & Rods



Some metalforming and special application tooling calls for round rod stock. FORMATHANE Urethane rods are ideal for prototype parts or high-volume applications that are best suited for round profiles held to precision tolerances.

- All FORMATHANE products are easily machined.
- Currently, we produce 24 U.S. and 12 metric sizes of molded rods.

**See page 15 for
Precision-Cast Bars
in metric sizes.**

NOTE: Please refer to the durometer/color/ordering information on page 3.

FORMATHANE Precision-Cast Rods - 95 A TAN

| Length | | 3" | 6" | 12" | 24" | 36" | 48" |
|----------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Diameter | O.D. Tolerance | | | | | | |
| 1/4" | ± .010" | MR-025-03 | MR-025-06 | MR-025-12 | MR-025-24 | – | – |
| 3/8" | | MR-038-03 | MR-038-06 | MR-038-12 | – | – | – |
| 1/2" | | MR-050-03 | MR-050-06 | MR-050-12 | MR-050-24 | MR-050-36 | MR-050-48 |
| 5/8" | | MR-063-03 | MR-063-06 | MR-063-12 | MR-063-24 | MR-063-36 | MR-063-48 |
| 3/4" | ± .015" | MR-075-03 | MR-075-06 | MR-075-12 | MR-075-24 | MR-075-36 | MR-075-48 |
| 7/8" | | MR-087-03 | MR-087-06 | MR-087-12 | MR-087-24 | MR-087-36 | MR-087-48 |
| 1" | | MR-100-03 | MR-100-06 | MR-100-12 | MR-100-24 | MR-100-36 | MR-100-48 |
| 1-1/4" | | MR-125-03 | MR-125-06 | MR-125-12 | MR-125-24 | MR-125-36 | MR-125-48 |
| 1-1/2" | | MR-150-03 | MR-150-06 | MR-150-12 | MR-150-24 | MR-150-36 | MR-150-48 |
| 1-3/4" | | MR-175-03 | MR-175-06 | MR-175-12 | MR-175-24 | MR-175-36 | MR-175-48 |
| 2" | ± .020" | MR-200-03 | MR-200-06 | MR-200-12 | MR-200-24 | MR-200-36 | MR-200-48 |
| 2-1/4" | | MR-225-03 | MR-225-06 | MR-225-12 | MR-225-24 | MR-225-36 | MR-225-48 |
| 2-1/2" | | MR-250-03 | MR-250-06 | MR-250-12 | MR-250-24 | MR-250-36 | MR-250-48 |
| 2-3/4" | | MR-275-03 | MR-275-06 | MR-275-12 | MR-275-24 | MR-275-36 | MR-275-48 |
| 3" | ± .030" | MR-300-03 | MR-300-06 | MR-300-12 | MR-300-24 | MR-300-36 | MR-300-48 |
| 3-1/4" | | MR-325-03 | MR-325-06 | MR-325-12 | MR-325-24 | MR-325-36 | MR-325-48 |
| 3-1/2" | | MR-350-03 | MR-350-06 | MR-350-12 | MR-350-24 | MR-350-36 | MR-350-48 |
| 3-3/4" | | MR-375-03 | MR-375-06 | MR-375-12 | MR-375-24 | MR-375-36 | MR-375-48 |
| 4" | ± .040" | MR-400-03 | MR-400-06 | MR-400-12 | MR-400-24 | MR-400-36 | MR-400-48 |
| 4-1/2" | | MR-450-03 | MR-450-06 | MR-450-12 | MR-450-24 | MR-450-36 | MR-450-48 |
| 5" | ± .060" | MR-500-03 | MR-500-06 | MR-500-12 | MR-500-24 | – | – |
| 6" | | MR-600-03 | MR-600-06 | MR-600-12 | MR-600-24 | – | – |
| 7" | | MR-700-03 | MR-700-06 | MR-700-12 | MR-700-24 | – | – |
| 8" | | MR-800-03 | MR-800-06 | MR-800-12 | MR-800-24 | – | – |

Length tolerance +1/8" / -0"

Available in any of our four standard FORMATHANE compounds.

Headed NAAMS™ Strippers



FORMATHANE headed strippers fully meet the NAAMS™ standard. The closed-end design allows for custom matching of the stripper face to the shape of your punch.

The headed design prevents the stripper from falling off the punch and into the die.

- Strippers are stocked in 95 A durometer.
- Molded to meet or exceed the new NAAMS Headed Stripper Standards.
- Manufactured from the highest performance urethane compound; provides long life.
- Each stripper resists taking a compression set providing consistent stripper forces throughout the life of the stripper.
- The unique molding process produces strippers that resist splitting and tearing keeping unwanted debris out of the die.

