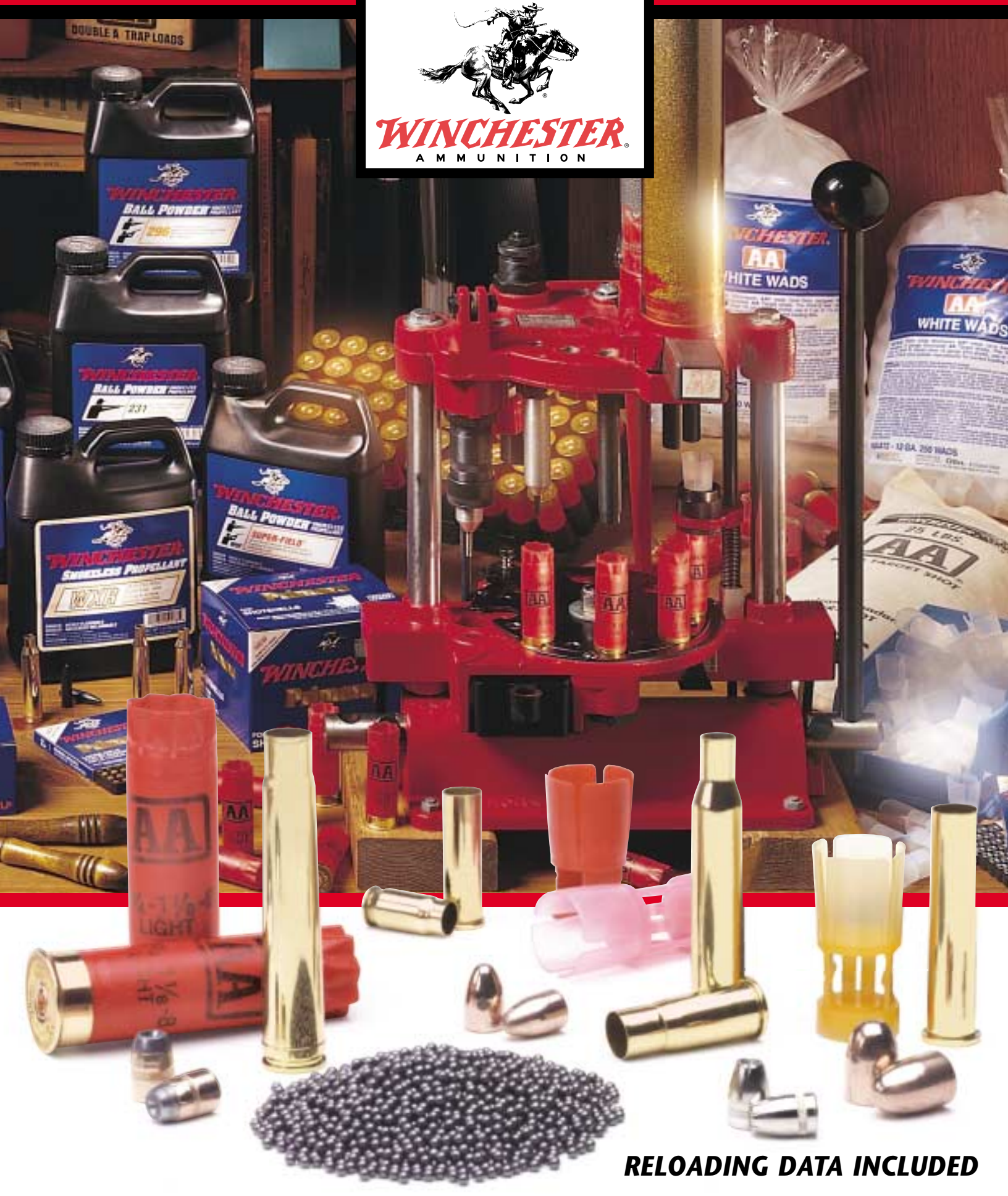
# WINCHESTER® COMPONENTS CATALOG

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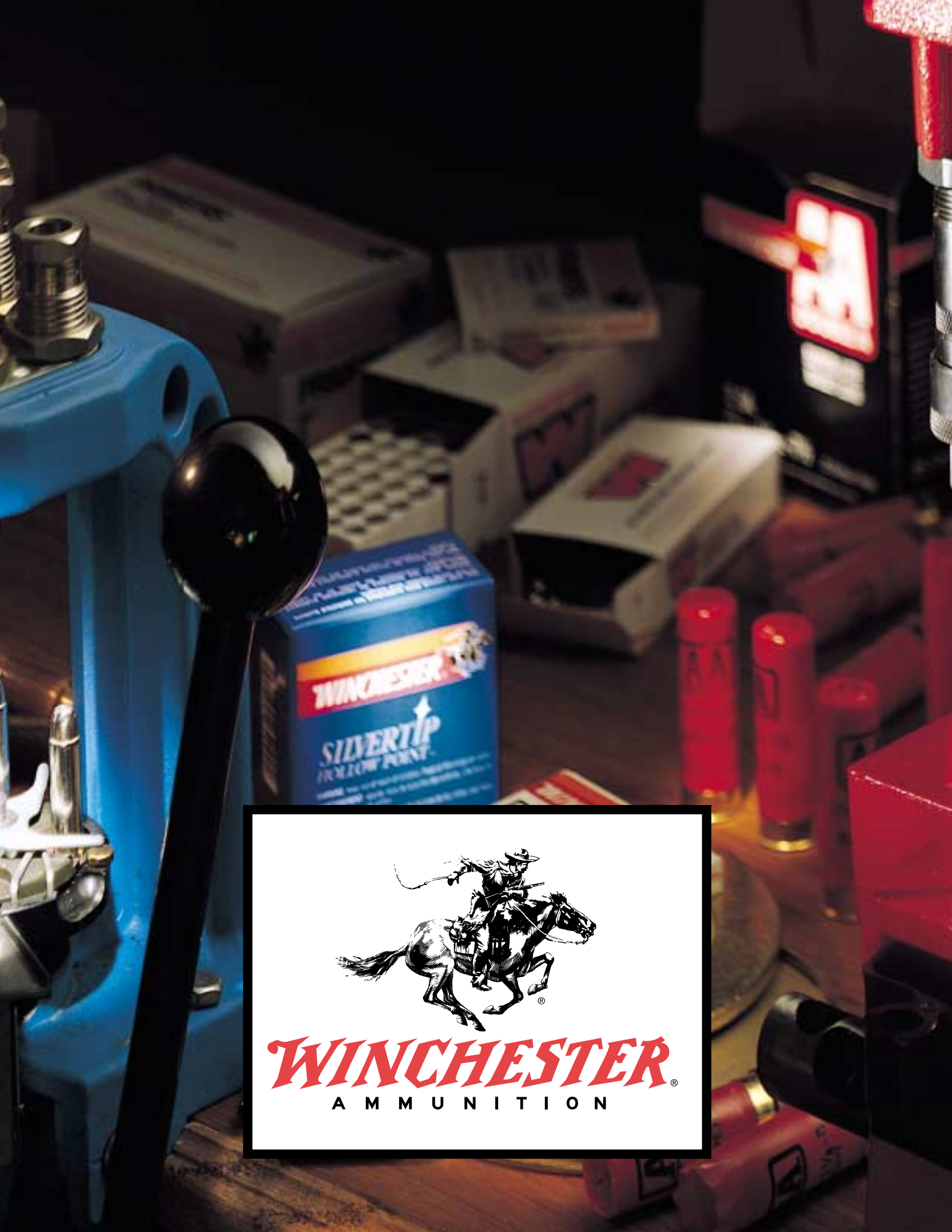
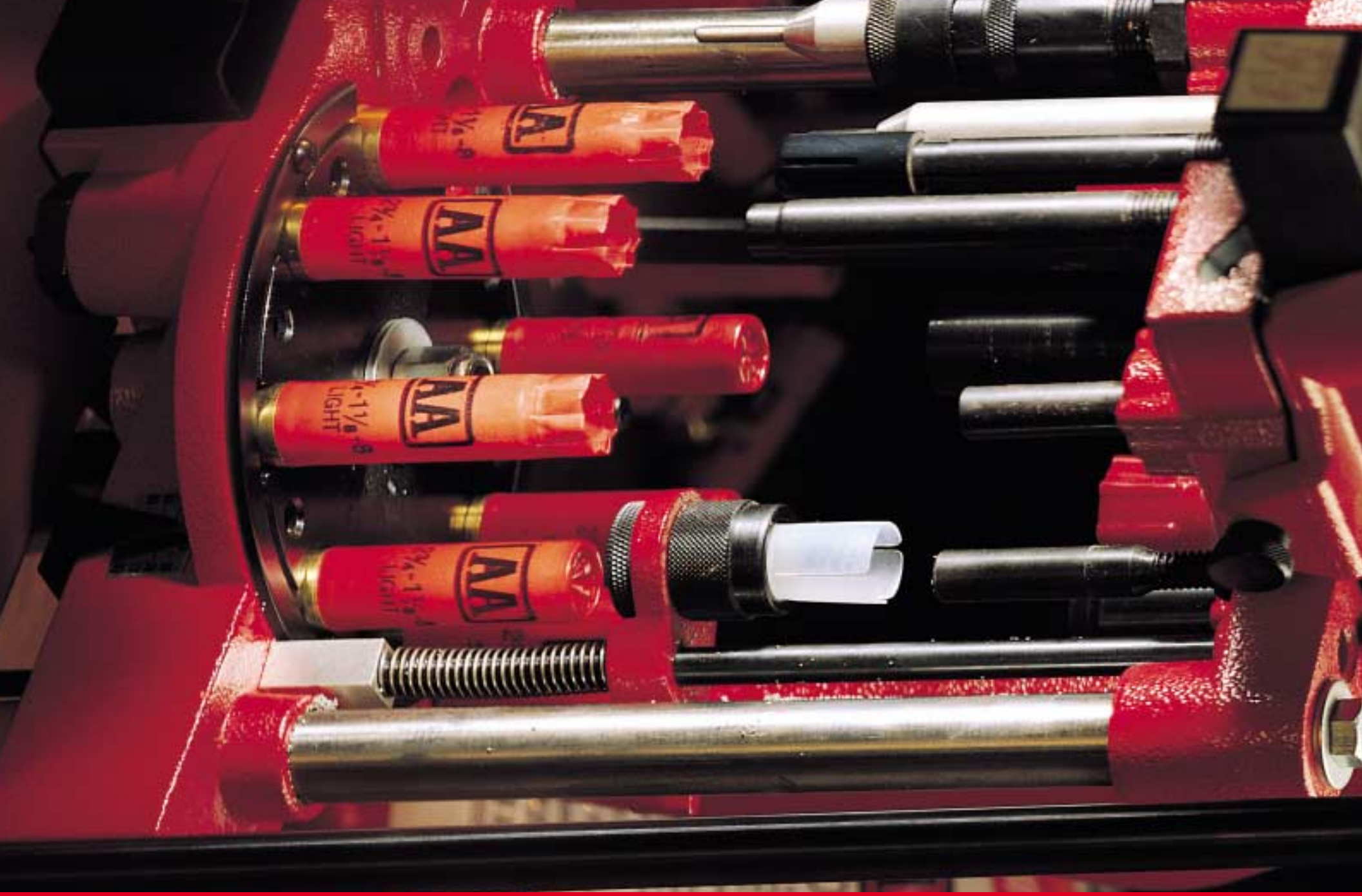


