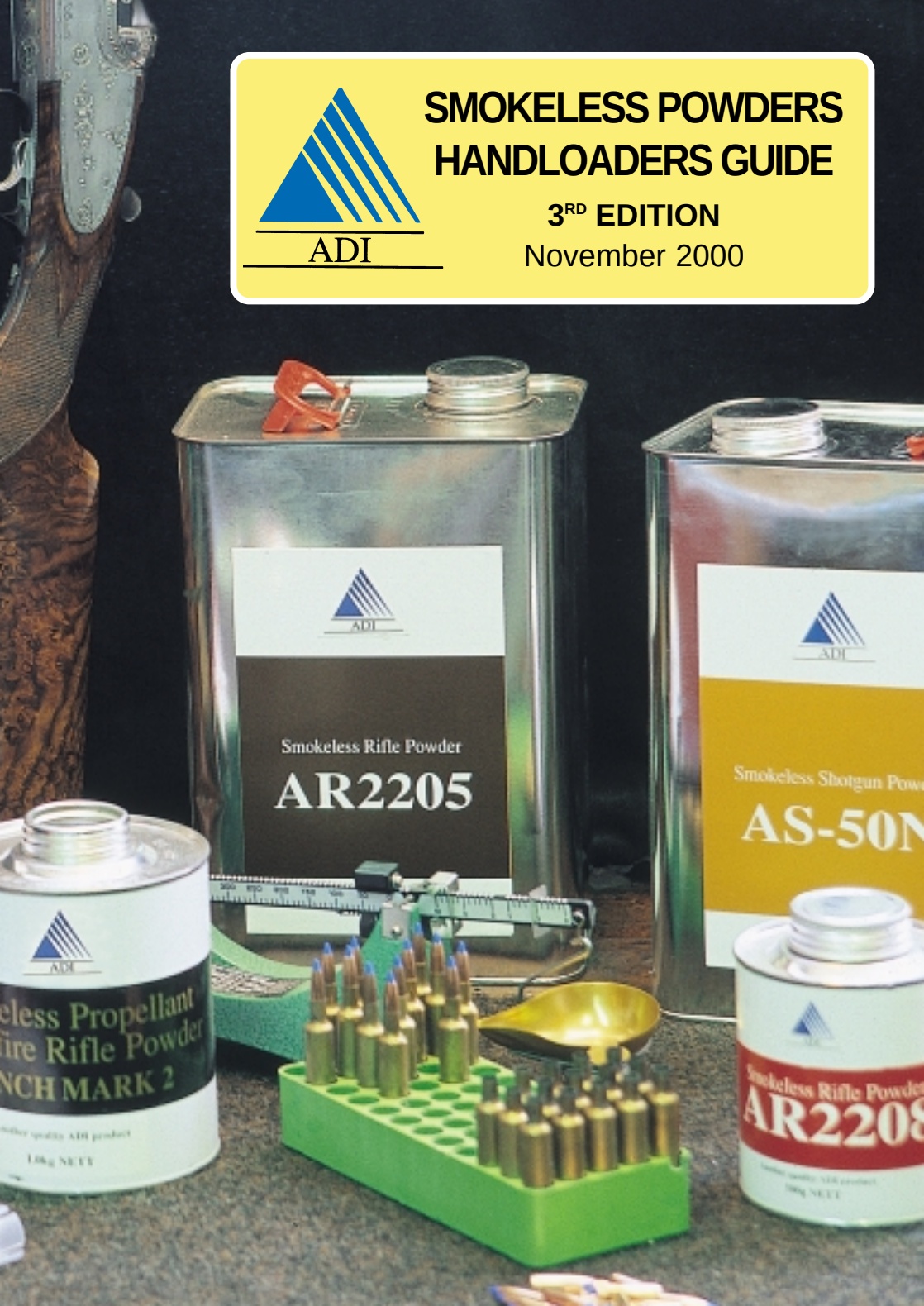

ADI
SMOKELESS POWDERS
HANDLOADERS GUIDE
3RD EDITION
November 2000
Smokeless Rifle Powder
AR2205
Smokeless Shotgun Pow
AS-50N
Smokeless Rifle Powde
AR2208

ADI

ADI Limited is one of Australia's foremost defence companies, employing some 3,000 people. ADI's businesses run the gamut of defence support activities, from ammunition production through to the installation and commissioning of complex ship management and radar systems. ADI is proud of its position in the Australian market, and constantly strives to improve its performance through investment and innovation.

In the year 2000 ADI is nearing 115 years of experience in ammunition manufacture and 90 years of powder production. The company can trace its roots to the Colonial Ammunition Company (1888, Footscray, Victoria) and "the Cordite Factory" (1911, Maribyrnong, Victoria). In the time since we have seen many changes, but one constant has been a commitment to providing quality ammunition and components for use in the defence of our country.

ADI's ammunition and propellant capabilities have kept pace with rapid developments in applied technology. Now extending to production of insensitive rocket motor propellant and motor filling, insensitive warhead filling and development of a quality Australian propellant for the Australian Army's 25mm Bushmaster cannon ammunition, ADI's expertise and capability in energetic materials is second-to-none in our region.

Australia's sporting shooters have for some years now enjoyed using ADI sporting powders. Products on the Australian market are a direct result of our defence commitment, and our partnership with the Hodgdon Powder Co. Inc. of the USA. ADI powders are now used by discerning shooters across the globe, and we like to think that our commitment to quality and innovation will see us at the forefront of powder development and manufacture for many years to come.

ADI Sporting Powders cover the full range of burning rate requirements from the fast burning handgun and shotgun powders right down to the very slow big-bore magnum rifle powders.

The shotgun powders are all large diameter disc powders, double base in composition, covering a wide range of applications in 12,20 and 28 gauge loads. All the shotgun powders are exceptionally clean burning.

The handgun powders are all smaller diameter disc powders manufactured for very uniform metering through powder loaders. The faster burning powders are double base in composition for increased energy. The slower burning powders for use in heavy loads are single base. All the handgun powders are exceptionally clean burning when loaded correctly. Note that the three fastest handgun powders are all matched with the nominal burning rates and bulk densities of the three shotgun powders but, because of their smaller size, they offer superior ability to be metered for small charge weights from standard powder loaders. Reloaders should endeavour to use the AS series powders in shotgun and the AP series powders in pistol where possible.

All the rifle powders are single perforated tubular propellants of single base composition based on ADI's experience in developing powders for the Australian Defence Forces' use in extreme climatic conditions. As a consequence all the rifle powders have, as a feature, low ballistic temperature coefficients – i.e. velocities and pressures do not vary with ambient temperature like most of the other powders available for reloading. In addition, the powders all have good loading characteristics with respect to bulk density and uniformity of metering through powder loaders. They are also very clean burning at normal loads.

All ADI sporting powders are packaged as UN class 1, Hazard Division 1.3C. (mass fire risk).

ADI powders are packed in 500 grams, 1kg, 2kg, or 4kg containers, depending upon type of powder.

ADI Smokeless Sporting Powders

Powder	Type	Can Size
AS-30N	SHOTGUN/PISTOL	0.5 kg / 2 kg
AP-30N (Discontinued)	PISTOL	
AS-50N	SHOTGUN	0.5 kg / 2 kg
AP-50N	PISTOL	0.5 kg / 2 kg
AS-70N (Discontinued)	SHOTGUN	
AP-70N	SHOTGUN/PISTOL	0.5 kg / 2 kg
AP-90 (Discontinued)	PISTOL	
AP-100	PISTOL	0.5 kg / 2 kg
AR2205	RIFLE/PISTOL	0.5 kg / 4kg
AR2207	RIFLE	0.5 kg / 4kg
BM1	RIFLE	1 kg
AR2206	RIFLE	0.5 kg / 4kg
BM2	RIFLE	1 kg
AR2208	RIFLE	0.5 kg / 4kg
AR2209	RIFLE	0.5 kg / 4kg
AR2213 (Discontinued)	RIFLE	
AR2213SC (New)	RIFLE	0.5 kg / 4kg
AR2214 (Discontinued)	RIFLE	
AR2217 (Coming soon)	RIFLE	0.5 kg / 4kg
AR2218	RIFLE	0.5 kg / 4kg

SHOOT WITH THE BEST!

ADI's range of powders offers the sporting shooter all the reliability, consistency and high performance they demand. Tested under the most rigorous conditions, this state-of-the-art (and development and production of quality powders *is* an art) range of powders offers the right burning rates for every weapon type – from shotguns to big-bore rifles.

All ADI powders are manufactured to the highest international standards. And they are backed by a comprehensive technical support service.

If you care enough to reload, you'll use ADI powders. And shoot with the best.

Pistol and Shotgun Powders

ADI shotgun powders are available in a range of burning rates for 12, 20 and 28 gauge cartridges. Exceptionally clean burning, these unique sporting powders offer great repeatability under a wide range of ambient temperatures.

For sporting pistol shooters, ADI offers a range of powders with clean burning properties similar to shotgun powders. Covering the range of calibres from .25 ACP to .50 Action Express, ADI's pistol powders perform with ultimate repeatability and reliability.

Rifle Powders

For rifles, the ADI sporting powders range is a product of our extensive experience in developing propellants for the Australian Defence Force. ADI offers a range of powders for most calibres from .17 Remington to 0.50 BMG.

CONTENTS

Cover photo by Ben Eu (Gunsmith/Photographer) of Mialls Gunshop, Frankston Vic. Ph: 9783 1576

Darryl Page

Dear Shooter,

Whilst it has been some time in the making, it is with pleasure that I present the 3rd Edition of our reloading guide. You will certainly notice some differences in this edition, the least of which is ADI's new blue logo, one result of the recent purchase of ADI by the Transfield/Thomson-CSF Joint Venture. With these new owners, ADI is now part of a strong and focussed international business and looks forward to a long future.

Secondly, you will notice more data! Through our strong partnership with Hodgdon Powder Co. Inc. of the USA, we can now offer a reliable, much expanded range of data in this guide. Data for many obscure and unusual cartridges, as well as new cartridges has been included. The data has been fired under controlled conditions to ensure safety and repeatability.

Finally, you will notice changes to the range of powders offered. We have, and will continue, to add new powders to our product range as they are developed, and discontinue powders for which demand has almost ceased or duplication exists.

I hope you find this guide a valuable tool, and wish to thank you for your support over the years through continued purchase of ADI Sporting Powders. If you keep buying them, we'll keep making them.

Happy shooting

Darryl Page
Director of Ordnance
ADI Limited

SHOTGUN POWDERS

In approximate order of burning rate from fastest to slowest.

AS-30N

An effective low bulk density, high burning rate shotgun powder very suitable for 24 gram loads up to 1350 ft/sec and its burning rate and bulk density are comparable with those for powders such as Hercules Red Dot®.

TYPICAL LOAD: Winchester compression formed case – 12 gauge. 70mm length
Winchester WAA1224 wad
Winchester W209 Primer

SHOT WEIGHT	24 grams lead shot
CHARGE WEIGHT	18.50 grains
VELOCITY	1300 ft/sec
PRESSURE	9500 psi

AS-50N

An effective intermediate bulk density, fast/medium burning rate shotgun powder very suitable for 28 gram loads up to 1350 ft/sec in 12 gauge and 24 gram loads up to 1200 ft/sec in 20 gauge. Its burning rate and bulk density are in the region of those for powders such as Hercules Green Dot®.

TYPICAL LOAD: Winchester compression formed case – 12 gauge. 70mm length
Winchester WAA12SL wad
Winchester W209 Primer

SHOT WEIGHT	28 grams lead shot
CHARGE WEIGHT	21.5 grains
VELOCITY	1300 ft/sec
PRESSURE	10,450 psi

AP-70N

An effective, moderately high bulk density, slow/medium burning rate shotgun powder, very suitable for 32 gram loads up to 1310 ft/sec and 36 gram loads up to 1275 ft/sec in 12 gauge, for 28 gram loads up to 1165 ft/sec in 20 gauge and for 21 gram loads up to 1200 ft/sec in 28 gauge. Its burning rate and bulk density are in the region of those for powders such as Hercule Unique® or Herco®.