Load Ratings in Newtons

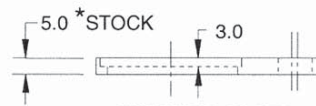
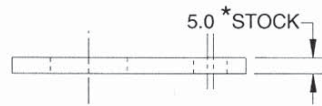
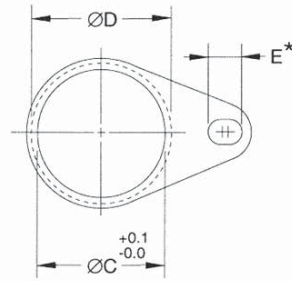
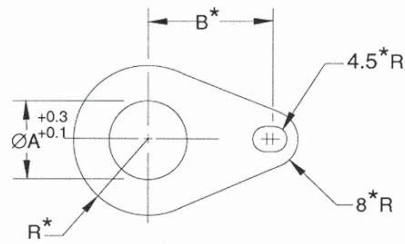
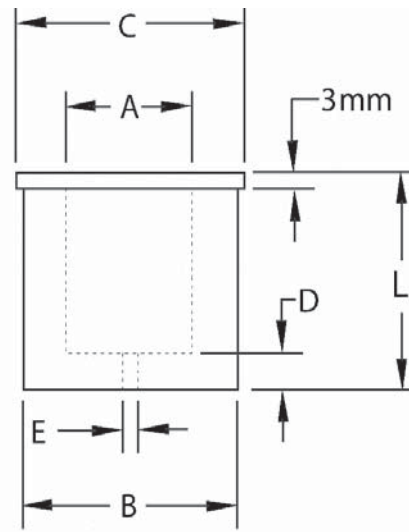
| Punch Dia. mm | Outside Dia. B mm | Length L mm | 95 A TAN Part Number | Newtons Required to deflect | | | NAAMS Code |
|---------------|-------------------|-------------|----------------------|-----------------------------|------|-------|------------|
| | | | | 3mm | 6mm | 9mm | |
| 10 | 18 | 44 | MTH-10-44 | 721 | 1237 | 1966 | P051044 |
| | | 54 | MTH-10-54 | 694 | 1179 | 1770 | P051054 |
| | | 64 | MTH-10-64 | 689 | 1121 | 1610 | P051064 |
| | | 74 | MTH-10-74 | 654 | 1036 | 1446 | P051074 |
| 13 | 23 | 44 | MTH-13-44 | 1303 | 2184 | 3380 | P051344 |
| | | 54 | MTH-13-54 | 1179 | 2028 | 3118 | P051354 |
| | | 64 | MTH-13-64 | 1023 | 1775 | 2580 | P051364 |
| | | 74 | MTH-13-74 | 907 | 1508 | 2175 | P051374 |
| 16 | 28 | 44 | MTH-16-44 | 1548 | 2655 | 4159 | P051644 |
| | | 54 | MTH-16-54 | 1406 | 2402 | 3696 | P051654 |
| | | 64 | MTH-16-64 | 1263 | 2277 | 3340 | P051664 |
| | | 74 | MTH-16-74 | 1121 | 1868 | 2807 | P051674 |
| 20 | 33 | 44 | MTH-20-44 | 2139 | 3683 | 5711 | P052044 |
| | | 54 | MTH-20-54 | 2002 | 3389 | 5253 | P052054 |
| | | 64 | MTH-20-64 | 1864 | 3211 | 4653 | P052064 |
| | | 74 | MTH-20-74 | 1730 | 2936 | 4230 | P052074 |
| 25 | 40 | 44 | MTH-25-44 | 2869 | 4946 | 7490 | P052544 |
| | | 54 | MTH-25-54 | 2660 | 4546 | 6810 | P052554 |
| | | 64 | MTH-25-64 | 2464 | 4114 | 5983 | P052564 |
| | | 74 | MTH-25-74 | 2224 | 3799 | 5498 | P052574 |
| 32 | 50 | 44 | MTH-32-44 | 4386 | 7557 | 11672 | P053244 |
| | | 54 | MTH-32-54 | 4021 | 6917 | 10373 | P053254 |
| | | 64 | MTH-32-64 | 3483 | 6063 | 8918 | P053264 |
| | | 74 | MTH-32-74 | 3260 | 5662 | 8207 | P053274 |
| 40 | 60 | 44 | MTH-40-44 | 5391 | 9830 | 15248 | P054054 |
| | | 54 | MTH-40-54 | 4915 | 8651 | 13411 | P054064 |
| | | 64 | MTH-40-64 | 4448 | 7953 | 11778 | P054074 |

Note: 44mm long bushings should not be compressed more than 6.6mm; more compression exceeds recommended maximum of 15%.

NOTE: Please refer to the durometer/color/ordering information on page 3.