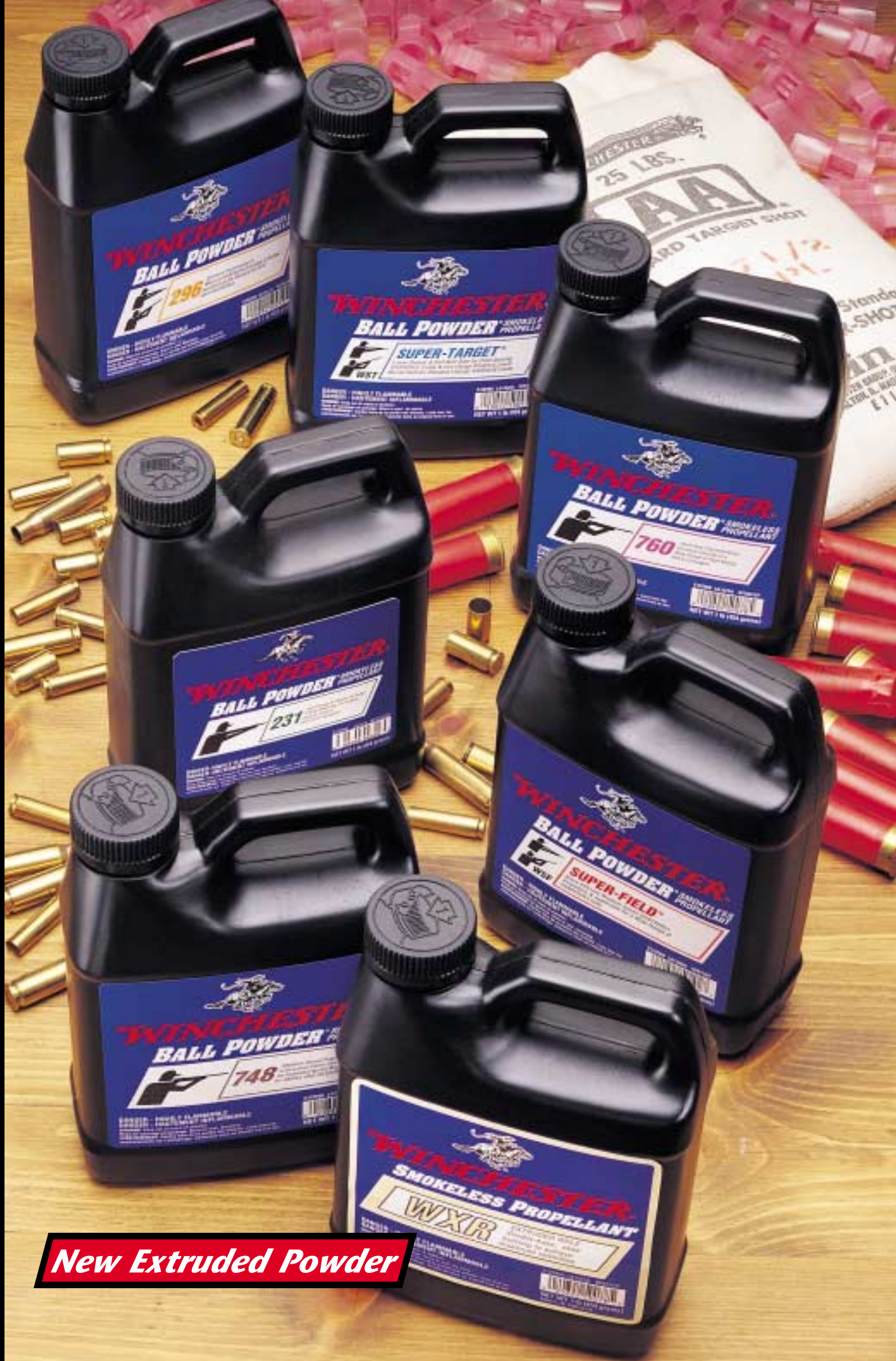

WINCHESTER®

AMMUNITION




# Winchester® Components

# Winchester Powder & Primers




**New Extruded Powder**

# Winchester® Powders

## WST

Target shotshell and standard velocity handgun propellant. Ideal for use in 45 Auto match applications. Consistent,clean, low flash and smoke are benefits to the shooter. Powder of choice for reloading AA shells.

## 231

As the most popular reload propellant, 231 is a pistol powder ideally suited to the 38 Special, 45 auto, and 9mm standard loads. Consistency, clean burning, low flash, and a broad range of applications make this a powder of choice on any pistol cartridge reloader's shelf.