TYPICAL LOAD: Winchester compression formed case – 12 gauge. 70mm length
Winchester WAA12F114 wad
Winchester W209 Primer

SHOT WEIGHT	36 grams lead shot
CHARGE WEIGHT	22.7 grains
VELOCITY	1255 ft/sec
PRESSURE	10,600 psi

HANDGUN POWDERS

In approximate order of burning rate from fastest to slowest.

AP-30N DISCONTINUED

An effective low bulk density, high burning rate handgun powder very suitable for light target loads in calibres such as .38 special and .45 ACP. Its burning rate, bulk density and clean burning properties are similar to those of AS-30N shotgun powder but it has superior metering characteristics for small charge weights.

TYPICAL LOAD: 38 special with 148 grain lead BBWC projectile
CHARGE WEIGHT 2.5 grains
APPROX VELOCITY 650 ft/sec

AP-50N

An effective intermediate bulk density medium/fast burning rate handgun powder very suitable for medium target loads in calibres such as .38 special and .45 ACP. It has proven its usefulness in equipment such as "Ammo Load" for the automated reloading of ammunition for police and paramilitary applications in these calibres. Its burning rate, bulk density and clean burning properties are similar to those of AS-50N shotgun powder but it has superior metering characteristics for small charge weights.

TYPICAL LOAD: .45 ACP with 200 grain lead SWC projectile
CHARGE WEIGHT 5.0 grains
APPROX VELOCITY 960 ft/sec

AP-70N

A very versatile medium bulk density medium burning rate handgun powder useable for loading over almost the full range of handgun cartridges (but not necessarily top performance loads for which specialised burning rate powders must be used). Its burning rate, bulk density and clean burning properties are similar to those of AS-70N shotgun powder but it has superior metering characteristics for small charge weights in powder loaders.

TYPICAL LOAD: .44 Special with 200 grain jacketed projectile.
CHARGE WEIGHT 6.8 grains
APPROX VELOCITY 967 ft/sec

AP-90 DISCONTINUED

An effective single base medium bulk density, medium slow burning rate powder suitable for medium loads in cartridges such as 9mm, .38 super. Its bulk density is slightly lower than AP-70N and its burning rate is approximately 10% slower. It shares the same clean burning and superior metering characteristics with the other ADI handgun powders.

TYPICAL LOAD: 9mm Luger with 125 grain lead RN projectile
CHARGE WEIGHT 5.2 grains
VELOCITY 1135 ft/sec

HANDGUN POWDERS

In approximate order of burning rate from fastest to slowest.

AP-100

An effective single base high bulk density, slow burning handgun powder suitable for major power factor loads in .38 super and similar cartridges. Its bulk density is a little lower than that of Hercules Blue Dot® while its burning rate is approximately 7% faster. It shares the same clean burning and superior metering characteristics with the other ADI handgun powders.

TYPICAL LOAD: .40 S&W with 180 grain lead CN projectile
CHARGE WEIGHT 6.5 grains
APPROX VELOCITY 1050 ft/sec

RIFLE POWDERS

In approximate order of burning rate from fastest to slowest.

AR2205

A very fine grained, very fast burning rifle powder suited to .22 Hornet loads but also useful in some Magnum pistol loads. Its burning rate is close to that of IMR 4227.

TYPICAL LOAD: .22 Hornet with 45 grain jacketed projectile.
CHARGE WEIGHT 9.8 grains
APPROX VELOCITY 2,484 ft/sec

AR2207

A very useful fine grained fast burning rifle powder for cartridges such as the 7.62mm x 39 Russian, 6mm PPC. Its burning rate is close to that of IMR 4198 although it meters significantly better through standard powder loaders.

TYPICAL LOAD: .222 Remington with 50 grain jacketed projectile
CHARGE WEIGHT 20.5 grains
APPROX VELOCITY 3200 ft/sec

BENCH MARK 1

A very fine grained powder with very high bulk density and superior metering characteristics for use by bench rest shooters in cartridges such as .22 PPC. It is intermediate in burning rate between AR2207 and AR2206.

TYPICAL LOAD: .223 Remington with 55 grain jacketed projectile
CHARGE WEIGHT 24.0 grains
APPROX VELOCITY 3175 ft/sec

RIFLE POWDERS

In approximate order of burning rate from fastest to slowest.

BENCH MARK 2

A fine grained powder with very high bulk density and superior metering characteristics for use in national rifle association match loads such as 5.56mm with 62 grain projectiles. It is similar in burning rate close to AR2206, but can be faster depending on the calibre used.

TYPICAL LOAD: .22-250 Remington with 52 grain jacketed projectile
CHARGE WEIGHT 34.0 grains
APPROX VELOCITY 3775 ft/sec

AR 2206

A very versatile medium burning rifle powder suitable for use in .308 Winchester. It can also be used in a wide range of other cartridges. Its burning rate is close to that of IMR 3031 but its bulk density is higher.

TYPICAL LOAD: .308 Winchester with 155 grain jacketed projectile
CHARGE WEIGHT 44.5 grains
APPROX VELOCITY 2825 ft/sec

AR2208

A useful fine grained medium/slow burning rifle powder for medium sized cartridges such as .308 Winchester and 25-06. Its burning rate is close to that of IMR 4064 but its bulk density is higher.

TYPICAL LOAD: 30-30 Winchester with 150 grain jacketed projectile
CHARGE WEIGHT 34.5 grains
APPROX VELOCITY 2349 ft/sec

AR2209

A useful fine grained, moderately slow burning rifle powder for cartridges such as 22-250, .243 Winchester, .270 Winchester, 30-06 and 300 Winchester Magnum. Its burning rate is close to that of IMR 4350 but its bulk density is a little higher and its metering through a powder loader is better.

TYPICAL LOAD: 30-06 Springfield with 165 grain jacketed projectile
CHARGE WEIGHT 59.0 compressed
APPROX VELOCITY 2835 ft/sec

AR2213 DISCONTINUED

A versatile fine grained, slow burning rifle powder for larger capacity cartridges such as .270 Winchester, 7mm Remington Magnum, 300 Winchester Magnum and .300 Weatherby Magnum. Its burning rate is in between that of IMR 4831 and H4831 with similar bulk density but better metering characteristics with standard powder loaders.

TYPICAL LOAD: .270 Winchester with 140 grain jacketed projectile
CHARGE WEIGHT 57.0 grains
APPROX VELOCITY 3005 ft/sec

RIFLE POWDERS

In approximate order of burning rate from fastest to slowest.

AR2213SC NEW

AR2213SC will replace AR2213 in the Australian reloading market. AR2213 has been produced by ADI only for supply to the Australian reloading market and is only manufactured every three to four years due to low consumption versus the lot size. As a result, the powder that reaches the shooter may not be of recent manufacture and stockout situations occasionally occur.

ADI produces AR2213SC for the North American reloading market in much higher quantities than AR2213. AR2213SC is in regular production and ADI will be in a better position to guarantee supply. AR2213SC is repackaged and distributed by Hodgdon Powder Co. in the US under the brand name of "Hodgdon H4831SC." ADI also produce AR2213H for Hodgdon, being "Hodgdon H4831" in North America and Europe. AR2213SC and AR2213H have the same burning rate and bulk density (charge weights), but AR2213SC has improved metering characteristics through a shorter cut length of grain.

TYPICAL LOAD: 300 Winchester Magnum with 165 grain jacketed projectile
CHARGE WEIGHT 75.5 grains
APPROX VELOCITY 3055 ft/sec

AR2217 COMING SOON

A fine grained, very slow burning rifle powder, suited for use in most large calibre magnums. Its burning rate is about 5% faster than AR2214.

TYPICAL LOAD: 300 Remington UltraMag with 180 grain jacketed projectile
CHARGE WEIGHT 96.0 grains
APPROX VELOCITY 3220 ft/sec

AR2214 DISCONTINUED

A fine grained, very slow burning rifle powder with specialised applications for some large magnum cartridges. Its burning rate is about 10% below that of AR2213 (a few percent below that of IMR 7828).

TYPICAL LOAD: 7mm Remington Magnum with 175 grain jacketed projectile
CHARGE WEIGHT 69.0 grains
APPROX VELOCITY 2650 ft/sec

AR2218

An extremely slow burning rifle propellant, initially developed for 0.50 cal and is perfect for over-bore, large capacity magnums. Its burning rate is about 5% below that of AR2214.

TYPICAL LOAD: 30-378 Weatherby Magnum with 220 grain jacketed projectile
CHARGE WEIGHT 118.5 grains
APPROX VELOCITY 3145 ft/sec

WARNINGS

ADI SMOKELESS PROPELLANTS

1. For the safety of purchaser and others, ADI powders **must be used in accordance with the latest edition of the ADI Smokeless Powders Handloaderís Guide.** Overloading, incorrect storage or improper use can result in personal injury or death to the user and/or other persons as well as damage to property.

It is **essential** that users of ADI powders:

- Follow the recommendations of the ADI Smokeless Powders Handloaderís Guide by not exceeding the maximum loads.
- Use only the latest reloading data, issued free of charge by ADI.
- Keep the powders out of reach of children and those persons unfamiliar with the properties of smokeless powders.
- Store the powders in a cool, dry and safe place with the lid tightly closed.
- Check the powders at least once per year for any signs of deterioration as described below.
- Store all powders in the original containers.
- Do not smoke in areas where ADI powders are stored and used.
- Do not have loaded firearms in areas where ADI powders are stored and used.

2. Loading data provided within the ADI Smokeless Powders Handloaderís Guide has been compiled from many sources including actual ballistic testing by ADI under controlled conditions and published loading/ballistic information available in the literature. The ballistic performance of smokeless powders varies considerably depending upon factors such as the type of firearm being used and its condition, the particular components being used in a cartridge with a powder, the reloading techniques used, the actual batch of the powder being loaded, weather conditions at the time of firing, etc. Therefore, it is not possible for the loading data in the ADI Smokeless Powders Handloaderís Guide (or any other similar manual) to be other than a guide to a safe load for any particular application. Exceeding the recommended loading data will increase the chance of obtaining unsafe pressures and may result in damage and/or personal injury or even death.

3. While ADI controls the burning rate of its various smokeless powders within tight limits at the time of manufacture all other factors affecting the ballistic performance of these powders at the time of use are outside ADIís control. ADI therefore disclaims any and all warranties concerning the use of its various smokeless powders for any particular application. ADI does not assume, nor does it authorise any person to assume for it, any liability in connection with the use of any product or data.

4. The buyer of ADI Smokeless Powders assumes the risk of having to follow safe loading practices otherwise damage and/or severe personal injury (including death) may occur.

5. NEVER substitute ADI Smokeless Powders for black powder or Pyrodex® or mix smokeless powders with these materials. NEVER use ADI smokeless powders in black powder firearms, saluting cannons or similar devices. Any of these practices may result in the firearm blowing apart resulting in property damage, personal injury or even death.

6. Store smokeless powders in a cool dry place separate from solvents, flammable gases and other combustible materials. Ensure that the storage area selected is free from any possible source of excess heat and is isolated from open flame, hot water heaters, furnaces, chimneys, flue pipes, etc. Avoid storing smokeless powders in areas which may be heated by the sun or where electrical, electronic or mechanical equipment is operated.