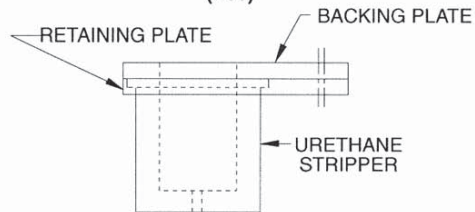
Headed NAAMS™ Strippers

| Punch Diameter mm | A Press Fit mm | C mm | D mm | E Vent Hole mm |
|-------------------|----------------|------|------|----------------|
| 10.0 | 9.75 | 21.3 | 6 | 1.6 |
| 13.0 | 12.75 | 26.3 | 6 | 3.0 |
| 16.0 | 15.75 | 31.3 | 6 | 3.0 |
| 20.0 | 19.75 | 36.3 | 7 | 3.0 |
| 25.0 | 24.75 | 43.3 | 7 | 3.0 |
| 32.0 | 31.70 | 55.3 | 7 | 3.0 |
| 40.0 | 39.70 | 65.3 | 8 | 3.0 |



BACKING PLATE (P02)

RETAINING PLATE (P03)



*Dimension common to both backing and retaining plate.

FORMATHANE Backing Plate Set

| Part Number | A mm | B mm | C mm | D mm | E mm | R mm |
|-------------|------|------|------|------|------|------|
| BRP0010 | 10 | 29.0 | 19 | 22 | 11.0 | 13.0 |
| BRP0013 | 13 | 32.0 | 24 | 27 | 11.0 | 15.5 |
| BRP0016 | 16 | 34.0 | 29 | 32 | 11.0 | 18.0 |
| BRP0020 | 20 | 36.0 | 34 | 37 | 11.5 | 20.5 |
| BRP0025 | 25 | 40.6 | 41 | 44 | 10.5 | 24.0 |
| BRP0032 | 32 | 42.0 | 51 | 56 | 10.5 | 31.0 |
| BRP0040 | 40 | 46.0 | 61 | 66 | 11.0 | 36.0 |

NOTE: Please refer to the durometer/color/ordering information on page 3.

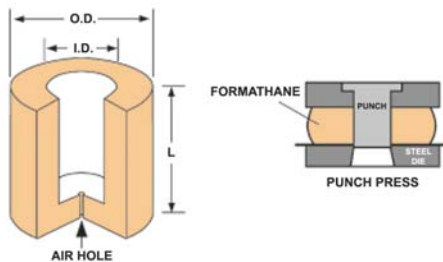
Closed-End Strippers



Closed-end FORMATHANE strippers allow for custom-matching of the stripper face to the shape of your punch. Simply press-fit the stripper onto the punch body and then complete one stroke without the metal stock. The punch will pierce the closed-end of the FORMATHANE stripper, cutting it to the exact same shape as the punch.

FORMATHANE strippers provide high blank-holding pressure on the downstroke and stripping pressure on the upstroke. This combination means less jamming of blanks.

Replace your conventional urethane strippers with long-life FORMATHANE and watch your profits increase. Your tool room can sidestep replacing worn out urethane strippers and work on more important projects.



**See page 15 for
Closed-End Strippers
in metric sizes.**

Tolerances:

Outside Diameters $\pm 0.015"$

Inside Diameters $- 0.005" / - 0.020"$

Length $+ 0.015" / + 0.046"$

All lengths cut to 1/32" over nominal to allow for set.

NOTE: Please refer to the durometer/color/ordering information on page 3.