## WSF

Super-Field® propellant is the propellant of choice for Winchester 20 gauge AA® Target Load and 12 gauge 3 3/4 dram equivalent Super-X® load. WSF is an ideal choice to maximize velocities in 12 gauge 1 1/8 oz. and 1 1/4 oz. loads. Super-Field also performs well in 38 Super, 9mm and 40 S&W pistol loads. Excellent propellant for fast shooting action pistol applications.

## 296

This propellant was developed for Winchester factory loaded ammunition for 357 magnum, 44 magnum and 410 bore. Its high loading density provides optimal velocity. 296 is also the powder type used by Winchester for factory loaded 410 bore AA loads. However, 296 is not suitable for most rifle cartridges.

## 748

748 is the powder of choice by Winchester and the U.S. military for 5.56mm and 223 Rem. ammunition. The low flame temperature of 748 extends barrel life versus other similar speed powders. It can be used in a wide variety of centerfire rifle loads including 222 Rem, 30-30 Win, 308 Win, and up to 458 Win. Mag. Combine Winchester components with 748 to duplicate 308 Win factory load ballistics. 748 is recommended for use with the new 308 Fail Safe® bullets.

## 760

Combine Winchester components with 760 to duplicate 30-06 factory load ballistics. 760 has ideal flow characteristics which give it an advantage over other propellants with similar burn rates. 760 is recommended as an excellent choice for 7mm-08 as well as with the new 30-06 Fail Safe bullet.

*New Extruded Powder*

## WXR

WXR is the propellant of choice for 7mm Magnum Winchester factory loaded ammunition. It is a double base, slow burning extruded propellant used to achieve maximum velocities and deliver superior performance in a wide variety of rifle cartridges.

# Winchester® Primers

You can't buy a more reliable primer than Winchester. Ignition is instant and precise. In Winchester testing labs, primers are constantly and rigorously tested for consistency and sensitivity at temperatures and conditions far beyond the range of normal usage. Ignition reliability is assured when you use Winchester primers.

- Better sensitivity for more positive firing in all guns.
- 7 different primers cover your reloading needs for shotshells, rifle and handgun cartridges.
- Non-corrosive, non-mercuric.
- Weight of the primer mixture is carefully controlled.
- Every Winchester primer is consistent in size and quality.
- Anvil heights are measured to precise tolerances to assure perfect ignition.
- Winchester primers maintain stability in extremes of temperature and humidity.

WARNING - Primers may explode if subjected to impact, shock, or intense heat. Store in original factory container only. Primers in bulk are capable of mass explosion. Do not use primer feed devices for reloading.

***Winchester Primers:*** Centerfire primers are recommended for use as follows:


## Large Rifle - WLR

| | | | |
|---|---|---|---|
| 22-250 Remington | 284 Winchester | 30-40 Krag | 35 Remington |
| 225 Winchester | 7mm Mauser | 300 Winchester Magnum | 356 Winchester |
| 243 Winchester | 7-08 Remington | 300 H&H Magnum | 358 Winchester |
| 6mm Remington | 7mm STW | 300 Savage | 375 H&H Magnum |
| 25-35 Winchester | 7mm Remington Magnum | 303 Savage | 38-55 Winchester |
| 250 Savage | 280 Remington | 303 British | 458 Winchester Magnum |
| 25-06 Remington | 7.62 x 39mm | 308 Winchester | |
| 257 Roberts +P | 30-30 Winchester | 32 Winchester Special | |
| 7mm-08 Remington | 30 Remington | 8mm Mauser | |
| 270 Winchester | 30-06 Springfield | 338 Winchester Magnum | |


## Small Rifle - WSR

| | | |
|---|---|---|
| 218 Bee | 223 Remington | 357 Remington Maximum |
| 22 Hornet | 25-20 Winchester | 9x23 Winchester |
| 222 Remington | 256 Winchester Magnum | 454 Casull |
| 222 Remington Magnum | 30 Carbine | |


## Small (Reg) Handgun - WSP

| | | | |
|---|---|---|---|
| 25 Automatic | 32 Short Colt | 38 S&W | 38 Super Automatic +P |
| 30 Luger | 32 Long Colt | 38 Special | 38 Automatic |
| 32 Automatic | 32 Colt New Police | 38 Short Colt | 380 Automatic |
| 32 S&W | 9mm Luger | 38 Long Colt | 357 SIG |
| 32 S&W Long | 9mm Winchester Magnum | 38 Colt New Police | 40 S&W |


## Large (Reg) Handgun - WLP

| | | |
|---|---|---|
| 38-40 Winchester | 44-40 Winchester | 45 Winchester Magnum |
| 10mm Automatic | 44 Magnum | |
| 41 Magnum | 45 Colt | |
| 44 S&W Special | 45 Automatic | |


## Small (Mag) Handgun - WSPM

357 Magnum


## Large (Mag) Rifle - WLRM

Large rifle magnum primer for those heavy charges of slow powder where extra ignition is required. Use only where magnum primers are specified.


## Shotshell - #209

Winchester #209 Shotshell primers are recommended for superior performance in all standard gauge shotshell reloading applications.

# Winchester Centerfire Handgun

# Centerfire Handgun Component Bullets

## Combined Technology

Combine Technology bullets are the most technologically advanced bullets in history. The CT brand bullets combine Winchester and Nosler advanced development techniques and innovative production processes.

### CT Partition Gold™ (PG)

- Proven Partition Technology
- Consistent, Dramatic Bullet Expansion
- Deep Penetration Regardless of Barrel Length
- Maximum Weight Retention

| Caliber | Bullet Wt. | Caliber | Bullet Wt. |
|---|---|---|---|
| 38/357 | 180 gr. | 45 | 260 gr. |
| 44 | 250 gr. | 45 | 300 gr. |

### Silvertip® Hollow Point (STHP)

- Rapid Energy Deposit
- Positive Functioning
- Uniform Expansion

| Caliber | Bullet Wt. | Caliber | Bullet Wt. |
|---|---|---|---|
| 38/357 | 145 gr. | 40/10mm | 155 gr. |
| 9mm | 115 gr. | 40/10mm | 175 gr. |
| 9mm | 147 gr. | 44 | 210 gr. |