Do not allow containers of powder to contact walls of storage areas which are exposed on the other side to sunlight or other form of heating. Any such form of heating or ignition may result in a fire, either immediately or after some time due to accelerated chemical deterioration and subsequent spontaneous ignition. An average storage temperature below 25ºC is recommended to obtain a safe shelf life of at least 10 years from the date of packing. Increased storage temperature will reduce the safe shelf life significantly – by approximately one-third for every 10ºC above 25ºC.

WARNINGS

7. All smokeless powders deteriorate chemically as they get older. This rate of deterioration can be accelerated by such things as storage in warm conditions, exposure to other chemicals and exposure to direct sunlight. Any such deterioration may ultimately lead to a fire through spontaneous ignition of the powder.

CHECK containers of smokeless powder regularly for possible deterioration through age or inadequate storage. Yearly checks are recommended wherever average daily summer temperatures exceed 30ºC. Where average daily summer temperatures are usually below 30ºC checks should be made every two years.

CHECK containers of smokeless powder for possible chemical deterioration through age or inadequate storage. Such deterioration may ultimately lead to spontaneous ignition of the powder. Chemical deterioration of smokeless powder can be recognised by carefully smelling the contents of the container – any deterioration produces an acrid, acidic odour quite different from the normal sweet smelling odours of ethanol or ether which are usually present. Rusting of metal surfaces exposed to smokeless powder can also indicate deterioration.

8. Deteriorated smokeless powder should be disposed of by carefully burning it in thin layers (not more than 10mm deep) in small quantities (never more than 500 gram) in an isolated location (at least 10 metres from any other combustible material). DO NOT LIGHT THE POWDER DIRECTLY. Always use an ignition train of slow burning combustible material so that you are able to retreat to a safe distance before the powder ignites.

9. Store ADI Smokeless Powders in their original containers which have been approved for that purpose. Storage cabinets used for storage of containers of Smokeless powders should be constructed of insulating materials with weak walls, seams or joints to provide easy venting in the event of a fire. Such storage cabinets should not be located on walls where heating on the other side (by the sun or other heating arrangement) will occur.

10. DO NOT SMOKE in areas where smokeless powder is stored or used.

11. DO NOT HAVE LOADED FIRARMS in areas where ADI Smokeless Powders are stored or used – accidental or intended operation of the firearm may cause ignition of smokeless powder, either by direct ignition of powder in the open or through bullet impact on containers of powders.

12. Do not cut, pierce or puncture powder containers.

13. ADI rifle powders are designed to give less ballistic variation with temperature changes than regular smokeless powders. This does not mean that ballistics will never change with temperature. The extent to which change is minimised depends upon many factors including the calibre, primer brand and projectile weight. Care should always be taken to ensure that any particular load is safe at the extreme temperatures at which it will be used.

14. Smokeless powders can change their moisture reasonably quickly if exposed to the atmosphere. Any change of moisture can affect the powder burning rate and the effectiveness or safety of a particular load. Always minimise the exposure of any smokeless powder to the atmosphere during loading. Use minimum quantities of powder at any time in powder loaders and keep lids on containers tightly closed at all times. Do not keep powders in loaders for long periods of time. In this way you are more likely to preserve the appropriate level of moisture for the lot of the powder in use and obtain consistent reliable ballistic performances from every load.

15. Follow the hints on Reloading Safety given in the ADI Smokeless Powders Reloaderís Guide. Remember that smokeless powders and ammunition are explosive and that firearms are only designed to operate within safe working limits and are not indestructible. The wrong combination of powder burning rate, charge weight, cartridge components and weapon can be disastrous. ALWAYS TAKE EXTREME CAUTION when you are reloading.

16. Never mix any varieties of powder, regardless of their type, brand or source.

17. Do not salvage powder from old cartridges, and do not mix new and salvaged powder.

18. Always store powder in the smallest practical quantities. If you have large quantities of powder, do not maintain it all in one place only. Spread your containers, and remember that small containers are safer than large containers.

RELOADING SAFETY

ADI SMOKELESS PROPELLANTS

1. These instructions on Reloading Safety should be read in conjunction with the Warnings section on pages 9 and 10.

2. Take care at all times – items and equipment used for reloading can all be dangerous if mishandled or abused.

3. Keep reloading components out of the reach of children – in particular powder, primers and lead projectiles.

4. Keep powder away from other combustible material and from possible sources of ignition.

5. Do not keep old powders, salvaged powders or powders of uncertain origins.

6. Do not smoke in areas where powder is stored or while handling powder or primers.

7. Only store powder in its original container to avoid the risk of the powder being mislabelled.

8. Do not leave any powder or primers in reloading press or in powder/primer dispensers after handloading is completed.

9. Clean up spilled powder promptly. Use a brush and dustpan – do not use a vacuum cleaner. Keep the waste powder under water in a suitable container until it can be disposed of safely. Do not accumulate large amounts of waste powder.

10. Each ADI Smokeless Powder has specific burning rate and bulking characteristics determined by its composition, geometry and manufacturing process. The factors are carefully controlled during manufacture to ensure consistent ballistic performance. Do not attempt to mix or blend different powders as such mixtures may produce dangerous and erratic velocities and pressures.

11. Develop a strict routine for reloading operations and avoid distraction such as television, visitors, etc.

12. Recheck each operation for safety and uniformity.

13. Double check critical points like powder type, projectile weight and diameter before starting.

14. Only have one powder type and one projectile type in the actual working area while reloading.

15. Do not trim cases below the minimum design length for any calibre.

16. Ensure that cases are not deformed and are free of body splits, mouth cracks, enlarged primer pockets, enlarged flash holes and any foreign matter. Only use cases which are dry (but do not dry cases by direct heating or in an oven above 150ºC.

17. Check Projectiles for damage and ensure that lead projectiles are free from casting defects.

18. Always wear safety glasses or goggles while reloading and wear gloves while handling lead projectiles.

19. Owing to the effect of variations within allowable manufacturing tolerances for cartridge components made by different manufacturers, weapon variations and conditions, operating temperatures etc, pressures developed by any given rifle or pistol load can vary significantly from that applying to our recommended loads. It is therefore **essential** that loads be worked up from a charge weight lower than the recommended maximum, watching for any signs of excessive pressure (difficult extraction, gas leaks, flattened or blown primers, unusual recoil or expanded case heads). Loads can then be worked up to safe comfortable levels providing signs of excessive pressure are not observed. If signs of excessive pressure are noticed then loads must be reduced until they are at least 5% lower than the load at which the excessive pressure signs were first noted.

RELOADING SAFETY

20. Take special care when working up trial loads with slow burning powders in large calibre cartridges. Light loads in some calibres may produce occasional dangerously high pressures. It is suggested that minimum loads in large calibre cartridges should not be reduced below about 75% case capacity.

21. Keep detailed records of your safe loads for your weapons and consult them before reloading. However, be prepared to work them up again whenever you change the lot of powder or alter the weapon. Normally a starting reduction of 5% in charge weight is all that should be necessary when you change lots of powder.

22. Never exceed maximum recommended loads.

23. Carry out frequent check weighing of powder charges thrown either by a hand operated powder measure or reloading press to ensure the setting has not changed. At least five charges should be used for each check using a good set of powder scales.

24. Because many recommended loads (especially for pistols) do not fill the cartridge case it is essential that, prior to bullet seating, each filled case is individually inspected to ensure that it contains only a single charge. Never load a cartridge with a double charge as excessively dangerous pressures are certain to occur. After bullet seating, the cartridge overall length must be individually checked to ensure that it has not fallen below the minimum design value where excessive dangerous pressures may be experienced.

25. Ensure that all reloaded cartridges are free from oil, grease, excess lead bullet lubricant and any other foreign matter prior to firing.

26. Never attempt to decap live primers from a cartridge case. Primed cases or cartridges should always be fired in a firearm to destroy the primer.

NOTE: Whenever practicable, avoid loading to maximum possible velocity. Experienced shooters know that velocities which are somewhat lower than maximum will usually give the best accuracy while helping to prolong weapon and barrel life and making shooting more comfortable.

Any questions or concerns related to the use of ADI Smokeless Powders should be directed to the ADI Ordnance, Propellants, Explosives and Chemicals on (03) 5742 2200.

Shotshell Data

Loads listed here should be followed as they are printed. These loads are for use with lead shot only, no larger than #2 size.

They must not be used with steel shot under any circumstances.

For loading data for BB's through to slugs, contact ADI Limited, PE & C on (03) 5742 2200.

NEVER EXCEED THE MAXIMUM RECOMMENDED LOADS OR SHOT WEIGHTS.

SHOT GUN DATA

12 Gauge 2¾" (70mm) Plastic compression-formed cases (Winchester AA12; Mk 5 Super X; Supreme; Beretta)

SHOT WEIGHT (ounces)	NOMINAL VELOCITY (ft/sec)	APPROX. DRAM EQUIV.	WAD TYPE	PRIMER TYPE	AS-30N		AS-50N		AP-70N	
					WEIGHT (grain)	PRESS (psi)	WEIGHT (grain)	PRESS (psi)	WEIGHT (grain)	PRESS (psi)
7/8	1200		WAA1224	WIN209 CCI209 Fiocchi 616	16.8	7000				
	1255		WAA1224	WIN209 CCI209 Fiocchi 616	17.5	8350				
	1300		WAA1224	WIN209 CCI209 Fiocchi 616	18.5	9500	21.0	7800		
	1350		WAA1224	WIN209 CCI209 Fiocchi 616	19.2	10600	22.0	8300		
1	1180	2¾	WAA12SL	WIN209 CCI209 Fiocchi 616	17.0	8450	19.5	8000		
	1250	3	WAA12SL	WIN209 CCI209 Fiocchi 616	18.5	9750	20.4	9200		
	1300	3¼	WAA12SL	WIN209 CCI209 Fiocchi 616	19.5	11000	21.5	10450		
	1350		WAA12SL	WIN209 CCI209 Fiocchi 616	NR	NR	22.5	11250		

NR = Not Recommended

SHOT GUN DATA

12 Gauge 2¾" (70mm) Plastic compression-formed cases (Winchester AA12; Mk 5 Super X; Supreme; Beretta)

SHOT WEIGHT (ounces)	NOMINAL VELOCITY (ft/sec)	APPROX. DRAM EQUIV.	WAD TYPE	PRIMER TYPE	AS-30N WEIGHT (grain)	AS-30N PRESS (psi)	AS-50N WEIGHT (grain)	AS-50N PRESS (psi)	AP-70N WEIGHT (grain)	AP-70N PRESS (psi)
1 1/8	1090	2½	WAA12	WIN209 CCI209 Fiocchi 616	16.3	7500				
	1145	2¾	WAA12	WIN209 CCI209 Fiocchi 616	17.0	10000	19.0	9000		
	1200	3	WAA12	WIN209 CCI209 Fiocchi 616	NR	NR	19.5	9850	23.0	9750
	1250	3¼	WAA12	WIN209 CCI209 Fiocchi 616	NR	NR	NR	NR	23.5	10100
	1300		WAA12	WIN209 CCI209 Fiocchi 616	NR	NR	NR	NR	24.50	11200
1 1/4	1220		WAA12F114	WIN209 CCI209M					23.0 22.5	10900 11400