FORMATHANE Closed-End Strippers

| I.D. | O.D. | Length | 95 A TAN Part Number | Pounds Required to deflect | | | Bulge at 1/2" |
|--------|--------|--------|-------------------------|----------------------------|------|------|---------------|
| | | | | 1/8" | 1/4" | 1/2" | |
| 3/16" | 11/16" | 1-1/4" | MT316-125 | 220 | 375 | 1035 | 0.25 |
| | | 1-1/2" | MT316-150 | 215 | 360 | 900 | 0.20 |
| 1/4" | 3/4" | 1-1/4" | MT104-125 | 225 | 410 | 975 | 0.30 |
| | | 1-1/2" | MT104-150 | 210 | 370 | 790 | 0.24 |
| | | 1-3/4" | MT104-175 | 195 | 345 | 700 | 0.23 |
| 5/16" | 13/16" | 1-1/4" | MT516-125 | 265 | 450 | 1035 | 0.31 |
| | | 1-1/2" | MT516-150 | 250 | 420 | 935 | 0.24 |
| | | 1-3/4" | MT516-175 | 235 | 400 | 865 | 0.19 |
| | | 2" | MT516-200 | 230 | 385 | 810 | 0.15 |
| 3/8" | 7/8" | 1-1/4" | MT308-125 | 270 | 460 | 960 | 0.22 |
| | | 1-1/2" | MT308-150 | 260 | 430 | 910 | 0.20 |
| | | 1-3/4" | MT308-175 | 250 | 415 | 875 | 0.18 |
| | | 2" | MT308-200 | 240 | 400 | 850 | 0.17 |
| 1/2" | 1" | 1-1/4" | MT102-125 | 280 | 480 | 1025 | 0.39 |
| | | 1-1/2" | MT102-150 | 240 | 420 | 945 | 0.37 |
| | | 1-3/4" | MT102-175 | 230 | 400 | 880 | 0.24 |
| | | 2" | MT102-200 | 215 | 370 | 835 | 0.21 |
| | | 2-1/4" | MT102-225 | 200 | 345 | 800 | 0.19 |
| 5/8" | 1-1/8" | 1-1/4" | MT508-125 | 370 | 610 | 1170 | 0.34 |
| | | 1-1/2" | MT508-150 | 340 | 565 | 1135 | 0.28 |
| | | 1-3/4" | MT508-175 | 320 | 530 | 1110 | 0.23 |
| | | 2" | MT508-200 | 300 | 510 | 1090 | 0.20 |
| 3/4" | 1-1/2" | 1-3/4" | MT304-175 | 675 | 1190 | 2090 | 0.24 |
| | | 2" | MT304-200 | 640 | 1120 | 1925 | 0.21 |
| | | 2-1/4" | MT304-225 | 610 | 1065 | 1790 | 0.18 |
| | | 2-1/2" | MT304-250 | 585 | 1025 | 1690 | 0.16 |
| | | 2-3/4" | MT304-275 | 565 | 990 | 1610 | 0.14 |
| 7/8" | 1-3/4" | 1-3/4" | MT708-175 | 935 | 1685 | 3050 | 0.31 |
| | | 2" | MT708-200 | 855 | 1535 | 2660 | 0.27 |
| | | 2-1/4" | MT708-225 | 795 | 1420 | 2395 | 0.23 |
| | | 2-1/2" | MT708-250 | 745 | 1325 | 2180 | 0.20 |
| | | 2-3/4" | MT708-275 | 710 | 1250 | 2010 | 0.17 |
| 1" | 2" | 1-3/4" | MT1000-175 | 965 | 1790 | 3115 | 0.31 |
| | | 2" | MT1000-200 | 950 | 1680 | 2810 | 0.26 |
| | | 2-1/4" | MT1000-225 | 815 | 1515 | 2420 | 0.24 |
| | | 2-1/2" | MT1000-250 | 805 | 1480 | 2335 | 0.23 |
| | | 2-3/4" | MT1000-275 | 770 | 1400 | 2270 | 0.19 |
| 1-1/4" | 2-1/2" | 2" | MT1104-200 | 1675 | 3010 | 4920 | 0.31 |
| | | 2-1/4" | MT1104-225 | 1560 | 2810 | 4520 | 0.27 |
| | | 2-1/2" | MT1104-250 | 1475 | 2650 | 4200 | 0.24 |
| | | 2-3/4" | MT1104-275 | 1400 | 2520 | 3945 | 0.22 |
| | | 3" | MT1104-300 | 1340 | 2410 | 3730 | 0.20 |
| 1-1/2" | 2-3/4" | 2" | MT1102-200 | 1655 | 3080 | 5035 | 0.29 |
| | | 2-1/4" | MT1102-225 | 1575 | 2915 | 4660 | 0.28 |
| | | 2-1/2" | MT1102-250 | 1560 | 2795 | 4365 | 0.27 |
| | | 2-3/4" | MT1102-275 | 1495 | 2665 | 4120 | 0.26 |
| | | 3" | MT1102-300 | 1300 | 2425 | 3765 | 0.22 |

Metric Sizes

Precision-Cast Bars

| Width mm | Height mm | Length mm | 95 A TAN Part Number |
|----------|-----------|-----------|----------------------|
| ± 0.4mm | 25 | 100 | MBM-2525100 |
| | | 415 | MBM-2525415 |
| | | 500 | MBM-2525500 |
| | | 835 | MBM-2525835 |
| | | 1000 | MBM-25251000 |
| ± 0.4mm | 30 | 100 | MBM-3025100 |
| | | 415 | MBM-3025415 |
| | | 500 | MBM-3025500 |
| | | 835 | MBM-3025835 |
| | | 1000 | MBM-30251000 |
| ± 0.6mm | 50 | 100 | MBM-5050100 |
| | | 415 | MBM-5050415 |
| | | 500 | MBM-5050500 |
| | | 835 | MBM-5050835 |
| | | 1000 | MBM-50501000 |
| ± 0.8mm | 80 | 100 | MBM-8030100 |
| | | 415 | MBM-8030415 |
| | | 500 | MBM-8030500 |
| | | 835 | MBM-8030835 |
| | | 1000 | MBM-80301000 |
| ± 0.8mm | 75 | 100 | MBM-7550100 |
| | | 415 | MBM-7550415 |
| | | 500 | MBM-7550500 |
| | | 835 | MBM-7550835 |
| | | 1000 | MBM-75501000 |
| ± 0.8mm | 110 | 100 | MBM-11045100 |
| | | 415 | MBM-11045415 |
| | | 500 | MBM-11045500 |
| | | 835 | MBM-11045835 |
| | | 1000 | MBM-110451000 |

Tolerances—Cast Bars:

Length + 3mm / -0mm

Precision-Cast Rods

| Dia. mm | Length mm | 95 A TAN Part Number | Dia. mm | Length mm | 95 A TAN Part Number |
|---------|-----------|----------------------|---------|-----------|----------------------|
| 8 | 500 | MRM-8500 | - | - | - |
| 10 | 500 | MRM-10500 | - | - | - |
| 15 | 500 | MRM-15500 | - | - | - |
| 20 | 500 | MRM-20500 | - | - | - |
| 25 | 500 | MRM-25500 | 25 | 1000 | MRM-251000 |
| 30 | 500 | MRM-30500 | 30 | 1000 | MRM-301000 |
| 40 | 500 | MRM-40500 | 40 | 1000 | MRM-401000 |
| 50 | 500 | MRM-50500 | 50 | 1000 | MRM-501000 |
| 60 | 500 | MRM-60500 | 60 | 1000 | MRM-601000 |
| 70 | 500 | MRM-70500 | 70 | 1000 | MRM-701000 |
| 80 | 500 | MRM-80500 | 80 | 1000 | MRM-801000 |
| 100 | 500 | MRM-100500 | 100 | 1000 | MRM-1001000 |

Tolerances—Cast Rods:

Diameter 8mm - 40mm ± 0.4mm
 Diameter 50mm - 60mm ± 0.6mm
 Diameter 70mm - 100mm ± 0.8mm
 Length +3mm / -0

Closed-End Strippers

| I.D. mm | O.D. mm | Length mm | Air Hole | 95 A TAN Part Number |
|---------|---------|-----------|----------|----------------------|
| 6 | 19 | 45 | 1.6 | MTM-061945 |
| | | 53 | 1.6 | MTM-061953 |
| | | 71 | 1.6 | MTM-061971 |
| 8 | 21 | 45 | 1.6 | MTM-082145 |
| | | 53 | 1.6 | MTM-082153 |
| | | 71 | 1.6 | MTM-082171 |
| 10 | 23 | 45 | 1.6 | MTM-102345 |
| | | 53 | 1.6 | MTM-102353 |
| | | 56 | 1.6 | MTM-102356 |
| | | 71 | 1.6 | MTM-102371 |
| | | 71 | 1.6 | MTM-102371 |
| 13 | 26 | 45 | 3.0 | MTM-132645 |
| | | 53 | 3.0 | MTM-132653 |
| | | 56 | 3.0 | MTM-132656 |
| | | 71 | 3.0 | MTM-132671 |
| | | 71 | 3.0 | MTM-132671 |
| 16 | 30 | 45 | 3.0 | MTM-163045 |
| | | 53 | 3.0 | MTM-163053 |
| | | 56 | 3.0 | MTM-163056 |
| | | 71 | 3.0 | MTM-163071 |
| 20 | 38 | 45 | 3.0 | MTM-203845 |
| | | 53 | 3.0 | MTM-203853 |
| | | 71 | 3.0 | MTM-203871 |
| 25 | 50 | 45 | 3.0 | MTM-255045 |
| | | 53 | 3.0 | MTM-255053 |
| | | 71 | 3.0 | MTM-255071 |
| | | 71 | 3.0 | MTM-255071 |
| 32 | 60 | 45 | 3.0 | MTM-326045 |

Tolerances—Strippers:

O.D. ± 0.4mm
 I.D. -0.1mm / -0.5mm
 Length ± 0.4mm

All lengths cut to 1mm over nominal to allow for set.

NOTE: Please refer to the durometer/color/ordering information on page 3.

Springs

| I.D. mm | O.D. mm | Length mm | 95 A TAN Part Number |
|---------|---------|-----------|----------------------|
| 7 | 15 | 25 | MMM-71525 |
| | | 30 | MMM-71530 |
| | | 35 | MMM-71535 |
| | | 40 | MMM-71540 |
| 8.5 | 20 | 330 | MMM-715330 |
| | | 25 | MMM-82025 |
| | | 30 | MMM-82030 |
| | | 35 | MMM-82035 |
| 11 | 25 | 40 | MMM-82040 |
| | | 330 | MMM-820330 |
| | | 25 | MMM-112525 |
| | | 30 | MMM-112530 |
| | | 35 | MMM-112535 |
| 14 | 30 | 40 | MMM-112540 |
| | | 45 | MMM-112545 |
| | | 330 | MMM-1125330 |
| | | 25 | MMM-143025 |
| | | 30 | MMM-143030 |
| 14 | 40 | 35 | MMM-143035 |
| | | 40 | MMM-143040 |
| | | 45 | MMM-143045 |
| | | 50 | MMM-143050 |
| | | 55 | MMM-143055 |
| 14 | 50 | 60 | MMM-143060 |
| | | 500 | MMM-1430500 |
| | | 40 | MMM-144040 |
| | | 50 | MMM-144050 |
| | | 60 | MMM-144060 |
| 14 | 60 | 500 | MMM-1440500 |
| | | 50 | MMM-145050 |
| | | 60 | MMM-145060 |
| | | 80 | MMM-145080 |
| | | 500 | MMM-1450500 |
| 22 | 80 | 50 | MMM-146050 |
| | | 60 | MMM-146060 |
| | | 80 | MMM-146080 |
| | | 500 | MMM-1460500 |
| 22 | 100 | 60 | MMM-228060 |
| | | 80 | MMM-228080 |
| | | 100 | MMM-2280100 |
| 22 | 100 | 500 | MMM-2280500 |
| | | 80 | MMM-2210080 |
| | | 100 | MMM-22100100 |
| | | 120 | MMM-22100120 |
| 22 | 100 | 500 | MMM-22100500 |