### Full Metal Jacket (FMJ)

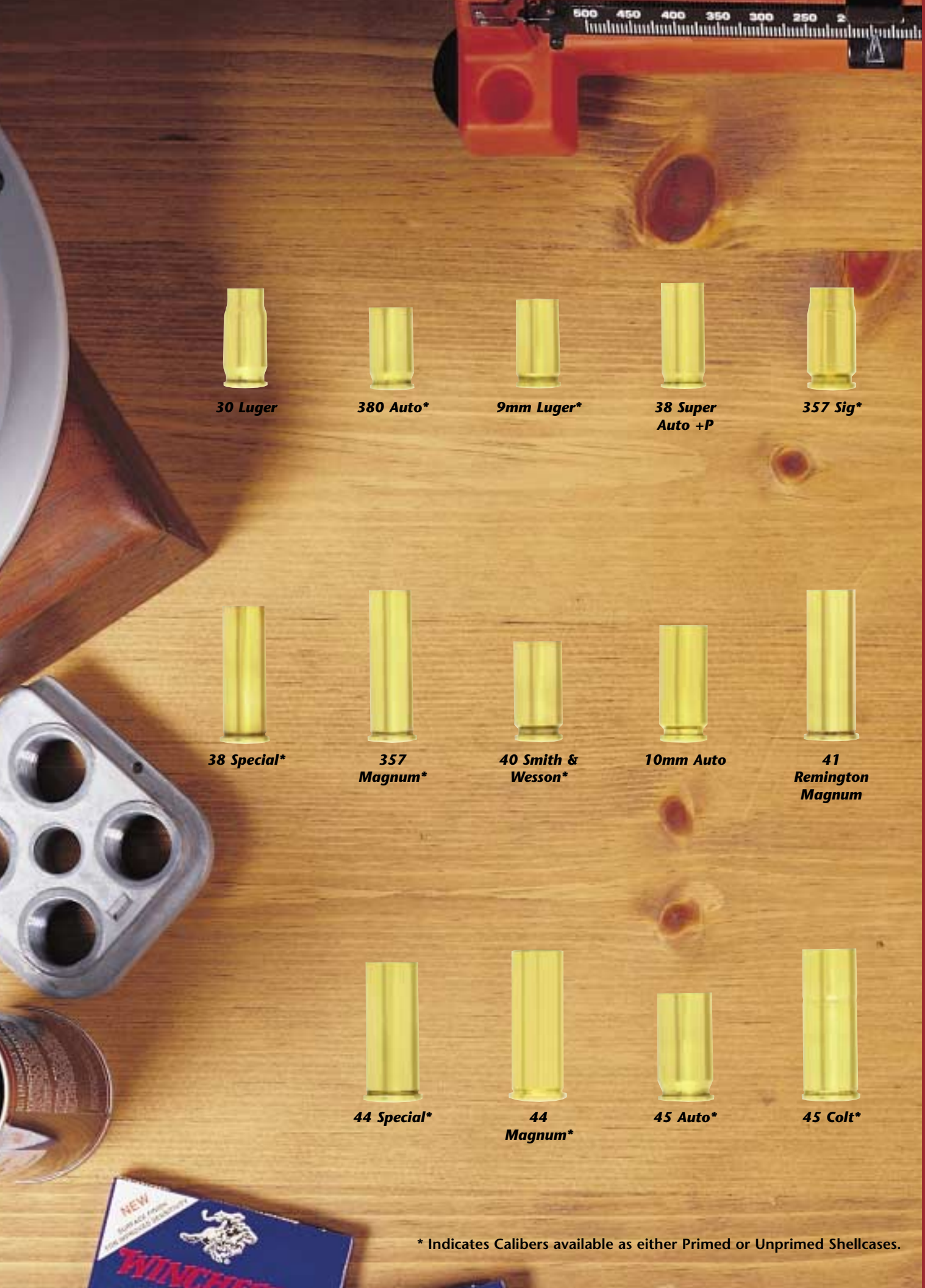
- Positive Functioning
- No Expansion
- Good Accuracy
- No Barrel Leading

| Caliber | Bullet Wt. | Caliber | Bullet Wt. |
|---|---|---|---|
| 380 | 95 gr. | 40/10mm | 165 gr. (Truncated Cone) |
| 38 | 130 gr. | | |
| 9mm | 115 gr. (Flat Base) | 40/10mm | 180 gr. (Truncated Cone) |
| 9mm | 115 gr. (Hollow Base) | | |
| 9mm | 124 gr. (Flat Base) | 45 | 230 gr. |

### Jacketed Soft/Hollow Point (JSP/JHP)

- Positive Expansion
- Proven Accuracy
- Notched Jacket

| Caliber | Bullet Wt. | Caliber | Bullet Wt. |
|---|---|---|---|
| 9mm | 115 gr. | 38/357 | 158 gr. |
| 9mm | 147 gr. | 40/10mm | 180 gr. |
| 38/357 | 110 gr. | 45 | 230 gr. |
| 38/357 | 125 gr. | | |
| 44 | 240 gr. | | |




30 Luger

380 Auto*

9mm Luger*

38 Super Auto +P

357 Sig*

38 Special*

357 Magnum*

40 Smith & Wesson*

10mm Auto

41 Remington Magnum

44 Special*

44 Magnum*

45 Auto*

45 Colt*

* Indicates Calibers available as either Primed or Unprimed Shellcases.

# Winchester Centerfire Handgun

# Handgun Data

| Bullet Wt. & Type | Pwdr | Starting Chg.Wt. (grs.) | Velocity (fps) | Pressure (psi) | Max Chg. Wt. (grs.) | Velocity (fps) | Pressure (psi) |
|---|---|---|---|---|---|---|---|
| **30 Luger** | | | | | | | |
| 93 gr. FMJ | 231 | | | | 4.2 | 1085 | 25,500cup |
| **32 S&W** | | | | | | | |
| 85 gr. Lead | 231 | | | | 1.4 | 595 | 9,500cup |
| **32 Auto** | | | | | | | |
| 71 gr. FMJ | 231 | | | | 2.5 | 865 | 14,000cup |
| **32 S&W Long** | | | | | | | |
| 98 gr. Lead | 231 | | | | 2.4 | 765 | 11,000cup |
| **38 S&W** | | | | | | | |
| 145 gr. Lead | 231 | | | | 2.6 | 675 | 11,500cup |
| **380 Auto** | | | | | | | |
| 95 gr. FMJ | 231 | | | | 3.2 | 860 | 15,000cup |
| **38 Auto** | | | | | | | |
| 130 gr. FMJ | 231 | | | | 4.4 | 875 | 20,000cup |
| **38 Super Auto +P** | | | | | | | |
| 115 gr. JHP | 231 | 5.0 | 1080 | 25,500 | 5.9 | 1230 | 34,200psi |
| | WSF | 6.0 | 1185 | 28,100 | 7.1 | 1320 | 34,400psi |
| 124 gr. FMJ | 231 | 4.9 | 1060 | 27,500 | 5.7 | 1185 | 34,600psi |
| | WSF | 5.2 | 1060 | 25,800 | 6.6 | 1245 | 34,600psi |
| 130 gr. FMJ | 231 | 4.8 | 1020 | 26,300 | 5.6 | 1145 | 34,800psi |
| | WSF | 5.4 | 1065 | 26,100 | 6.3 | 1200 | 34,400psi |
| 147 gr. JHP | 231 | 4.4 | 930 | 28,500 | 4.9 | 1010 | 34,900psi |
| | WSF | 4.8 | 960 | 27,300 | 5.6 | 1070 | 34,400psi |
| 160 gr. Lead | 231 | 3.5 | 860 | 27,300 | 4.2 | 955 | 34,400psi |
| | WSF | 3.8 | 875 | 25,300 | 4.9 | 1010 | 34,600psi |
| **38 Special** | | | | | | | |
| 148 gr. Lead HBWC | 231 | 2.9 | 690 | 12,400 | 3.3 | 770 | 16,100psi |
| | WST | 2.5 | 680 | 13,000 | 2.8 | 735 | 16,000psi |
| 148 gr. Lead BBWC | 231 | 3.0 | 690 | 13,600 | 3.4 | 760 | 16,400psi |
| | WST | 2.5 | 665 | 13,100 | 2.7 | 700 | 16,300psi |
| 158 gr. Lead | 231 | (6-1/8" barrel) (cowboy load) | | | 4.1 | 900 | 16,000psi |
| 158 gr. SWC | 231 | 4.0 | 745 | 12,600 | 4.5 | 830 | 15,800psi |
| | WST | 3.3 | 705 | 12,800 | 3.7 | 770 | 15,700psi |