NR = Not Recommended

SHOT GUN DATA

12 Gauge 2¾" (70mm) Plastic Reiffenhaauser style cases (Fiocchi Cheddite)

SHOT WEIGHT (ounces)	NOMINAL VELOCITY (ft/sec)	APPROX. DRAM EQUIV.	WAD TYPE	PRIMER TYPE	AS-30N WEIGHT (grain)	AS-30N PRESS (psi)	AS-50N WEIGHT (grain)	AS-50N PRESS (psi)	AP-70N WEIGHT (grain)	AP-70N PRESS (psi)
7/8	1200	2¾	Gualandi	WIN209 Fiocchi 616	19.0	6150				
	1250	3	Gualandi	WIN209 Fiocchi 616	20.0	6600				
	1300	3¼	Gualandi	WIN209 Fiocchi 616	20.5	7150				
	1350		Gualandi	WIN209 Fiocchi 616	21.5	7700				
	1400		Gualandi	WIN209 Fiocchi 616	22.5	8250				
1	1200	2¾	Gualandi	WIN209 Fiocchi 616	19.5	7750	21.5	6600		
	1250	3	Gualandi	WIN209 Fiocchi 616	20.0	8200	22.5	7250		
	1300	3¼	Gualandi	WIN209 Fiocchi 616	21.0	9050	23.5	8050		
	1350		Gualandi	WIN209 Fiocchi 616	22.0	9800	23.5	9500		
1⅛	1200	2¾	Gualandi	WIN209 Fiocchi 616			22.0	8500		
	1255	3	Gualandi	WIN209 Fiocchi 616			22.8	9500		
	1300	3¼	Gualandi	WIN209 Fiocchi 616	NR	NR	23.5	11000		

NR = Not Recommended

SHOT GUN DATA

12 Gauge 2¾" (70mm) Plastic Reiffenhaauser style cases (Fiocchi Cheddite)

SHOT WEIGHT (ounces)	NOMINAL VELOCITY (ft/sec)	APPROX. DRAM EQUIV.	WAD TYPE	PRIMER TYPE	AS-30N		AS-50N		AP-70N	
					WEIGHT (grain)	PRESS (psi)	WEIGHT (grain)	PRESS (psi)	WEIGHT (grain)	PRESS (psi)
1	1200		WAA12SL	WIN209	16.8	6200				
	1250		WAA12SL	WIN209	18.0	7200				
	1300		WAA12SL	WIN209	19.0	8000				
	1180		WAA12SL	WIN209	17.1	7800	19.0	7100		
	1235		WAA12SL	WIN209	18.5	9200	20.0	8600		
	1290		WAA12SL	WIN209	19.3	1060	21.1	9600		
1 1/8	1090		WAA12	WIN209	NR	NR	19.2	7000		
	1145		WAA12	WIN209	NR	NR	19.7	7400		
	1200		WAA12	WIN209	NR	NR	21.0	8500		
	1200		WAA12	WIN209	NR	NR			23.3	9100
	1255		WAA12	WIN209	NR	NR			24.0	9600
	1310		WAA12	WIN209	NR	NR			25.0	10800
1 1/4	1220		WAA12F114	Fiocchi 616					24.0	10900

NR = Not Recommended

SHOT GUN DATA

12 Gauge 2¾" (70mm) ACTIV Plastic Cases

SHOT WEIGHT (ounces)	NOMINAL VELOCITY (ft/sec)	APPROX. DRAM EQUIV.	WAD TYPE	PRIMER TYPE	AS-30N WEIGHT (grain)	AS-30N PRESS (psi)	AS-50N WEIGHT (grain)	AS-50N PRESS (psi)	AP-70N WEIGHT (grain)	AP-70N PRESS (psi)
7/8	1200		Gualandi	WIN209 Fiocchi 616	19.0	6150				
	1250		Gualandi	WIN209 Fiocchi 616	20.0	6600				
	1300		Gualandi	WIN209 Fiocchi 616	20.5	7150				
	1350		Gualandi	WIN209 Fiocchi 616	21.5	7700				
	1400		Gualandi	WIN209 Fiocchi 616	22.5	8250				
1	1200	2¾	Gualandi	WIN209 Fiocchi 616	19.0	8100	21.0	7050		
	1250	3	Gualandi	WIN209 Fiocchi 616	19.8	9000	21.6	7850		
	1300	3¼	Gualandi	WIN209 Fiocchi 616	21.0	10200	22.6	8700		
1⅛	1200	3	Gualandi	WIN209 Fiocchi 616	18.7	11250	21.0	7050		
	1250	2¾	Gualandi	WIN209 Fiocchi 616	21.6	8550	21.0	6500	26.0	8800
	1300	3¼	Gualandi	WIN209 Fiocchi 616	NR	NR	22.6	8850	27.0	9850
1¼	1200		Gualandi	WIN209 Fiocchi 616	NR	NR	NR	NR	25.5	9200
	1250		Gualandi	WIN209 Fiocchi 616	NR	NR	NR	NR	26.4	10150
	1300		Gualandi	WIN209 Fiocchi 616	NR	NR	NR	NR	27.5	10900

NR = Not Recommended

SHOT GUN DATA

16 Gauge 2¾" (70mm) Winchester AA Plastic Compression-Formed Cases

SHOT WEIGHT (ounces)	NOMINAL VELOCITY (ft/sec)	APPROX. DRAM EQUIV.	WAD TYPE	PRIMER TYPE	AS-30N		AS-50N		AP-70N	
					WEIGHT (grain)	PRESS (psi)	WEIGHT (grain)	PRESS (psi)	WEIGHT (grain)	PRESS (psi)
1	1165	2½	WAA16	WIN209	NR	NR	NR	NR	19.0	9200
	1220	2¾	WAA16	WIN209	NR	NR	NR	NR	20.0	10300
	1275		WAA16	WIN209	NR	NR	NR	NR	20.7	11000

20 Gauge 2¾" (70mm) Winchester AA Plastic Compression-Formed Cases

SHOT WEIGHT (ounces)	NOMINAL VELOCITY (ft/sec)	APPROX. DRAM EQUIV.	WAD TYPE	PRIMER TYPE	AS-50N		AP-70N	
					WEIGHT (grain)	PRESS (psi)	WEIGHT (grain)	PRESS (psi)
¾	1180		WAA20	WIN209 CCI209	NR	NR	15.0	8700
	1245		WAA20	WIN209 CCI209	NR	NR	16.0	9820
	1320		WAA20	WIN209 CCI209	NR	NR	17.0	11050
⅞	1125	2¼	WAA20	WIN209 CCI209	NR	NR	15.0	10100
	1160		WAA20	WIN209 CCI209	NR	NR	15.5	10700
	1200	Skeet	WAA20	WIN209 CCI209	NR	NR	16.0	11400

NR = Not Recommended

SHOT GUN DATA

20 Gauge 2¾" (70mm) ACTIV Plastic Cases

SHOT WEIGHT (ounces)	NOMINAL VELOCITY (ft/sec)	APPROX. DRAM EQUIV.	WAD TYPE	PRIMER TYPE	AS-30N WEIGHT (grain)	AS-30N PRESS (psi)	AS-50N WEIGHT (grain)	AS-50N PRESS (psi)	AP-70N WEIGHT (grain)	AP-70N PRESS (psi)
7/8	1200		WAA20	WIN209	NR	NR	NR	NR	18.5	8300
1	1165		WAA20F1	CCI209	NR	NR	NR	NR	18.5	8700
	1220		WAA20F1	CCI209	NR	NR	NR	NR	19.0	9600
	28 Guage 2¾" (70mm) Winchester AA Plastic Compression-Formed Cases									
3/4	1200	Skeet	WWAA28	WIN209	NR	NR	NR	NR	13.0	10800

NR = Not Recommended

410 Bore 2½" Winchester AA Plastic Compression-Formed Cases

SHOT WEIGHT (ounces)	NOMINAL VELOCITY (ft/sec)	APPROX. DRAM EQUIV.	WAD TYPE	PRIMER TYPE	AR2205 WEIGHT (grain)	AR2205 PRESS (psi)
1/2	1200		WWAA41	WIN209	14.0	10500
				CCI209M	14.0	10500

Pistol Data

The loads shown here are maximums. Pressure variations due to different components, weapons, weapon condition and powder lots are relatively greater for pistols than for rifles. Therefore, it is essential that the initial load used in working up your safe load with your components must be 20% less than listed here. Any increases on the starting load should not be more than 2% at a time. The pistol loads shown are for jacketed projectiles unless otherwise specified.

NEVER EXCEED THE MAXIMUM RECOMMENDED LOADS.

PISTOL DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
.17 Bumble Bee 10" Barrel	25	AR2205	7	2,331
.22 Hornet (TCU) 10" Barrel	45	AR2205	11	2,250
.22 Remington Jet (TCU) 10" Barrel	40	AP-100	8	1,800
	40	AR2205	13	2,400
	45	AP-100	7.5	1,700
	45	AR2205	12.5	2,300
.221 Remington Fireball 10 3/4 (XP-100)" Barrel	40	AR2205	17	3,033
	45	AR2205	16	2,697
	45	AR2207	17	2,632
	50	AR2205	16	2,672
	50	AR2207	16.5	2,539
	52-53	AR2205	16	2,603
	52-53	AR2207	16.5	2,537
	55	AR2205	15.5	2,503
	55	AR2207	16	2,441
	60-63	AR2205	15	2,414
	60-63	AR2207	16	2,399
.222 Remington (TCU) 10" Barrel	45	AR2207	20.5	2,575
	50	AR2207	20	2,525
	55	AR2207	19.2	2,325
	52-53	AR2207	19.6	2,425
	55	AR2207	19.2	2,325
.25 ACP 2" Barrel	35	AP-70N	1.7	922
	50	AP-30N	1.05	750
	50	AP-50N	1.2	750
	50	AP-70N	1.4	751
.256 Winchester Magnum 10" Barrel	60	AR2205	16	2,386
	60	AR2207	18	1,704

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
	75	AR2205	15	2,120
	87	AR2205	14	2,040
	87	AR2207	15	2,007
7mm (TCU) 14 "Wichita" Barrel	100	AR2207	24	2,176
	115-120	AR2205	18	1,914
	115-120	AR2207	23	2,075
	130	AR2205	17	1,675
	130	AR2207	22	1,935
	139-140	AR2205	16.5	1,635
	139-140	AR2207	21	1,904
	145-150	AR2205	16	1,597
	145-150	AR2207	20.5	1,835
	154-162	AR2205	15	1,474
	154-162	AR2207	19.5	1,729
	168	AR2207	18.5	1,699
	175	AR2207	18	1,522
7mm BR Remington 14 "Wichita" Barrel	100	AR2207	26	2,429
	168	AR2207	21	1,799
	175	AR2207	20	1,684
	115-120	AR2207	24.5	2,250
	139-140	AR2207	23	1,977
	145-150	AR2207	22	1,882
	154-162	AR2207	22	1,805
7mm-08 (Silhouette) 15" Barrel	100	AR2208	45.7	2,931
	130	AR2208	43.5	2,710
	139	AR2208	43.5	2,612
	139	AR2209	50.00C	2,581
	150	AR2208	41.3	2,508
	150	AR2209	48.50C	2,552
	162	AR2208	41	2,468
	162	AR2209	48.00C	2,472

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

PISTOL DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
7mm-08 (Silhouette)	168	AR2208	40	2,380
15" Barrel (cont)	168	AR2209	47.20C	2,404
	175	AR2208	37.5	2,236
	175	AR2209	45.00C	2,325
.30 Luger	85	AP-30N	3.6	1,000
(7.65mm Parabellum)	85	AP-50N	4	1,000
4 1/2" Barrel	95	AP-30N	3.3	925
	95	AP-50N	3.8	925
.30 M1 Carbine	85	AR2205	15.5C	1,745
(pistol)	100	AR2205	14.50C	1,621
7" Barrel	110	AR2205	14.50C	1,602
.30 Herrett	100	AR2205	23	2,360
10 T-C" Barrel	110	AR2205	22	2,321
	125	AR2205	20	2,004
	130	AR2205	19	1,960
	150	AR2205	18	1,752
	150	AR2207	22	1,797
	165	AR2207	18.5	1,710
.30 Mauser	85	AP-30N	4.1	1,200
(7.6mm Mauser)	85	AP-50N	4.5	1,225
5 1/2" Barrel	95	AP-30N	3.4	1,075
	95	AP-50N	3.8	1,100
.30-30 Winchester	130	AR2208	36.00C	2,238
(TCU)	150	AR2208	34.5	2,119
14" Barrel	170	AR2208	33	2,023
.32 ACP	71	AS-30N	1.7	830
(7.65mm Browning)	71	AP-70N	2.4	881
4" Barrel				
.32 Smith & Wesson	85	AS-30N	1.2	600
4" Barrel	85	AP-50N	1.4	650
	85	AP-70N	1.8	730