Tolerances—Springs:

O.D. 15mm - 40mm ± 0.4mm
 O.D. 50mm - 60mm ± 0.6mm
 O.D. 80mm - 100mm ± 0.8mm
 I.D. -0.1mm / -0.5mm
 Length +3mm / -0

Automotive Metric Springs & Tube Stock

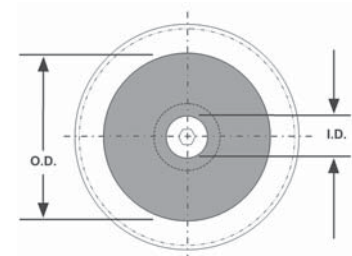
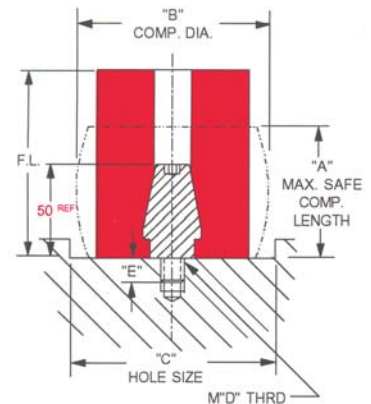
| Part Number | O.D. mm | I.D. mm | F.L. mm | A Max Comp Length mm | B Max Comp O.D. mm | C Hole Size mm | D Thread Size mm | E Thread Depth mm | | |
|-----------------|------------|------------|------------|-------------------------------|-----------------------------|-------------------------|---------------------------|----------------------------|--|--|
| MMM-145032R | 50 | 14 | 32 | 22 | 62 | 95 | 12 | 14 | | |
| MMM-145050R | | | 50 | 35 | 62 | 95 | 12 | 14 | | |
| MMM-145060R | | | 60 | 42 | 62 | 95 | 12 | 14 | | |
| MMM-145080R | | | 80 | 56 | 62 | 95 | 12 | 14 | | |
| MMM-145080R-T | | | 80 | 56 | 62 | 95 | 12 | 14 | | |
| MMM-1450100R | | | 100 | 70 | 62 | 95 | 12 | 14 | | |
| MMM-1450100R-T | | | 100 | 70 | 62 | 95 | 12 | 14 | | |
| MMM-1450500R | | | 500 | FULL TUBE | | | | | | |
| MMM-146050R | 60 | 14 | 50 | 35 | 74 | 110 | 12 | 14 | | |
| MMM-146060R | | | 60 | 42 | 74 | 110 | 12 | 14 | | |
| MMM-146060R-T | | | 60 | 42 | 74 | 110 | 12 | 14 | | |
| MMM-146080R | | | 80 | 56 | 74 | 110 | 12 | 14 | | |
| MMM-146080R-T | | | 80 | 56 | 74 | 110 | 12 | 14 | | |
| MMM-1460100R | | | 100 | 70 | 74 | 110 | 12 | 14 | | |
| MMM-1460100R-T | | | 100 | 70 | 74 | 110 | 12 | 14 | | |
| MMM-1460125R | | | 125 | 88 | 74 | 110 | 12 | 14 | | |
| MMM-1460125R-T | 125 | 88 | 74 | 110 | 12 | 14 | | | | |
| MMM-1460500R | 500 | FULL TUBE | | | | | | | | |
| MMM-228050R | 80 | 22 | 50 | 35 | 98 | 135 | 16 | 18 | | |
| MMM-228060R | | | 60 | 42 | 98 | 135 | 16 | 18 | | |
| MMM-228080R | | | 80 | 56 | 98 | 135 | 16 | 18 | | |
| MMM-228080R-T | | | 80 | 56 | 98 | 135 | 16 | 18 | | |
| MMM-2280100R | | | 100 | 70 | 98 | 135 | 16 | 18 | | |
| MMM-2280100R-T | | | 100 | 70 | 98 | 135 | 16 | 18 | | |
| MMM-2280125R | | | 125 | 88 | 98 | 135 | 16 | 18 | | |
| MMM-2280125R-T | | | 125 | 88 | 98 | 135 | 16 | 18 | | |
| MMM-2280500R | 500 | FULL TUBE | | | | | | | | |
| MMM-2210050R | 100 | 22 | 50 | 35 | 124 | 160 | 16 | 18 | | |
| MMM-2210080R | | | 80 | 56 | 124 | 160 | 16 | 18 | | |
| MMM-2210080R-T | | | 80 | 56 | 124 | 160 | 16 | 18 | | |
| MMM-22100100R | | | 100 | 70 | 124 | 160 | 16 | 18 | | |
| MMM-22100100R-T | | | 100 | 70 | 124 | 160 | 16 | 18 | | |
| MMM-22100125R | | | 125 | 88 | 124 | 160 | 16 | 18 | | |
| MMM-22100125R-T | | | 125 | 88 | 124 | 160 | 16 | 18 | | |
| MMM-22100500R | | | 500 | FULL TUBE | | | | | | |
| MMM-2512750R | 127 | 25 | 50 | 35 | 155 | 190 | 20 | 22 | | |
| MMM-2512780R | | | 80 | 56 | 155 | 190 | 20 | 22 | | |
| MMM-2512780R-T | | | 80 | 56 | 155 | 190 | 20 | 22 | | |
| MMM-25127100R | | | 100 | 70 | 155 | 190 | 20 | 22 | | |
| MMM-25127100R-T | | | 100 | 70 | 155 | 190 | 20 | 22 | | |
| MMM-25127125R | | | 125 | 88 | 155 | 190 | 20 | 22 | | |
| MMM-25127125R-T | | | 125 | 88 | 155 | 190 | 20 | 22 | | |
| MMM-25127160R | | | 160 | 120 | 155 | 190 | 20 | 22 | | |
| MMM-25127160R-T | | | 160 | 120 | 155 | 190 | 20 | 22 | | |
| MMM-25127915R | | | 915 | FULL TUBE | | | | | | |