# Handgun Data

| Bullet Wt. & Type | Pwdr | Starting Chg.Wt. (grs.) | Velocity (fps) | Pressure (psi) | Max Chg. Wt. (grs.) | Velocity (fps) | Pressure (psi) |
|---|---|---|---|---|---|---|---|
| **38 Special +P** | | | | | | | |
| 110 gr. JHP | 231 | 5.3 | 935 | 14,700psi | 5.7 | 1015 | 17,600psi |
| 125 gr. JHP | 231 | 4.8 | 840 | 14,100psi | 5.3 | 935 | 17,200psi |
| 140 gr. JHP | 231 | 4.3 | 685 | 13,900psi | 4.8 | 785 | 17,200psi |
| 158 gr. JHP | 231 | 4.0 | 635 | 13,900psi | 4.4 | 720 | 17,200psi |
| 158 gr. LSWC | 231 | | | | 4.7 | 860 | 17,100psi |
| | WST | | | | 3.9 | 800 | 17,300psi |
| **357 Magnum** | | | | | | | |
| 110 gr. JHP | 231 | | | | 8.8 | 1575 | 42,500cup |
| 125 gr. JHP | 231 | | | | 8.1 | 1460 | 42,500cup |
| 125 gr. JHP | 296* | | | | 18.5 | 1800 | 32,500cup |
| 145 gr. STHP | 296* | | | | 17.5 | 1640 | 31,600cup |
| 148 gr. WC | 231 | | | | 3.4 | 880 | 19,500cup |
| 150 gr. Lead | 231 | | | | 6.9 | 1305 | 42,000cup |
| 150 gr. Lead | 296* | | | | 14.0 | 1510 | 32,000cup |
| 158 gr. JHP | 231 | | | | 6.9 | 1260 | 42,000cup |
| 158 gr. Lead | 231 | | | | 6.7 | 1275 | 42,500cup |
| 158 gr. Lead | 296* | | | | 14.5 | 1560 | 38,000cup |
| 158 gr. JHP | 296* | | | | 16.6 | 1610 | 39,500cup |
| 170 gr. FMJ | 296* | | | | 14.3 | 1390 | 42,000cup |
| 200 gr. Lead | 231 | | | | 5.5 | 1060 | 42,500cup |
| 200 gr. Lead | 296* | | | | 12.4 | 1335 | 35,000cup |
| **357 Maximum** | | | | | | | |
| 180 gr. FMJ | 296* | | | | 19.0 | 1670 | 46,900cup |
| **357 Sig** | | | | | | | |
| 125 gr. FMC-FN | WSF | | | | 7.1 | 1260 | 33,800psi |
| **9x23mm Winchester** | | | | | | | |
| 125 gr. JHP | 231 | | | | 5.3 | 1180 | 38,000psi |
| 125 gr. JHP | 231 | | | | 6.3 | 1300 | 46,000psi |
| **9mm Luger** | | | | | | | |
| 95 gr. FMJ | 231 | 4.6 | 1145 | 27,100psi | 5.1 | 1235 | 32,600psi |
| 114 gr. Lead CCN | 231 | 3.8 | 1010 | 26,900psi | 4.2 | 1115 | 32,000psi |
| 115 gr. FMJ | 231 | 4.4 | 1045 | 25,900psi | 4.9 | 1135 | 32,600psi |
| | WSF | 4.9 | 1060 | 24,200psi | 5.7 | 1195 | 31,900psi |
| 115 gr. JHP | 231 | 4.3 | 1010 | 25,800psi | 4.8 | 1120 | 32,100psi |
| | WSF | 5.2 | 1095 | 28,700psi | 5.7 | 1165 | 32,100psi |
| 124 gr. Lead RN | 231 | 3.3 | 910 | 23,800psi | 4.0 | 1035 | 32,900psi |
| | WSF | 4.0 | 945 | 22,200psi | 4.7 | 1055 | 27,300psi |
| 124 gr. FMJ | 231 | 4.2 | 1005 | 28,800psi | 4.5 | 1060 | 32,700psi |
| | WSF | 4.7 | 1015 | 27,700psi | 5.3 | 1115 | 32,700psi |
| 147 gr. Lead CFP | 231 | 3.3 | 865 | 29,000psi | 3.5 | 905 | 32,100psi |
| | WSF | 3.7 | 905 | 28,500psi | 4.1 | 965 | 32,800psi |
| 147 gr. FMJ | WSF | 3.9 | 895 | 28,400psi | 4.3 | 950 | 32,300psi |
| 147 gr. JHP | WSF | 4.0 | 900 | 30,100psi | 4.3 | 935 | 32,300psi |

** Note: 296 powder is considered to be one of the best powders for use in magnum handgun cartridges. Please refer to page 6 for recommended primer and use a very heavy crimp. Failure to follow this procedure could result in poor ignition and/or squib loads under extreme circumstances, particularly in loads where less than 90% of the available powder space is being used (low loading density).*

# Handgun Data

| Bullet Wt. & Type | Pwdr | Starting Chg.Wt. (grs.) | Velocity (fps) | Pressure (psi) | Max Chg. Wt. (grs.) | Velocity (fps) | Pressure (psi) |
|---|---|---|---|---|---|---|---|
| **40 S&W** | | | | | | | |
| 150 gr. JHP | 231 | 5.2 | 970 | 21,800psi | 6.3 | 1150 | 33,200psi |
| | WST | 5.5 | 990 | 23,900psi | 6.3 | 1050 | 27,100psi |
| | WSF | 6.7 | 1100 | 26,200psi | 7.7 | 1200 | 33,200psi |
| 155 gr. JHP | 231 | 5.1 | 950 | 23,200psi | 6.0 | 1100 | 33,200psi |
| | WST | 5.5 | 980 | 24,000psi | 6.0 | 1040 | 27,900psi |
| | WSF | 6.0 | 1010 | 21,600psi | 7.3 | 1180 | 33,200psi |
| 170 gr. JHP | 231 | 4.5 | 860 | 24,000psi | 5.3 | 1000 | 33,200psi |
| | WST | 4.2 | 830 | 22,100psi | 5.5 | 970 | 30,100psi |
| | WSF | 5.5 | 920 | 23,300psi | 6.5 | 1080 | 33,200psi |
| 170 gr. Lead | 231 | 4.0 | 850 | 22,800psi | 5.2 | 1030 | 33,200psi |
| | WST | 4.0 | 870 | 22,800psi | 5.0 | 970 | 30,000psi |
| | WSF | 5.2 | 950 | 23,500psi | 6.2 | 1090 | 33,200psi |
| 180 gr. JHP | 231 | 4.0 | 790 | 23,700psi | 5.0 | 950 | 33,200psi |
| | WST | 4.0 | 780 | 21,800psi | 5.0 | 900 | 28,100psi |
| | WSF | 5.0 | 860 | 22,900psi | 6.2 | 1040 | 33,200psi |
| 200 gr. FMJ | 231 | 4.0 | 750 | 26,600psi | 4.7 | 850 | 33,200psi |
| | WST | 3.8 | 740 | 24,200psi | 4.5 | 810 | 29,900psi |
| | WSF | 4.9 | 840 | 25,600psi | 5.7 | 930 | 33,200psi |
| 200 gr. Lead | 231 | 3.0 | 700 | 21,100psi | 4.0 | 850 | 33,200psi |
| | WST | | | | 3.5 | 760 | 25,200psi |
| | WSF | 3.9 | 785 | 21,800psi | 5.0 | 920 | 33,200psi |
| **10MM** | | | | | | | |
| 150 gr. JHP | 231 | 6.0 | 1090 | 29,000psi | 7.0 | 1210 | 35,600psi |
| | WST | 5.5 | 1080 | 30,200psi | 7.0 | 1190 | 34,000psi |
| | WSF | 6.5 | 1090 | 24,700psi | 8.1 | 1310 | 35,600psi |
| 155 gr. JHP | 231 | 5.8 | 1040 | 23,300psi | 7.3 | 1250 | 35,600psi |
| | WST | 5.0 | 1000 | 23,100psi | 8.0 | 1220 | 31,900psi |
| | WSF | 6.8 | 1100 | 23,000psi | 8.4 | 1320 | 35,600psi |
| 170 gr. Lead | 231 | 4.8 | 980 | 26,400psi | 5.6 | 1100 | 35,600psi |
| | WST | | | | 5.0 | 1020 | 32,100psi |
| | WSF | 5.5 | 1020 | 25,700psi | 6.6 | 1170 | 35,600psi |
| 170 gr. JHP | 231 | 4.7 | 880 | 20,600psi | 6.3 | 1120 | 35,600psi |
| | WST | 4.5 | 940 | 26,200psi | 5.5 | 1020 | 29,500psi |
| | WSF | 6.0 | 1020 | 24,000psi | 7.5 | 1210 | 35,600psi |
| 180 gr. JHP | 231 | 5.2 | 950 | 29,600psi | 5.8 | 1050 | 35,600psi |
| | 296* | | | | 12.6 | 990 | 22,400psi |
| | WST | 5.0 | 950 | 30,500psi | 5.5 | 1010 | 35,200psi |
| | WSF | 5.7 | 950 | 25,000psi | 7.1 | 1150 | 35,600psi |
| 190 gr. FMJ | 231 | 4.6 | 800 | 22,000psi | 5.9 | 1030 | 35,600psi |
| | 296* | | | | 12.6 | 970 | 22,200psi |
| | WST | | | | 4.5 | 850 | 26,700psi |
| | WSF | 5.5 | 880 | 22,000psi | 7.1 | 1120 | 35,600psi |
| 200 gr. Lead | 231 | 4.2 | 870 | 24,200psi | 5.5 | 1030 | 35,600psi |
| | WST | 3.8 | 830 | 23,900psi | 5.0 | 940 | 32,400psi |
| | WSF | 5.0 | 920 | 23,500psi | 6.3 | 1080 | 35,600psi |
| 200 gr. FMJ | 231 | 4.6 | 840 | 24,600psi | 5.6 | 1000 | 35,600psi |
| | 296* | | | | 11.6 | 940 | 23,600psi |
| | WST | | | | 4.6 | 890 | 35,600psi |
| | WSF | 5.2 | 880 | 26,200psi | 6.2 | 1020 | 35,600psi |