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
.32 Smith & Wesson	85	AP-70N	3	865
Long	**L** 90	AP-70N	2.7	844
5.32" Barrel	90	AP-70N	2.9	838
	L 98	AP-70N	2.2	830
.32 H & R Magnum	85	AP-70N	4.3	1,123
5" Barrel	85	AR2205	9.5	1,151
	L 90	AP-70N	3.2	908
	90	AP-70N	4	1,072
	90	AR2205	10	1,079
	100	AP-70N	3.7	973
	100	AR2205	10	1,060
.32-20 (Pistol)	**L** 115	AP-70N	3.2	869
5 1/2" Barrel				
.380 Auto	90	AP-30N	2.7	850
(9mm Kurz)	90	AP-50N	3	800
3 3/4" Barrel	90	AP-70N	3.6	955
	90	AP-100	5.1	850
	100	AP-30N	2.5	750
	100	AP-50N	2.8	725
	100	AP-70N	3.4	889
	100	AP-100	4.7	775
	115	AP-30N	2.1	700
	115	AP-50N	2.3	725
	115	AP-70N	2.6	725
	115	AP-100	4.4	750
9mm Luger	90	AP-70N	5.5	1,266
(9mm Parabellum)	100	AP-70N	5.3	1,212
4" Barrel	115	AP-70N	5	1,149
	L 120	AP-50N	3.5	1,075
	L 120	AP-100	6	1,180
	124	AP-70N	4.9	1,118
	L 125	AP-50N	3.2	1,000

(C) = Compressed load **L** = Lead Projectile

Sequence of numbers is correct in order of decreasing burning rates.

PISTOL DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
9mm Luger	**L** 125	AP-70N	3.8	1,055
(9mm Parabellum)	**L** 125	AP-90	5.2	1,135
4" Barrel	**L** 125	AP-100	6.2	1,135
	130	AP-70N	4.7	1,058
	L 135	AP-30N	2.9	905
	L 135	AP-50N	3.3	955
	L 135	AP-70N	4.2	1,050
	L 135	AP-90	5.2	1,080
	L 135	AP-100	6	1,100
	147	AP-70N	3.3	869
.38 ACP	**L** 90	AP-70N	3.6	955
3.75" Barrel	**L** 95	AP-70N	3.5	901
	L 100	AP-70N	3.4	889
.38 Super Auto	90	AP-70N	6.3	1,352
5" Barrel	100	AP-70N	6	1,327
	115	AP-70N	5.5	1,225
	L 125	AP-70N	5.3	1,171
	125	AP-70N	5.5	1,179
	130	AP-70N	5.3	1,124
	147	AP-70N	4.8	1,017
.38 Smith & Wesson	110	AP-30N	3.1	950
4" Barrel	110	AP-50N	3.5	1,000
	110	AP-70N	4.1	1,000
	110	AP-90	5.1	975
	125	AP-30N	3	900
	125	AP-50N	3.4	950
	125	AP-70N	4	950
	125	AP-90	5	925
	L 148	AP-50N	2.9	750
	L 148	AP-70N	3.4	750
	L 148	AP-90	4	750
	L 148	AP-100	4.3	750

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
	L 158	AP-50N	2.8	700
	L 158	AP-70N	3.3	700
	L 158	AP-90	3.8	700
	L 158	AP-100	4.1	700
.38 Special	110	AS-30N	4.2	1,073
7.7" Barrel	110	AP-70N	5.6	1,143
	L 125	AS-30N	3.5	978
	125	AS-30N	3.9	937
	L 125	AP-70N	4.7	1,036
	125	AP-70N	5.2	1,019
	L 135	AS-30N	3.3	910
	L 135	AP-70N	4.6	1,025
	140	AS-30N	3.7	869
	140	AP-70N	4.8	939
	146	AP-70N	4.5	933
	146	AR2205	10.7	979
	L 148	AS-30N	2.5	836
	L 148	AP-70N	3.8	940
	L 158	AS-30N	3.1	871
	158	AS-30N	3.1	721
	L 158	AP-70N	4.5	974
	158	AP-70N	4.4	778
	L 158	AR2205	10	983
	158	AR2205	10	864
	170	AP-70N	4.2	823
	170	AR2205	9.8	888
.38 Special + P	110	AP-70N	6	1,204
7.7" Barrel	125	AP-70N	5.4	1,072
See Warning	140	AP-70N	5.1	1,022
	140	AR2205	12.4	1,121
	146	AP-70N	4.7	987
	146	AR2205	12	1,085
	158	AP-70N	4.7	837

(C) = Compressed load **L** = Lead Projectile

WARNING: 38 Special + P Loads are for use in modern arms (not aluminium frame) in good condition.

Sequence of numbers is correct in order of decreasing burning rates.

PISTOL DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
.38 Special + P 7.7" Barrel ***See Warning***	158	AR2205	11	964
	170	AP-70N	4.3	847
	170	AR2205	10.6	950
.357 SIG 4" Barrel	90	AP-70N	7	1,511
	115	AP-70N	6.1	1,300
	124	AP-70N	5.8	1,235
	147	AP-70N	4.9	1,062
.357 Magnum 10" Barrel	110	AP-70N	8	1,536
	110	AR2205	21	1,900
	L 125	AS-30N	5.3	1,260
	L 125	AP-70N	6.8	1,401
	125	AP-70N	7.6	1,453
	125	AR2205	20	1,839
	L 135	AS-30N	5.1	1,207
	L 135	AP-70N	6.5	1,314
	140	AP-70N	7	1,299
	140	AR2205	18	1,685
	146	AP-70N	6.5	1,261
	146	AR2205	16	1,566
	L 148	AP-70N	4	989
	150	AP-70N	6.7	1,255
	150	AR2205	16.5	1,583
	L 158	AS-30N	4.6	1,079
	L 158	AP-70N	6.2	1,247
	158	AP-70N	6.3	1,133
	158	AR2205	16	1,520
	170	AR2205	14.5	1,395
	180	AR2205	13.7	1,308
.357 Remington Maximum 10 Ruger" Barrel	110	AR2205	28	2,314
	125	AR2205	27	2,126
	140	AR2205	24	1,985
	150	AR2205	23	1,923
	160	AR2205	22.5	1,814
	170	AR2205	21	1,748
	180	AR2205	20	1,645
	200	AR2205	18	1,440
.357 Herrett (TCU) 10" Barrel	110	AR2205	33	2,380
	125	AR2205	32	2,329
	140	AR2205	30	2,198
	150	AR2205	29	2,142
	158	AR2205	28	2,022
.375 JDJ 4" Barrel	220	AR2207	44	2,115
.38/40 Winchester 5 1/2" Barrel	**L** 180	AS-30N	5.5	890
	L 180	AP-70N	7.5	955
.40 Smith & Wesson 4" Barrel	**L** 140	AS-30N	4	1,035
	L 140	AP-50N	4.5	1,105
	L 140	AP-70N	5.5	1,145
	L 155	AS-30N	4	970
	L 155	AP-50N	4.6	1,015
	L 155	AP-70N	5.6	1,100
	L 155	AP-90	6.8	1,140
	L 155	AP-100	8.1	1,180
	L 170	AS-30N	3.4	865
	L 170	AP-50N	3.8	895
	L 170	AP-70N	4.8	1,005
	L 170	AP-90	5.9	1,045
	L 170	AP-100	6.9	1,070
	L 180	AP-70N	4.8	1,010
	L 180	AP-100	6.7	1,065

(C) = Compressed load **L** = Lead Projectile

WARNING: 38 Special + P Loads are for use in modern arms (not aluminium frame) in good condition.

Sequence of numbers is correct in order of decreasing burning rates.

PISTOL DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
.40 Smith & Wesson	135	AS-30N	4.5	1,071
4" Barrel	135	AP-70N	7.5	1,324
See Warning	155	AS-30N	4	937
	155	AP-70N	6.6	1,186
	180	AS-30N	3.5	847
	180	AP-70N	5.8	1,046
	200	AP-70N	4.7	903
10mm Auto	135	AP-70N	8	1,416
5" Barrel	155	AP-70N	7.5	1,279
	170	AP-70N	6.7	1,187
	180	AP-70N	6.4	1,122
	200	AP-70N	5.9	1,015
.41 Action Express	150	AP-70N	6.5	1,025
5" Barrel	**L** 150	AP-70N	6.3	1,125
	150	AP-90	8.3	1,050
	L 150	AP-90	8	1,175
	150	AP-100	9.2	1,075
	L 150	AP-100	9.0	1,200
	170	AP-70N	5.1	900
	L 170	AP-70N	4.9	1,000
	170	AP-90	6.1	925
	L 170	AP-90	5.9	1,050
	170	AP-100	6.7	925
	L 170	AP-100	6.5	1,050
	L 200	AP-70N	4.4	875
	L 200	AP-90	5.5	900
	L 200	AP-100	6	925
.41 Magnum	170	AP-70N	10.3	1,488
10.125" Barrel	170	AR2205	24.9	1,745
	210	AP-70N	8.9	1,243
	210	AR2205	21.5	1,518
	220	AP-70N	8.5	1,178
	220	AR2205	20	1,433
	L 245	AP-70N	8	1,164
	L 245	AR2205	20	1,444
.44/40 Winchester	**L** 200	AS-30N	5.5	890
7 Test" Barrel	**L** 200	AP-50N	6.5	920
	L 200	AP-70N	7.3	777
	200	AR2205	18	910
	L 200	AR2205	20	1,030
	L 215	AP-50N	6.4	940
.44 Special	**L** 165	AS-30N	4.6	1,009
8" Barrel	**L** 165	AP-70N	6.3	1,042
	L 185	AS-30N	4.2	930
	L 185	AP-70N	6.4	1,031
	L 200	AS-30N	4.5	891
	L 200	AP-70N	6.5	960
	200	AP-70N	6.8	967
	L 200	AR2205	15	1,051
	200	AR2205	15	1,021
	L 240	AS-30N	4	771
	L 240	AP-70N	5.6	873
	L 240	AR2205	13.2	947
.44 Remington Magnum	**L** 165	AS-30N	5.5	1,064
8.275" Barrel	**L** 165	AP-70N	7.2	1,059
	180	AP-70N	11.3	1,463
	180	AR2205	29	1,708
	L 185	AS-30N	6	1,043
	L 185	AP-70N	7.4	1,070
	L 200	AS-30N	6.4	1,028
	L 200	AP-70N	7.8	1,045
	200	AP-70N	11.1	1,398
	200	AR2205	27	1,686
	210	AP-70N	11	1,365
	210	AR2205	27	1,624

(C) = Compressed load **L** = Lead Projectile

WARNING: This data is only for use in firearms with barrels which fully support the cartridge in the chamber.

Sequence of numbers is correct in order of decreasing burning rates.