FORMATHANE



The unique physical properties and quality engineered into our FORMATHANE® springs, tubes and strippers is new. We encourage you to compare... and put FORMATHANE® to the test.

- 85 Shore "A" hardness (red).



Tolerances—Springs & Tubes:
 O.D. 15mm - 40mm ± 0.4mm
 O.D. 50mm - 60mm ± 0.6mm
 O.D. 80mm - 127mm ± 0.8mm
 I.D. -0.1mm / -0.5mm
 Length +3mm / -0

NOTE:

- The "T" designation in the part number refers to springs that include a locating stud.

FORMATHANE®

SERVICE WE DELIVER AND QUALITY YOU CAN DEPEND ON

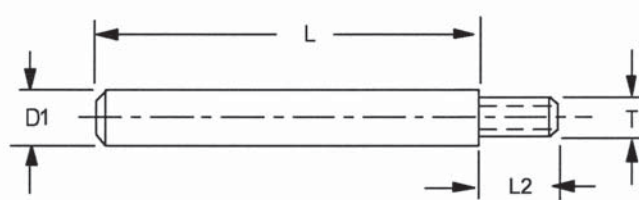
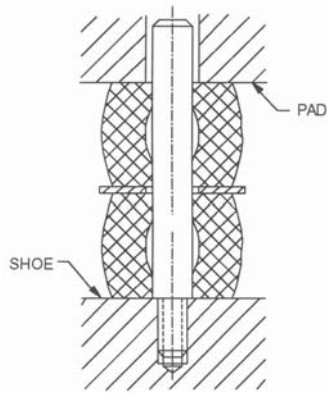
ANCHOR DANLY is a leading manufacturer of die and die component products supplied globally to the parts forming industry. Backed by years of tool and die experience, quality and innovation are some of the reasons why our name is respected throughout the world. We have taken the lead role in creating and bringing new products to customers and helping them find solutions that improve their operations. Based on the capabilities **ANCHOR DANLY** offers, we can help you to meet the demands of quick deliveries, technical support, quality products and competitive prices. **ANCHOR DANLY** and its' broad distribution channels and direct sales personnel will assist you in any way to make your product a better and more profitable one.

Whether standard or customized products, with our years of experience, customers can be sure the products they receive will meet their expectations for reliability and dependable performance. We understand the demanding schedules of die builders and production personnel and have developed efficient manufacturing processes to shorten product lead times as well as put inventory on our shelves so you can have it in your facility when you need it. Put the **ANCHOR DANLY** network to work for you. We've got the service you've been looking for.