** Note: 296 powder is considered to be one of the best powders for use in magnum handgun cartridges. Please refer to page 6 for recommended primer and use a very heavy crimp. Failure to follow this procedure could result in poor ignition and/or squib loads under extreme circumstances, particularly in loads where less than 90% of the available powder space is being used (low loading density).*

# Handgun Data

| Bullet Wt. & Type | Pwdr | Starting Chg.Wt. (grs.) | Velocity (fps) | Pressure (psi) | Max Chg. Wt. (grs.) | Velocity (fps) | Pressure (psi) |
|---|---|---|---|---|---|---|---|
| **41 Magnum** | | | | | | | |
| 210 gr. Lead | 231 | | | | 7.4 | 1125 | 28,000cup |
| 210 gr. JSP | 231 | | | | 8.8 | 1220 | 38,000cup |
| | 296* | | | | 20.4 | 1460 | 24,000cup |
| **44 S&W Special** | | | | | | | |
| 246 gr. Lead | 231 | | | | 5.4 | 795 | 12,500cup |
| 240 gr. Lead | 231 | (cowboy load-6-12"barrel) | | | 4.9 | 800 | 13,000cup |
| **44 Rem Mag** | | | | | | | |
| 210 gr. JHP | 231 | | | | 11.7 | 1385 | 38,000cup |
| 240 gr. Lead SWC | 231 | | | | 11.0 | 1285 | 38,000cup |
| | 296* | | | | 25.0 | 1560 | 37,500cup |
| 240 gr. HSP | 231 | | | | 11.2 | 1280 | 38,000cup |
| | 296 | | | | 24.0 | 1430 | 38,000cup |
| **45 Colt** | | | | | | | |
| 255 gr. Lead | 231 | | | | 7.1 | 875 | 13,000cup |
| 250 gr. Lead | 231 | (cowboy load-5-1/2" barrel) | | | 5.5 | 750 | 10,000psi |
| **454 Casull** | | | | | | | |
| 260 gr. JSP | 296* | | | | 34.0 | 1830 | 40,000psi |
| | 296* | | | | 36.0 | 1965 | 50,000psi |
| 300 gr. JSP | 296* | | | | 29.5 | 1600 | 38,000psi |
| | 296* | | | | 31.5 | 1750 | 50,000psi |
| **45 Auto** | | | | | | | |
| 180 gr. Lead | 231 | 5.3 | 885 | 15,300psi | 6.3 | 1020 | 20,000psi |
| Cast SWC | WST | 4.6 | 880 | 16,200psi | 5.4 | 1000 | 20,000psi |
| | WSF | 6.6 | 960 | 15,900psi | 7.4 | 1060 | 20,000psi |
| 185 gr. JSWC | 231 | 5.1 | 760 | 13,300psi | 6.1 | 920 | 18,600psi |
| | WST | 4.3 | 745 | 13,400psi | 5.3 | 890 | 19,000psi |
| | WSF | 6.0 | 775 | 12,800psi | 7.0 | 950 | 17,600psi |
| 185 gr. JHP | 231 | 6.2 | 915 | 17,200psi | 6.8 | 990 | 19,500psi |
| | WST | 5.1 | 875 | 17,100psi | 5.6 | 935 | 19,800psi |
| | WSF | 7.2 | 920 | 15,600psi | 7.9 | 1035 | 19,700psi |
| 200 gr. Lead | 231 | 4.8 | 800 | 14,900psi | 5.5 | 910 | 19,600psi |
| Cast SWC | WST | 4.4 | 830 | 15,400psi | 5.1 | 910 | 19,900psi |
| | WSF | 6.0 | 870 | 15,200psi | 6.7 | 970 | 19,400psi |
| 200 gr. FPJ | 231 | 5.4 | 815 | 16,200psi | 6.1 | 920 | 19,900psi |
| | WST | 4.7 | 825 | 16,400psi | 5.3 | 890 | 20,000psi |
| | WSF | 6.5 | 870 | 15,500psi | 7.3 | 980 | 19,400psi |
| 200 gr. JHP | 231 | 5.3 | 830 | 16,200psi | 5.8 | 905 | 19,500psi |
| | WST | 4.7 | 820 | 16,900psi | 5.2 | 885 | 19,900psi |
| | WSF | 6.6 | 870 | 15,500psi | 7.1 | 970 | 19,500psi |
| 230 gr. Lead RN | 231 | 4.5 | 765 | 15,500psi | 5.1 | 870 | 19,800psi |
| | WST | 4.0 | 750 | 16,200psi | 4.5 | 805 | 20,100psi |
| | WSF | 5.5 | 820 | 15,200psi | 6.2 | 910 | 19,600psi |
| 230 gr. FMJ | 231 | 4.9 | 695 | 14,900psi | 5.7 | 830 | 19,200psi |
| | WST | 4.1 | 710 | 15,500psi | 4.9 | 800 | 19,900psi |
| | WSF | 5.7 | 755 | 14,900psi | 6.6 | 885 | 19,200psi |
| 230 gr. JHP | 231 | 4.8 | 740 | 18,000psi | 5.1 | 785 | 20,000psi |
| | WSF | 5.7 | 780 | 16,500psi | 6.1 | 850 | 19,600psi |

** Note: 296 powder is considered to be one of the best powders for use in magnum handgun cartridges. Please refer to page 6 for recommended primer and use a very heavy crimp. Failure to follow this procedure could result in poor ignition and/or squib loads under extreme circumstances, particularly in loads where less than 90% of the available powder space is being used (low loading density).*

# *WARNINGS*

***Read before using data***

The shotshell and metallic cartridge data in this booklet supersede all previous data published for Winchester smokeless propellants.

The data shown in this booklet has been verified by tests fired in our laboratory under controlled conditions and found to produce safe cartridges. Since we have no control over the actual loading procedures and methods used, or the condition or choice of firearms and components used and assembled, no responsibility for the use or safety in use of these data is assumed or implied. Where data contained in this booklet list specific components, no changes or substitutions for these components can be made. The exception to this is substitutions of bullets of the same type, diameter, and weight from reputable manufacturers, without risking significant changes in the level of ballistic performance and/or safety of the loads shown.

***WARNING - All smokeless powders are extremely flammable. Keep them stored in their original containers in locked cabinets, out of the reach of children or incompetent persons, and away from exposure to the sun's rays, heating equipment, electrical equipment, or any source of heat, flame or sparks.***

***WE MAKE NO WARRANTIES EXPRESS OR IMPLIED, LIMITED OR FULL; SPECIFICALLY DISCLAIM ANY AND ALL WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY; AND SPECIFICALLY DISCLAIM ANY AND ALL LIABILITY FOR CONSEQUENTIAL DAMAGES OF ANY KIND WHATSOEVER. FAILURE TO COMPLY WITH THESE WARNINGS OR TO USE THIS DATA EXACTLY AS SHOWN MAY RESULT IN ACCIDENTS WITH SERIOUS INJURY AND/OR DEATH TO THE SHOOTER AND/OR RELOADER AND/OR BYSTANDERS.***

***Black Powder - WARNING***

Never substitute smokeless powder for black powder or Pyrodex or mix smokeless powder with black powder or Pyrodex. Never use smokeless powder in black powder firearms or in saluting cannons. Smokeless powder has much more energy than black powder or Pyrodex. Substituting or mixing powders may cause the firearm to blow up resulting in personal injury, property damage, or death.