PISTOL DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
.44 Remington Magnum 8.275" Barrel (cont)	225	AP-70N	10.5	1,291
	225	AR2205	25.5	1,537
	L 240	AS-30N	6.2	940
	L 240	AP-70N	10.2	1,276
	240	AP-70N	10.2	1,246
	240	AR2205	24	1,458
	270	AP-70N	9.5	1,128
	270	AR2205	22.5	1,425
	280	AP-70N	9.7	1,090
	280	AR2205	22	1,373
	300	AP-70N	9.6	1,113
	300	AR2205	20	1,312
.44 Magnum (TCU) 14" Barrel	180	AP-100	19	1,750
	180	AR2205	28.5	1,825
	200	AP-100	18.5	1,700
	200	AR2205	27	1,750
	225	AP-100	17.2	1,675
	225	AR2205	15	1,675
	240	AP-100	16.5	1,625
	240	AR2205	23.5	1,625
	265	AP-100	15.5	1,450
	265	AR2205	22	1,475
.44 Auto Magnum 6 TDE" Barrel	180	AR2205	27	1,478
	200	AR2205	26	1,427
	225	AR2205	22	1,269
	240	AR2205	21	1,183
.45 ACP 5" Barrel	**L** 155	AS-30N	5.2	1,080
	L 155	AP-50N	6.2	1,175
	L 155	AP-70N	7.6	1,195
	185	AS-30N	4.9	981
	185	AP-50N	5.8	1,030
	185	AP-70N	7.2	993
	200	AS-30N	4.3	785
	L 200	AS-30N	4.3	888
	L 200	AP-50N	5	960
	200	AP-70N	6.7	930
	L 200	AP-70N	6.5	1,020
	230	AS-30N	4	732
	230	AP-70N	6	853
	L 230	AP-70N	6.1	965
.45 Colt 7.25" Barrel	160	AS-30N	6.4	1,083
	160	AP-70N	9.5	1,197
	180	AS-30N	6	1,016
	180	AP-70N	9.2	1,161
	L 200	AS-30N	5.9	931
	L 200	AP-70N	8.8	1,067
	200	AP-70N	9	1,068
	L 215	AS-30N	5.7	889
	L 215	AP-70N	8.6	1,001
	230	AS-30N	5.4	865
	230	AP-70N	8.1	975
	250	AS-30N	5.1	817
	250	AP-70N	7.8	941
.45 Winchester Magnum 5" Barrel	225-230	AR2205	25	1,259
	240	AR2205	25	1,266
	250	AR2205	24	1,239
	260	AR2205	23	1,209
.45 Winchester Magnum (TCU) 14" Barrel	185	AP-90	15.4	1,625
	185	AP-100	17	1,650
	185	AR2205	26	1,600
	200	AP-90	14.8	1,500
	200	AP-100	16.4	1,525
	200	AR2205	25	1,500
	230	AP-90	14.2	1,400

(C) = Compressed load **L** = Lead Projectile

Sequence of numbers is correct in order of decreasing burning rates.

PISTOL DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
.45 Winchester Magnum (TCU) 14" Barrel	230	AP-100	15.6	1,425
	230	AR2205	24	1,400
	250	AP-90	13	1,300
	250	AP-100	14.5	1,325
	250	AR2205	23	1,325
.454 Casull Magnum 9.37" Barrel	240	AP-70N	11.5	1,325
	240	AR2205	34.00C	1,834
	250	AP-70N	12	1,290
	250	AR2205	28.50C	1,685
	260	AP-70N	11.5	1,245
	260	AR2205	33.00C	1,762
	300	AR2205	31.00C	1,702
.50 Action Express 6" Barrel	325	AR2205	30.8	1,294

(C) = Compressed load

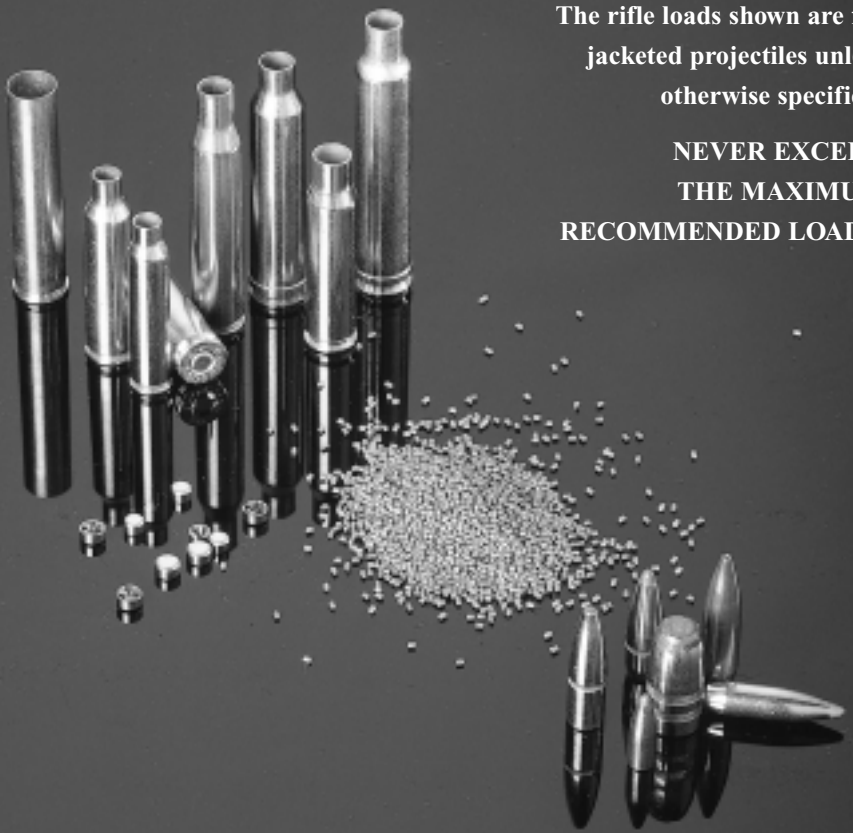
Sequence of numbers is correct in order of decreasing burning rates.

Rifle Data

The loads shown here are maximum. Initial loads for working up your safe load with your components in your weapon should be 10% less than shown with subsequent increases of about 3% at a time.

The rifle loads shown are for jacketed projectiles unless otherwise specified.

NEVER EXCEED THE MAXIMUM RECOMMENDED LOADS.



RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
17 Hornet (Ackley)	25	AR2205	10	3,100
24" Barrel	25	AR2207	11	3,100
17 Bee (Ackley)	25	AR2205	11	3,131
22" Barrel	25	AR2207	13.5	3,365
17 Mach IV	25	AR2207	16	3,700
24" Barrel	25	AR2206	18.5	3,700
17 - 222	25	AR2207	17.2	3,601
24" Barrel	25	AR2206	20	3,625
	25	AR2208	21	3,675
17 Remington	25	AR2207	18.5	3,900
24" Barrel	25	BM1	20.5	3,965
	25	BM2	21.5	3,985
	25	AR2206	22	4,000
	25	AR2208	23	4,025
	25	AR2209	25.50C	3,765
17-223	25	AR2206	22.2	3,975
24" Barrel	25	AR2207	23.5	3,995
22 Hornet	40	AR2205	10.2	2,567
24" Barrel	40	AR2207	11.50C	2,488
	45	AR2205	9.8	2,484
	45	AR2207	11.50C	2,400
	50	AR2205	9.4	2,256
	50	AR2207	11.50C	2,296
	53	AR2205	8.7	2,062
	53	AR2207	11	2,165
	55	AR2205	9	2,095
	55	AR2207	11.5	2,273
22 K Hornet	40	AR2205	11.5	2,900
24" Barrel	40	AR2207	12.5	2,900
	45	AR2205	11	2,750
	45	AR2207	12	2,750
	50	AR2205	10.5	2,600
	50	AR2207	11.5	2,600
	55	AR2205	10.5	2,400
	55	AR2207	11	2,400
218 Bee	40	AR2205	12	2,760
	40	AR2207	14	2,792
26" Barrel	45	AR2207	14	2,779
	50	AR2207	13.5	2,582
	55	AR2207	13.5	2,567
222 Remington	40	AR2205	19	3,455
24" Barrel	40	AR2207	22	3,605
	40	BM-1	23.5	3,525
	40	BM-2	25.5C	3,535
	40	AR2206	24.5C	3,365
	40	AR2208	25.00C	3,195
	45	AR2205	17.8	3,225
	45	AR2207	21.5	3,395
	45	BM-1	24	3,405
	45	BM-2	25.0C	3,340
	50	AR2207	20.8	3,250
	50	BM-1	22.8	3,265
	50	BM-2	24.4	3,250
	50	AR2206	24.5C	3,265
	50	AR2208	25.00C	3,155
	52	AR2207	20.3	3,185
	52	BM1	22	3,130
	52	BM2	23.4	3,135
	52	AR2206	23	3,065
	52	AR2208	25.00C	3,140
	53	AR2205	17	2,990
	53	BM1	21.6	3,060
	53	BM2	22	2,965
	55	AR2207	19.5	3,045
	55	BM1	22	3,055
	55	AR2206	23.7	3,125
	55	AR2208	24.5C	3,075

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
222 Remington	60	BM2	23.5	3,100
24" Barrel (cont)	60-63	AR2207	18.5	2,850
	60-63	AR2206	23	2,925
223 Remington	40	AR2205	20	3,545
(5.56mm x 45)	40	AR2207	24	3,755
24" Barrel	40	BM1	26	3,695
	40	BM2	27.50C	3,690
	40	AR2206	27.50C	3,690
	40	AR2208	27.50C	3,460
	50	AR2207	22.5	3,380
	50	BM1	24.8	3,385
	50	BM2	26.3	3,410
	50	AR2206	26.5C	3,455
	50	AR2208	27.5C	3,410
	52	AR2207	22.5	3,315
	52	BM1	24.5	3,340
	52	BM2	26.2	3,365
	52	AR2206	26	3,405
	52	AR2208	27.00C	3,330
	55	AR2207	22	3,190
	55	BM1	24	3,175
	55	BM2	25.5	3,240
	55	AR2206	25.5	3,260
	55	AR2208	27	3,285
1 in 10 twist or	62	BM2	23.5	3,000
faster required	62	AR2206	24.5	3,075
for this projectile.	62	AR2208	25	3,055
1 in 10 twist or	69	BM2	23.5	2,870
faster required	69	AR2206	24	2,920
for this projectile.	69	AR2208	25	2,920
1 in 8 twist or	80	BM-2	22	2,670
faster required	80	AR2206	22.2	2,690
for this projectile.	80	AR2208	23.5	2,715

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
222 Remington Magnum	40	AR2205	17	3,062
26" Barrel	40	AR2207	24.5	3,760
	45	AR2207	24	3,641
	50	AR2207	23.5	3,379
	52-53	AR2207	23	3,282
	55	AR2207	23	3,222
	60-64	AR2207	20.5	3,019
	70	AR2209	27	2,570
	70	AR2213SC	27	2,359
22 Waldog	52-53	AR2207	21	3,000
24" Barrel	52-53	AR2206	23.5	3,000
	52-53	AR2208	24.5	3,000
22 PPC	40	AR2208	29.5C	3,560
24" Barrel	50	AR2207	24.0	3,325
	50	BM1	26	3,350
	50	BM2	29	3,430
	50	AR2206	27.5	3,350
	50	AR2208	29.5C	3,408
	52-53	AR2207	23.5	3,300
	52-53	BM1	25.5	3,300
	52-53	BM2	28.5	3,368
	52-53	AR2208	28.5	3,363
	55	AR2208	28.5	3,317
5.6mm x 50 Magnum	40	AR2206	29	3,630
24" Barrel	45	AR2206	28.5	3,550
	45	AR2208	30	3,550
	50	AR2206	28	3,500
	50	AR2208	29.5	3,500
	55	AR2206	27	3,300
	55	AR2208	28.5	3,300
	60	AR2208	27.5	3,250
	70	AR2208	26.5	3,100

