

QuickLOAD© V.3.9 Cartridge Dimensions

Selected Bullet: **.224, 77, Sierra TMK #7177** File: \sierra
 Selected Cartridge: **.222 Rem.** File: \qloadfw

Lait/Base Shaped **Friction-proofed**

| | Inches | mm |
|------------------|--------|-------|
| Seating Depth | 0.507 | 12.88 |
| Shank Seat Depth | 0.375 | 9.53 |
| Bullet Length | 1.067 | 27.10 |
| Bullet Diameter | 0.224 | 5.69 |
| Cartridge Length | 2.260 | 57.40 |
| Case Length | 1.700 | 43.18 |
| Groove Caliber | 0.224 | 5.69 |
| Barrel Length | 20.0 | 508.0 |
| Bullet Travel | 18.807 | 477.7 |

| | psi | bar |
|----------------------------------|------------|-----------------|
| Pmax (MAP) | 53664 | 3700.0 |
| Meas. Method | Piezo CIP | |
| | Grains | Grams |
| Bullet Weight | 77.0 | 4.99 |
| | Sq. inches | mm ² |
| Cross-sectional Bore Area | .03889 | 25.09 |
| | Grains H2O | cm ³ |
| Maximum Case Capacity, overflow | 27.90 | 1.812 |
| Volume Occupied by Seated Bullet | 4.821 | 0.313 |
| Useable Case Capacity | 23.087 | 1.499 |
| Weighting Factor | 0.6 | |

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QuickLOAD© V.3.9 Charge

Selected Propellant: **ADI BM2** File: \qloadfw

| | | |
|----------------------------------|--------|----------------------|
| Heat of Explosion / Potential | 3910 | kJ/kg |
| Ratio of Specific Heats | 1.2300 | |
| Burning Rate Factor Ba | 0.6900 | 1/Bar ^{1/2} |
| Pro- or Degressivity Factor a0 | 0.7485 | |
| Progressive Burning Limit z1 | 0.320 | x 100% |
| Factor b | 1.3501 | |
| Propellant Solid Density | 1.620 | g/cm ³ |
| Shot Start (Initiation) Pressure | 3626 | psi |
| Filling/L.R. | 90.4 | Charge Weight |
| | % | Grains Grams |
| | | 20.5 1.328 |

Apply&Calc

QuickLOAD© V.3.9 Diagram

— .222 Rem. - .224, 77, Sierra TMK #7177 - 20.5 grs ADI BM2 - OAL= 2.260 in.

QuickLOAD© V.3.9 Results

| | | | |
|---|-------------------------|-----------------------|----------------------------|
| Maximum Chamber Pressure (Pmax) | 3701 bar / 53674 psi | Bullet Travel at Pmax | 27.6mm / 1.09 in. |
| Load Density | 0.886 g/cm ³ | Energy Density | 3464 J/cm ³ |
| Values when Bullet Base Exits Muzzle...click here for more data | | | |
| Muzzle Pressure | 510 bar / 7395 psi | Muzzle Velocity | 793 m/s / 2602 fps |
| Barrel Time, 10% Pmax to Muzzle | 1.037 ms | Projectile Energy | 1570 Joule / 1158 ft.-lbs. |
| Amount of Propellant Burnt | 97.73 % | Ballistic Efficiency | 30.2 % |

Results without any guarantee on usability ! DANGER: Load exceeds Maximum Average Pressure ! DO NOT USE THIS LOAD ! End of combustion after the projectile exits muzzle.