***Lead - WARNING***

Discharging firearms in poorly ventilated areas, cleaning firearms, or handling ammunition may result in exposure to lead, and other substances known to cause birth defects, reproductive harm, and other serious physical injury. Have adequate ventilation at all times. Wash hands thoroughly after exposure.

***Dram Equivalent - WARNING***

Never use the dram equivalent measure as a weight for smokeless powders in reloading. Dangerously high pressures can occur and result in personal injury, property damage, or death.

***Powder Storage - WARNING***

The following information has been extracted from a pamphlet entitled "Properties and Storage of Smokeless Powder" issued by the Sporting Arms and Ammunition Manufacturers Institute (SAAMI) at Flintlock Ridge Office Center, 11 Mile Hill Rd., Newtown, CT 06470-2359/203-426-1320; FAX: 203-426-1087. For a free copy of the complete pamphlet send a self-addressed, stamped envelope to the above address and request the pamphlet by title.

***Considerations for Storage of Smokeless Powder***

Smokeless powder is intended to function by burning, so it must be protected against accidental exposure to flame, sparks or high temperatures.

For these reasons, it is desirable that storage enclosures be made of insulating materials to protect the powder from external heat sources.

Once smokeless powder begins to burn, it will normally continue to burn (and generate gas pressure) until it is consumed.

D.O.T. approved containers are constructed to open up at low internal pressures to avoid the effects normally produced by the rupture or bursting of a strong container.

Storage enclosures for smokeless powder should be constructed in a similar manner:

1. Of fire-resistant and heat insulation materials to protect contents from external heat.
2. Sufficiently large to satisfactorily vent the gaseous products of combustion which would result if the quantity of smokeless powder within the enclosure accidentally ignited.

If a small, tightly enclosed storage enclosure is loaded to capacity with containers of smokeless powder, the wall of the enclosure will expand or move outwards to release the gas pressure if the powder in storage is accidentally ignited. Under such conditions, the effects of the release of gas pressure are similar or identical to the effects produced by an explosion.

Hence only the smallest practical quantities of smokeless powder should be kept in storage, and then in strict compliance with all applicable laws, regulations and recommendations of the National Fire Protection Association (reprinted at end of SAAMI pamphlet).

***Recommendations for Storage of Smokeless Powder***

STORE IN A COOL, DRY PLACE. Be sure the storage area selected is free from any possible sources of excess heat and is isolated from open flame, furnaces, hot water heaters, etc. Do not store smokeless powder where it will be exposed to sun's rays. Avoid storage in areas where mechanical or electrical equipment is in operation. Restrict from the storage areas heat or sparks which may result from improper, defective or overloaded circuits.

DO NOT STORE SMOKELESS POWDER IN THE SAME AREA WITH SOLVENTS, FLAMMABLE GASES OR HIGHLY COMBUSTIBLE MATERIALS.

STORE ONLY IN DEPARTMENT OF TRANSPORTATION APPROVED CONTAINERS. Do not transfer the powder from an approved container into one which is not approved.

DO NOT SMOKE IN AREAS WHERE POWDER IS STORED OR USED. Place appropriate "No Smoking" signs in these areas.

DO NOT SUBJECT THE STORAGE CABINETS TO CLOSE CONFINEMENT.

STORAGE CABINETS SHOULD BE CONSTRUCTED OF INSULATING MATERIALS AND WITH A WEAK WALL, SEAMS OR JOINTS TO PROVIDE AN EASY MEANS OF SELF-VENTING.

DO NOT KEEP OLD OR SALVAGED POWDERS. Check old powder for deterioration regularly. Destroy deteriorated powders immediately.

OBEY ALL LAWS AND REGULATIONS REGARDING QUANTITY AND METHODS OF STORING. Do not store all your powders in one place. If you can, maintain separate storage locations. Many small containers are safer than one or more large containers.

KEEP YOUR STORAGE AND USE AREA CLEAN. Clean up spilled powder promptly. Make sure surrounding area is free of trash or other readily combustible materials.

***How to Check Smokeless Powder for Deterioration***

Powder deterioration can be checked by opening the cap on the container and smelling the contents. Powder undergoing deterioration has an irritating odor. (Don't confuse this with common solvent odors such as alcohol, ether and acetone.)

The best way to dispose of deteriorated smokeless powder is to burn it out in the open at an isolated location in small shallow piles (not over 1" deep). The quantity burned in any one pile should never exceed one pound. Use an ignition train of slow burning combustible material so the person may retreat to a safe distance before powder is ignited.

***Primer - WARNING***

***Instructions & Warning for the Safe Storage and Handling of Primers***

It is the responsibility of all persons who receive, store and use primers to be aware of the hazards and to know and follow all approved safety procedures. It is your responsibility to strictly comply with all applicable federal, state and local laws, regulations and ordinances.

***Properties of Primers - DANGER***

BULK STORAGE OF PRIMERS IS EXTREMELY DANGEROUS!!

Primers should never be stored, handled or used in bulk; i.e. piled or poured together. The energy of one exploding primer is sufficient to cause mass detonation of the surrounding primers. This could result in property damage and serious injury or death to operators and/or bystanders.

Note: Primers Should Always Be Kept In Their Original Factory Containers.

Primers contain mixtures of chemical ingredients designed to explode and provide the necessary energy in the form of hot particles, heat, & gas to ignite propellant powders.

Primers are sensitive to the following:

Impact, Friction, Heat, Flame, Static Electricity, and Mishandling abuses.

Conditions which may cause misfires or poor ignition:

Exposure to water
Exposure to organic solvents such as paint thinner, gasoline, oil, grease, penetrating lubricants, etc.
Exposure to temperatures above 140 degrees Fahrenheit

Primers subjected to shaking, vibration, jolting, etc. may separate small particles of priming compound. This is referred to as "dusting". Accumulation of primer dust in primer feeds, on machine surfaces, in loading areas, etc. is extremely dangerous. Primer dust may cause fires and/or explosions due to heat, impact, friction, flame or static electricity. These areas must be kept very clean.

***Storage of Primers– Store in a Cool Dry Place***

BULK STORAGE OF PRIMERS IS EXTREMELY DANGEROUS!!

Primers should never be stored, handled or used in bulk; i.e. piled or poured together. The energy of one exploding primer is sufficient to cause mass detonation of the surrounding primers. This could result in property damage and serious injury or death to operators and/or bystanders.

Note: Store Primers in a Cool Dry Place Away From Heat, Sparks & Flame.

Cabinets designated for primers only are recommended. They should be constructed of materials designed to provide a substantial delay in the transmissions of heat in case of fire.

The storage area should be clean and free of other combustible materials such as propellant powders, solvents, flammable gases, etc. Avoid areas which may be subjected to high temperatures, open flames, furnaces, water heaters, direct sunlight, gunfire and bullet impact, the operation of mechanical or electrical equipment and static electricity. Primers should be stored in original factory containers only. The packaging has been designed to minimize accidental ignition and to protect the consumers as well as the primers.

NEVER SMOKE IN PRIMER STORAGE AREAS.

Observe all federal, state and local laws, regulations and ordinances regarding quantities of primers stored and conditions of storage.

***Handling of Primers - Handle with Care***

BULK HANDLING OF PRIMERS IS EXTREMELY DANGEROUS!!

Primers should never be stored, handled or used in bulk; i.e. piled or poured together. The energy of one exploding primer is sufficient to cause mass detonation of the surrounding primers. This could result in property damage and serious injury or death to operators and/or bystanders.

Safety glasses should be worn at all times. Additional protection such as face shields and machine guards are also recommended for personal safety.

NEVER SMOKE WHILE HANDLING PRIMERS.