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
219 Donaldson Wasp	40	AR2207	24	3,500
24" Barrel	40	AR2206	27	3,500
	40	AR2208	28.5	3,500
	50	AR2207	23.5	3,400
	50	AR2206	26.5	3,400
	50	AR2208	28	3,400
	52-53	AR2207	23	3,300
	52-53	AR2206	26	3,300
	52-53	AR2208	27.5	3,300
	55	AR2207	22.5	3,200
	55	AR2206	25.5	3,200
	55	AR2208	27	3,200
219 Zipper	45	AR2207	22	3,200
24" Barrel	45	AR2206	25	3,200
	45	AR2208	26	3,200
	50	AR2207	21	3,000
	50	AR2206	24	3,000
	50	AR2208	25	3,000
	52-53	AR2207	20.5	2,900
	52-53	AR2206	23.5	2,900
	52-53	AR2208	24.5	2,900
	55	AR2207	20	2,800
	55	AR2206	23	2,800
	55	AR2208	24	2,800
225 Winchester	40	AR2206	31	3,780
	40	AR2208	33	3,760
24" Barrel	45	AR2206	30	3,400
	45	AR2208	32	3,480
	50	BM2	29	3,400
	50	AR2206	30	3,450
	50	AR2208	32	3,450
	52-53	BM2	28.5	3,280
	52-53	AR2206	29	3,280
	52-53	AR2208	30.5	3,280
	55	BM2	28	3,250
	55	AR2206	29	3,250
	55	AR2208	30	3,250
	55	AR2209	37	3,189
	55	AR2213SC	37	3,112
	60-63	BM2	27	3,180
	60-63	AR2206	28	3,180
	60-63	AR2208	29	3,180
	60-63	AR2209	36	3,120
	60-63	AR2213SC	36	3,068
	68-70	BM2	27	2,750
	68-70	AR2206	26	2,750
	68-70	AR2208	28	2,800
	68-70	AR2209	35	2,949
	68-70	AR2213SC	35	2,831
22/303 Sprinter	45	AR2206	31.5	3,450
24" Barrel	45	AR2208	34	3,450
	50	AR2206	30.5	3,200
	50	AR2208	33	3,200
	55	AR2206	29.5	3,000
	55	AR2208	32	3,000
22/303 Swift	45	AR2206	32	3,500
24" Barrel	45	AR2208	36	3,500
	50	AR2206	31	3,250
	50	AR2208	35	3,250
	55	AR2206	30	3,050
	55	AR2208	34	3,050
22/303 Falcon	45	AR2206	33.5	3,600
(Full Length)	45	AR2208	37.5	3,600
24" Barrel	50	AR2206	32.5	3,350
	50	AR2208	35.5	3,350
	55	AR2206	31.5	3,100
	55	AR2208	34.5	3,100

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
224 Weatherby Magnum	45	AR2206	30.5	3,500
24" Barrel	45	AR2208	31.5	3,500
	50	AR2206	30.5	3,450
	50	AR2208	31.5	3,450
	52-53	AR2206	30	3,400
	52-53	AR2208	31	3,400
	55	AR2206	29.5	3,300
	55	AR2208	30.5	3,300
	55	AR2209	34	3,240
	55	AR2213SC	34	3,200
	60-63	AR2206	28.5	3,100
	60-63	AR2208	29.5	3,100
	60-63	AR2209	34	3,240
	60-63	AR2213SC	33.5	3,041
	68-70	AR2206	27	2,900
	68-70	AR2208	28.5	2,900
	68-70	AR2209	32	2,777
	68-70	AR2213SC	32	2,486
22-250 Remington	40	BM2	37	4,165
24" Barrel	40	AR2206	37.5	4,250
	40	AR2208	38.8	4,225
	50	BM2	34	3,770
	50	AR2206	36	3,830
	50	AR2208	36.8	3,865
	50	AR2209	41.00C	3,680
	50	AR2213SC	42	3,473
	52	AR2207	29	3,635
	52	BM2	34	3,775
	52	AR2206	35.6	3,840
	52	AR2208	36	3,795
	52	AR2209	41.00C	3,640
	55	BM2	32.5	3,600
	55	AR2206	35.5	3,730
	55	AR2208	36	3,730
	55	AR2209	41.0C	3,665
	60-64	AR2208	34	3,426
	60-64	AR2209	38	3,391
	60-64	AR2213SC	41	3,441
	68-70	AR2206	30	3,215
	68-70	AR2209	36	3,129
	68-70	AR2213SC	38	3,189
	68-70	AR2217	38	3,187
22-250 Improved (Ackley)	50	AR2206	36.5	3,800
26" Barrel	50	AR2208	39	3,800
	50	AR2209	42.5	3,800
	52-53	AR2206	35.5	3,750
	52-53	AR2208	38	3,750
	52-53	AR2209	41	3,750
	55	AR2206	34.5	3,650
	55	AR2208	37	3,650
	55	AR2209	40	3,650
	60-63	AR2206	32.5	3,500
	60-63	AR2208	35	3,500
	60-63	AR2209	38	3,500
	68-70	AR2206	31.5	3,400
	68-70	AR2208	34	3,400
	68-70	AR2209	37	3,400
220 Swift	40	AR2206	38	3,950
26" Barrel	40	AR2208	40.5	4,113
	45	AR2206	37.5	3,800
	45	AR2208	38.5	3,800
	50	BM2	37.5	3,845
	50	AR2206	38.5	3,920
	50	AR2208	40	3,925
	50	AR2209	44.5C	3,770
	50	AR2213SC	44.5C	3,545
	52-55	AR2208	36	3,645
	52-55	AR2209	42	3,619
	52-55	AR2213SC	46	3,616

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
220 Swift	60-64	AR2208	34	3,407
26" Barrel (cont)	60-64	AR2209	39	3,474
	60-64	AR2213SC	46	3,586
	60-64	AR2217	45.5	3,343
	68-70	AR2208	33	3,247
	68-70	AR2209	38	3,313
	68-70	AR2213	40	3,325
	68-70	AR2213SC	42	3,359
	68-70	AR2217	44	3,317
220 Jaybird	52	AR2209	47	3,992
26" Barrel	55	AR2209	47	3,981
	60	AR2209	45	3,763
	60	AR2213SC	47	3,772
	69	AR2213SC	47	3,654
5.6mm X 57RWS	50	AR2208	37	3,700
26" Barrel	50	AR2209	41	3,700
	50	AR2213	46	3,700
CAUTION:	55	AR2208	36	3,550
If reloading old style	55	AR2209	40	3,550
thick walled brass	55	AR2213	45	3,550
reduce these loads	60	AR2208	35	3,450
by at least	60	AR2209	39	3,450
4 grains to avoid	60	AR2213	44	3,450
dangerous pressures.	69/70	AR2208	34	3,300
NOTE WELL:	69/70	AR2209	38	3,300
Use Magnum Primers	69/70	AR2213	43	3,300
with AR2213 powder	74	AR2209	37	3,250
reloads.	74	AR2213	42	3,250
22 Cheetah Mark II	50	AR2209	51	4,069
24" Barrel	55	AR2209	51	4,017
22 Savage	70	AR2207	21.5	2,900
Hi Power (5.6 x 52R)	70	AR2208	24.5	2,900
24" Barrel				

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
6mm-222	60	AR2207	19	3,023
24" Barrel	75	AR2207	18	2,718
	85	AR2207	16.5	2,514
	100	AR2207	15	2,090
6mm-284	60	AR2213SC	58	3,807
24" Barrel	70	AR2213SC	56	3,762
	75	AR2213SC	55	3,691
	80	AR2213SC	55	3,683
	85	AR2213SC	53	3,471
	90	AR2213SC	52	3,380
	90	AR2217	57	3,314
	100	AR2213SC	49	3,207
	100	AR2217	55	3,229
	105	AR2213SC	48	3,130
	105	AR2217	54	3,168
	115-117	AR2213SC	45	2,813
	115-117	AR2217	51	2,898
6mm x 45	60	AR2207	21.5	2,956
24" Barrel	68-70	AR2207	21	2,773
	75	AR2207	19.5	2,480
	80	AR2207	19	2,440
	85	AR2207	19	2,440
	90	AR2207	19	2,350
6mm x 47	60	BM1	25	3,100
24" Barrel	60	AR2206	26.5	3,100
	60	AR2208	28.5	3,100
	70	BM1	24	2,900
	70	AR2206	26	2,900
	70	AR2208	28	2,900

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
6mm x 47	75	BM1	23.5	2,700
24" Barrel (cont)	75	AR2206	25.5	2,700
	75	AR2208	27.5	2,700
	80	BM1	23	2,600
	80	AR2206	25	2,600
	80	AR2208	27	2,600
	87-90	BM1	21.5	2,450
	87-90	AR2206	23.5	2,450
	87-90	AR2208	26	2,450
6mm PPC	60	AR2207	24	3,450
24" Barrel	60	BM1	25.5	3,450
	60	BM2	27.5	3,450
	60	AR2206	29.5	3,450
	60	AR2208	30	3,450
	68-70	AR2207	25	3,165
	68-70	BM1	27	3,135
	68-70	BM2	28.5	3,135
	68-70	AR2206	29	3,100
	68-70	AR2208	29.5	3,050
	75	AR2207	21	2,780
	75	BM1	24	2,850
	75	BM2	27	2,850
	75	AR2206	28.5	2,850
	75	AR2208	28.5	2,850
	80	AR2207	21	2,641
	80	AR2208	28.0C	2,843
	85	AR2208	28.0C	2,848
6 mm BR Remington	60	BM2	32.5	3,450
24" Barrel	60	AR2206	33	3,450
	60	AR2208	34	3,442
	68-70	BM2	30.5	3,200
	68-70	AR2206	31	3,200
	68-70	AR2208	34	3,342
	75	BM2	29	3,100
	75	AR2206	30	3,100
	75	AR2208	32.5	3,239
	80	AR2208	32.5	3,159
	85	AR2208	31	3,007
	90	AR2208	30.2	2,886
	100	AR2208	28	2,649
6mm International	60	AR2207	30	3,300
20" Barrel	60	AR2206	33.5	3,300
	60	AR2208	36	3,300
	75	AR2207	27	2,900
	75	AR2206	30.5	2,900
	75	AR2208	33	2,900
243 Winchester	55	BM2	41.5	3,875
24" Barrel	55	AR2206	42	3,890
	55	AR2208	44	3,905
	55	AR2209	50.0C	3,825
	60	AR2206	40	3,700
	60	AR2208	41	3,650
	70	BM2	37	3,435
	70	AR2206	38.0	3,495
	70	AR2208	39.5	3,510
	70	AR2209	43.5	3,190
	70	AR2213SC	48	3,159
	75	AR2206	36.5	3,330
	75	AR2208	36.5	3,265
	75	AR2209	44.5	3,335
	75	AR2213SC	48	3,177
	80	AR2206	36	3,225
	80	AR2208	38	3,260
	80	AR2209	45	3,290
	80	AR2213SC	47.3	3,295
	87	AR2206	35	3,035
	87	AR2208	36	3,120
	87	AR2209	43	3,150
	87	AR2213	44	3,170
	87	AR2214	49.00C	3,085