Included in our full line offering are both inch and metric size die sets and die components that are designed to numerous die standards including ISO, NAAMS, JIS and many large automotive and appliance manufacturers' standards. The complete product offering includes:

- Accu-Bend Rotary Benders
- Air Presses
- Cams
 - Aerial & Diemount Cams
 - Box Cams
 - Roller Cams
 - Wide Cams
- Die Accessories
- Die Sets
 - Plain & Ball Bearing Sets
 - Catalog Ball Bearing Sets
 - Wear Plate Sets
 - Cast Sets
- Ejector Boxes
- Guide Posts & Bushings
 - Plain & Ball Bearing Styles
 - Steel, Bronze, Bronze-Plated &
 - Self-Lubricating Bushings
 - Lempoloy Bushings
 - Special Pins, Bushings & Retainers
- Hydraulics
 - Electronic Die Setters
 - Die Separators
 - Drill & Tap Equipment
 - Hydraulic Motors
- In-Die Tapping Units
- Machined and Cut Ground Plate
 - Adapter Plates
 - Bolster Plates
 - 1020, 1045 & 4140 materials
- Manufacturing Services
 - CNC Machining
 - Blanchard Grinding
 - Stress Relieving
 - Die Set Repair
- Mold Components
 - Bronze Plated & Self-Lubricated Bushings
 - Leader Pins
 - Bronze & Bronze Plated Wear Strips & Ways
- Punches, Buttons & Retainers
- Reliance Fabrications
 - Custom Fabrications
 - Robotic Welding
 - Aluminum & Steel Fixture Bases
- Springs
 - DieMax L Inch Series Springs
 - DieMax XL Series ISO Springs
 - JIS Series Springs
 - Custom Heavy Duty Springs
 - Marsh Mellow Springs
 - Formathane Urethane
 - Kaller Gas Springs
 - Utility & Disc Springs
- Wear Products
 - Plates, Strips, Gibs & Blocks
 - Steel, bronze, Bronze-Plated and Self-Lubricating Materials

Automotive Metric Guide Pins, Studs & Washers

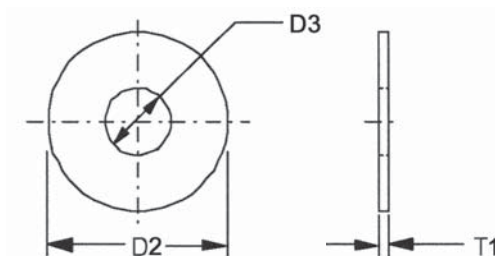


Stacking Guide Pins

| Part Number | D1 mm | T | L2 mm | L mm |
|-------------|-------|-----|-------|------|
| M12-032 | 13 | M12 | 18 | 32 |
| M12-040 | | | | 40 |
| M12-050 | | | | 50 |
| M12-063 | | | | 63 |
| M12-080 | | | | 80 |
| M12-095 | | | | 95 |
| M12-118 | | | | 118 |
| M12-140 | | | | 140 |
| M12-180 | | | | 180 |
| M16-050 | | | | 21 |
| M16-063 | 63 | | | |
| M16-080 | 80 | | | |
| M16-095 | 95 | | | |
| M16-118 | 118 | | | |
| M16-140 | 140 | | | |
| M16-180 | 180 | | | |
| M20-050 | 24 | M20 | 30 | 50 |
| M20-063 | | | | 63 |
| M20-080 | | | | 80 |
| M20-095 | | | | 95 |
| M20-118 | | | | 118 |
| M20-140 | | | | 140 |
| M20-180 | | | | 180 |

Stacking Washers

| Part Number | D2 mm | D3 mm | T1 mm |
|-------------|-------|-------|-------|
| WASHER050 | 60 | 16.5 | 6 |
| WASHER060 | 80 | 16.5 | 6 |
| WASHER080 | 100 | 20.5 | 8 |
| WASHER100 | 120 | 20.5 | 8 |
| WASHER125 | 150 | 26.0 | 8 |



Locating Studs

| Part Number | Thread | Length mm | Use with Spring I.D. mm |
|--------------|----------|-----------|-------------------------|
| M12-LOCATING | M12-1.75 | 64 | 14 |
| M16-LOCATING | M16-2.0 | 68 | 22 |
| M20-LOCATING | M20-2.5 | 72 | 25 |

Distributed by:



Anchor Danly

The Brands You Trust

| | |
|---|--|
| ANCHOR DIE SETS CANADA Cambridge, ON, Canada CALL: 800-265-7842 FAX: 519-740-8213 cooeng@anchordanly.com | ANCHOR DIE SETS CANADA Montreal, QC, Canada CALL: 800-263-5560 FAX: 514-525-7835 moneng@anchorlamina.com |
| ANCHOR DIE SETS Windsor, ON, Canada CALL: 800-265-5007 FAX: 519-966-3594 wineng@anchorlamina.com | ANCHOR DIE SETS USA Detroit, MI CALL: 800-543-3790 FAX: 800-963-0400 wineng@anchorlamina.com |
| ANCHOR DIE SETS USA Grand Rapids, MI CALL: 888-526-2467 FAX: 616-949-9580 graeng@anchorlamina.com | DANLY IEM Ithaca, MI CALL: 800-243-2659 FAX: 800-833-2659 info@danly.com |
| LAMINA COMPONENTS Farmington Hills, MI CALL: 800-652-6462 FAX: 800-406-4410 sales@lamina.com | LEMPCO Ithaca, MI CALL: 800-321-8632 FAX: 800-221-6310 lempco@lempco.com |

www.anchordanly.com