Primers are extremely sensitive and should always be handled with care.

Primers should be handled individually with adequate safeguards. The use of primer feeds for reloading is not recommended. Adequate protection from the danger of explosion must be provided by machine guards, barriers, etc.. Primer feeds allowing contact between or among individual primers cause a potentially dangerous condition and are to be avoided. One exploding primer could cause detonation of all primers in the area.

Do not decap live primers. It is recommended live primers be destroyed by firing the empty shell or cartridge in a suitable firearm.

Areas designated for the storage and/or handling of primers should require equipment and wiring methods suitable for hazardous locations (National Electrical Code, Class II, Div. I). Persons responsible for these areas should also observe and comply with all applicable federal, state and local laws, regulations and ordinances pertinent to their location.

Precautions should be taken to prevent the accumulation of static electricity on persons handling primers or conducting handloading procedures. Cotton clothing, conductive shoes & floors, individual ground straps, static bars, leg stats, and proper electrical/mechanical grounds all help to reduce, dissipate and/or eliminate the buildup of static electricity. Atmospheric conditions, especially low humidity, will increase the potential of static accumulation. The working area should be maintained at a comfort-able temperature with a relative humidity of at least 60% to minimize static buildup and/or discharge.

Good housekeeping is a must for safe cartridge loading and primer handling. Equipment and work areas should be kept clean and free of loose primers, primer dust, propellant powder, and/or abrasive materials. A damp cloth or sponge should be used to clean contaminated areas and be thoroughly rinsed after use. Do not use a vacuum cleaner because fire or explosion may result.

Loading operations should be conducted with a minimum quantity of primers. Unused primers should be returned to the original package and placed in a designated safe storage area.

It is common sense to make primers unavailable to children, household pets, and any individuals that are not familiar with the potential danger of primers.

Never smoke or allow open flames, spark sources or hot particles near primers or loading areas.

Additional References:

Sporting Arms & Ammunition Manufacturer's Institute (S.A.A.M.I.)
National Electrical Code (NEC)
National Fire Protection Association (NFPA) 495, Explosive Materials Code
Occupational Safety & Health Administration (OSHA)

***WARNING: DO NOT INTERCHANGE FEDERAL 209 AND FEDERAL 209A PRIMERS***

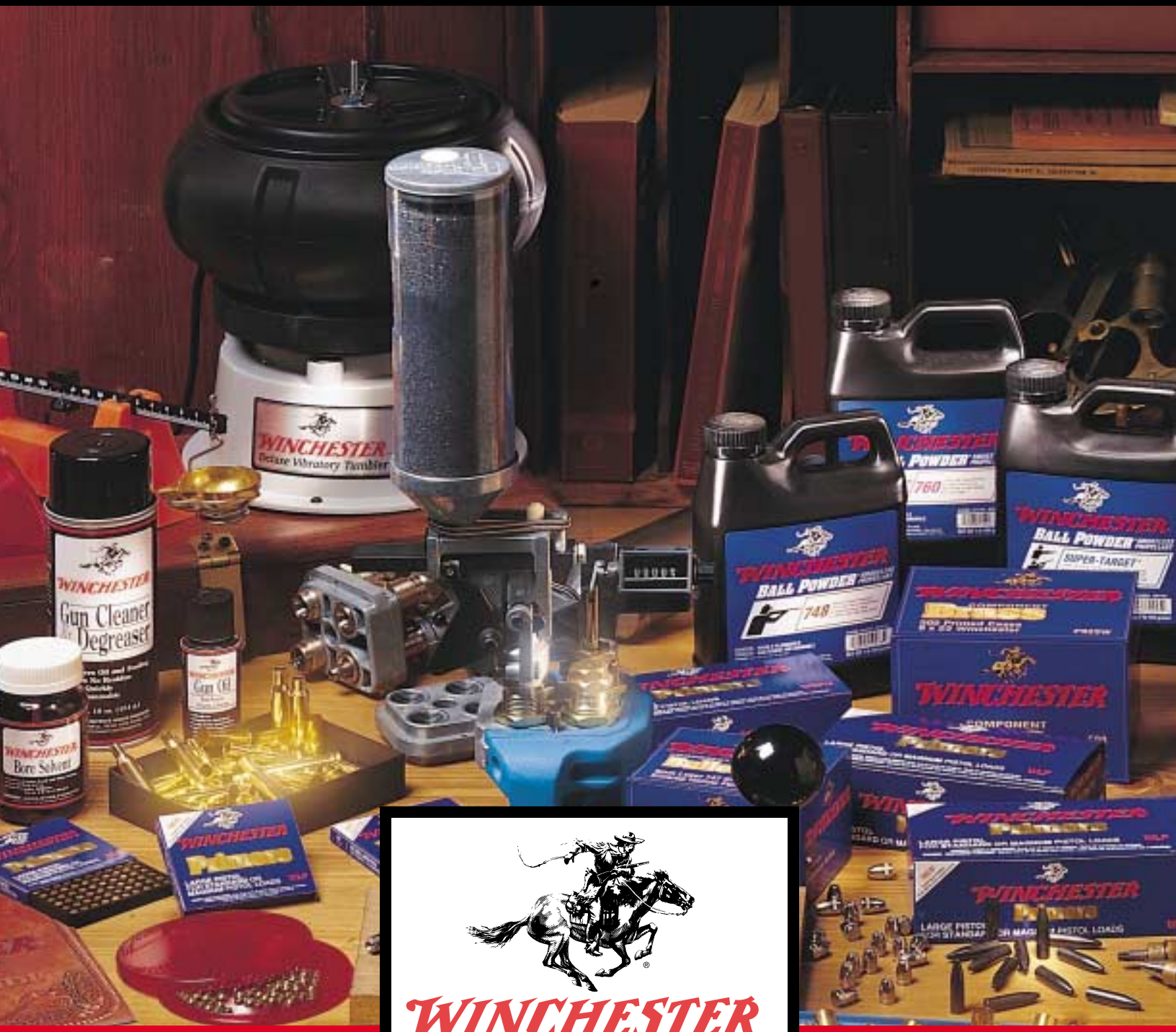
***Reloading Precautions – WARNING***

Follow these precautions to assure maximum enjoyment and safety in reloading and uniform performance of your reloads. Remember you can suffer severe burns, be badly injured, or killed if the strictest safety precautions and housekeeping rules are not enforced.

1. Exercise care at all times. Wear safety glasses while reloading.
2. Never smoke while handling powder or primers or during any reloading operation.
3. Keep powder and primers away from heat, sparks and open flames.
4. Store powder in a cool, dry place at all times.
5. Never use a powder unless you are certain of its identity.
5. -Always read warnings on powder and component container labels.
5. -Always read and understand the instruction manual for your reloading machine/tools.
5. -Always reload in strict compliance with instructions in current reloading manuals.
6. Do not mix powders.
7. Devote full attention to reloading operations– avoid distractions.
8. Keep powder and primers out of reach of children.
9. Use components as recommended; don't take shortcuts.
10. Never exceed maximum recommended loads.
11. Examine every shell or cartridge before loading to insure good condition.
12. Double check every operation for safety and uniformity.
13. Check powder charge level in shells to avoid double charges.
14. On centerfire loads, start with charge weights 10% below recommended maximum loads.
15. Always watch for indications of excessive pressure.
16. Do not decap live primers; it is safer to destroy them by firing the empty shell or cartridge in a firearm.
17. Do not substitute components, except bullets of the same type and weight from reputable manufacturers. It could result in a significant change in ballistics, and unsatisfactory or even dangerous load.
18. Observe all local fire regulations and codes with respect to quantities of powders and primers stored and conditions of storage.
19. Store powder in its original container. Never transfer it from one storage container to another since this increases the possibility of becoming mislabeled.
20. Do not use the shotshell data contained in this handbook with steel shot; to do so would cause an extremely dangerous condition. Steel shot requires the use of special data, wads and powders.

When such components become available, Winchester will develop data specifically for steel shot.

# WINCHESTER® COMPONENTS CATALOG

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