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
243 Winchester 24" Barrel (cont)	90	AR2209	44.5	3,185
	90	AR2213SC	48.0C	3,203
	95	AR2208	35	2,996
	95	AR2209	42	3,087
	95	AR2213SC	44.50C	3,052
	100	AR2208	33.7	2,838
	100	AR2209	41	2,970
	100	AR2213	42	2,990
	100	AR2217	47.0C	3,000
	100	AR2214	48.5	2,980
	105	AR2209	38	2,820
	105	AR2213	38	2,785
	105	AR2213SC	41	2,846
	105	AR2217	46.0C	2,930
	105	AR2214	46	2,775
	115-117	AR2217	45.5	2,802
6mm Remington (.244 Remington) 24" Barrel	55	AR2208	46	4,014
	60	AR2208	42	3,722
	60	AR2213SC	51	3,391
	65	AR2208	44	3,737
	65	AR2209	51.5	3,717
	65	AR2213	53.00C	3,574
	70	AR2208	42	3,550
	70	AR2209	50.5	3,638
	70	AR2213SC	50	3,321
	75	AR2208	41	3,395
	75	AR2209	49	3,502
	75	AR2213SC	51	3,488
	80	AR2208	41	3,379
	80	AR2209	47	3,337
	80	AR2213SC	51	3,358
	85	AR2208	39	3,235
	85	AR2209	46	3,275
	85	AR2213SC	49.5	3,291
	87	AR2208	38.5	3,174
	87	AR2209	45.5	3,240
	87	AR2213SC	48	3,213
	90	AR2208	36.5	2,954
	90	AR2209	43	3,062
	90	AR2213SC	45	3,027
	90	AR2217	50.00C	3,127
	95	AR2208	37	2,996
	95	AR2209	45	3,103
	95	AR2213SC	48.7	3,125
	95	AR2217	52.00C	3,094
	100	AR2208	36	2,933
	100	AR2209	42.5	2,999
	100	AR2213SC	46	3,042
	100	AR2217	50	3,080
	105	AR2208	35.5	2,879
	105	AR2209	43.2	2,987
	105	AR2213SC	46.5	3,002
	105	AR2217	51.00C	3,010
	107	AR2208	35.5	2,854
	107	AR2209	42	2,906
	107	AR2213SC	46	2,988
	107	AR2217	49.5	3,011
	115	AR2209	39	2,696
	115	AR2213SC	42	2,761
	115	AR2217	45.5	2,793
243/303 24" Barrel	75	AR2206	33.5	3,200
	75	AR2208	36	3,200
	80	AR2206	32.5	3,100
	80	AR2208	35	3,100
	80	AR2209	40	3,100
	90	AR2206	30.5	2,900
	90	AR2208	33	2,900
	90	AR2209	38	2,900

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
243/303 24" Barrel (cont)	100	AR2208	32	2,750
	100	AR2209	37	2,750
240 Weatherby Magnum 26" Barrel	60	AR2213SC	57	3,488
	70	AR2208	43	3,800
	70	AR2209	51	3,800
	70	AR2213	55.5	3,800
	75	AR2208	42	3,700
	75	AR2209	50	3,700
	75	AR2213	54.5	3,700
	75	AR2213SC	56	3,453
	80	AR2208	41.5	3,600
	80	AR2209	49	3,600
	80	AR2213	53.5	3,600
	80	AR2213SC	56	3,481
	80	AR2217	59	3,207
	85	AR2213SC	56	3,460
	85	AR2217	59	3,167
	85-87	AR2208	41	3,500
	85-87	AR2209	48.5	3,500
	85-87	AR2213	52.5	3,500
	85-87	AR2214	59	3,500
	90	AR2209	48	3,450
	90	AR2213	52	3,450
	90	AR2213SC	55	3,394
	90	AR2217	59	3,140
	90	AR2214	58.5	3,450
	100	AR2209	46.5	3,350
	100	AR2213	51	3,350
	100	AR2213SC	53	3,202
	100	AR2217	59	3,122
	100	AR2214	58	3,350
	105	AR2213SC	52	3,142
	115-117	AR2213SC	46	2,779
	115-117	AR2217	58	3,066

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
25/20 Winchester 24" Barrel	60	AR2205	10.2	1,962
	60	AR2207	14.20C	2,101
	L 71	AR2205	7	1,346
	75	AR2205	9.3	1,741
	75	AR2207	12.8	1,877
	L 85	AR2205	7	1,317
	86	AR2205	8.6	1,545
	86	AR2207	11.5	1,673
256 Winchester Magnum 24" Barrel	60	AR2207	18	2,794
	75	AR2207	16	2,327
	87	AR2207	15	2,192
25 Remington 20" Barrel	87	AR2207	21	2,500
	87	AR2206	25	2,500
	87	AR2208	26	2,500
	100	AR2207	20	2,200
	100	AR2206	24	2,200
	100	AR2208	26	2,200
	117	AR2207	18.5	2,000
	117	AR2206	22.5	2,000
	117	AR2208	23.5	2,000
25/35 Winchester 24" Barrel	87	AR2207	22	2,500
	87	AR2206	27	2,500
	87	AR2208	29	2,500
	100	AR2207	21	2,250
	100	AR2206	26	2,250
	100	AR2208	28	2,250
	117	AR2207	20	2,000
	117	AR2206	25	2,000
	117	AR2208	27	2,000
250 Savage (250-3000) 24" Barrel	60	AR2207	33	3,515
	60	AR2206	36.5	3,550
	60	AR2208	39	3,550
	60	AR2209	42	3,394

(C) = Compressed load **L** = Lead Projectile
Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
250 Savage (250-3000)	75	AR2207	30	3,169
24" Barrel (cont)	75	AR2206	34.5	3,200
	75	AR2208	36	3,200
	75	AR2209	42	3,222
	87	AR2206	32	3,000
	87	AR2208	34.5	3,000
	87	AR2209	41	3,063
	87	AR2213	41.5	3,000
	100	AR2206	30.5	2,750
	100	AR2208	33	2,750
	100	AR2209	40	2,881
	100	AR2213	40	2,750
	100	AR2213SC	42	2,890
	117	AR2208	31.5	2,500
	117	AR2213	38.5	2,500
	117	AR2209	38	2,654
	117	AR2213SC	42	2,789
	125	AR2209	37	2,619
	125	AR2213SC	41	2,736
25/303	87	AR2206	33	3,000
(Improved P14 Action)	87	AR2208	35	3,000
24" Barrel	87	AR2209	38.5	3,000
	87	AR2213	42	3,000
	100	AR2206	32	2,800
	100	AR2208	34	2,800
	100	AR2209	37.5	2,800
	100	AR2213	40	2,800
	117-120	AR2206	31	2,600
	117-120	AR2208	33	2,600
	117-120	AR2209	36.5	2,600
	117-120	AR2213	39	2,600
250 Savage	87	AR2209	42	3,300
(Ackley Improved)	100	AR2209	41	3,050
24" Barrel	120	AR2209	40	2,750

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
25-308	60	AR2206	45	3,700
24" Barrel	60	AR2208	46.5	3,700
	60	AR2209	51	3,700
	87	AR2206	41	3,200
	87	AR2208	42.5	3,200
	87	AR2209	47.5	3,200
	100	AR2208	40.5	3,000
	100	AR2209	45.5	3,000
	120	AR2209	43.5	2,850
	120	AR2213	45	2,850
25-303	87	AR2206	34	3,050
24" Barrel	87	AR2208	37	3,050
	87	AR2209	41	3,050
	100	AR2206	31	2,850
	100	AR2208	33.5	2,850
	100	AR2209	38	2,850
	100	AR2213	40	2,850
	117	AR2206	28	2,700
	117	AR2208	31	2,700
	117	AR2209	36	2,700
	117	AR2213	39	2,700
257/303 (P14 Action)	87	AR2206	34	3,100
24" Barrel	87	AR2208	37	3,100
	87	AR2209	40	3,100
	100	AR2206	31	2,900
	100	AR2208	36	2,900
	100	AR2209	39.5	2,900
	117-120	AR2206	28	2,700
	117-120	AR2208	33	2,700
	117-120	AR2209	36.5	2,700
	117-120	AR2213	40	2,700
257 Roberts	60	AR2209	51	3,612
24" Barrel	60	AR2213SC	53	3,382

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
257 Roberts	75	AR2208	41	3,453
24" Barrel (cont)	75	AR2209	50	3,422
	75	AR2213SC	53	3,307
	87-90	AR2208	40	3,269
	87-90	AR2209	46	3,040
	87-90	AR2213SC	52	3,236
	100	AR2208	38	2,981
	100	AR2209	45	2,970
	100	AR2213SC	49	3,010
	117-120	AR2208	35	2,701
	117-120	AR2209	43	2,777
	117-120	AR2213SC	46	2,760
	125	AR2208	33.5	2,523
	125	AR2209	43	2,680
	125	AR2213SC	45	2,677
257 Roberts Improved	60	AR2206	49	3,650
24" Barrel	60	AR2208	50	3,650
	60	AR2209	53.5	3,650
	75	AR2206	48	3,500
	75	AR2208	49	3,500
	75	AR2209	52.5	3,500
	75	AR2213	55	3,500
	87-90	AR2206	45.5	3,300
	87-90	AR2208	46.5	3,300
	87-90	AR2209	51	3,300
	87-90	AR2213	53.5	3,300
	100	AR2206	42	3,100
	100	AR2208	43.5	3,100
	100	AR2209	48	3,100
	100	AR2213	51	3,100
	117-120	AR2208	41.5	2,900
	117-120	AR2209	46	2,900
	117-120	AR2213	49	2,900
25/284	75	AR2209	52	3,640
26" Barrel	75	AR2213SC	58	3,604
	87	AR2209	50	3,400
	87	AR2213SC	57	3,544
	100	AR2209	48	3,129
	100	AR2213SC	54	3,369
	117	AR2213SC	52	3,025
	120	AR2209	44	2,916
	120	AR2213SC	49	2,978
	125	AR2209	43	2,870
	125	AR2213SC	48	2,911
25/06 Remington	75	AR2208	49.7	3,660
24" Barrel	75	AR2209	58.5	3,700
	75	AR2213SC	62.00C	3,599
	75	AR2217	62.0C	3,359
	85	AR2208	46.5	3,449
	85	AR2209	53	3,445
	85	AR2213SC	58	3,473
	87	AR2208	46	3,382
	87	AR2209	54.5	3,409
	87	AR2213SC	60	3,421
	87	AR2217	62	3,296
	90	AR2208	45	3,312
	90	AR2209	53	3,370
	90	AR2213SC	58	3,481
	100	AR2209	51	3,210
	100	AR2213SC	54.3	3,172
	100	AR2217	61	3,245
	117	AR2209	47.7	2,923
	117	AR2213SC	52	2,937
	117	AR2214	57	3,050
	117	AR2217	58.5C	3,046
	120	AR2209	47.5	2,816
	120	AR2213SC	51.5	2,856
	120	AR2214	56	3,000
	120	AR2217	55.5	2,902

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
25/06 Remington	125	AR2213SC	49	2,770
24" Barrel (cont)	125	AR2217	56	2,894
.257 Weatherby Magnum	75	AR2209	65	3,714
26" Barrel	75	AR2213SC	73	3,849
	87	AR2209	63	3,550
	87	AR2213SC	72	3,713
	100	AR2209	62	3,319
	100	AR2213SC	68	3,436
	117	AR2209	60	3,144
	117	AR2213SC	66	3,282
	120	AR2213SC	65	3,220
6.5mm Japanese	85	AR2206	34	2,600
(6.5mm x 50 Arisaka)	85	AR2208	36	2,600
19" Barrel	100	AR2206	33	2,500
	100	AR2208	34.5	2,500
	100	AR2209	39.5	2,500
	120	AR2206	31.5	2,400
	120	AR2208	33	2,400
	120	AR2209	38	2,400
	120	AR2213	40	2,400
	129-130	AR2208	32	2,300
	129-130	AR2209	37	2,300
	129-130	AR2213	39	2,300
	140	AR2208	31	2,200
	140	AR2209	36	2,200
	140	AR2213	38	2,200
	180	AR2208	30	2,050
	180	AR2209	35	2,050
	180	AR2213	37	2,050
6.5mm x 52	85	AR2206	34	2,600
Mannlicher-Carcano	85	AR2208	37	2,600
21" Barrel	100	AR2206	33	2,450
	100	AR2208	35	2,450
	100	AR2209	40	2,450
	120-125	AR2206	31	2,300
	120-125	AR2208	33.5	2,300
	120-125	AR2209	38	2,300
	129-130	AR2206	30	2,250
	129-130	AR2208	32.5	2,250
	129-130	AR2209	37	2,250
	139-140	AR2206	29	2,150
	139-140	AR2208	31.5	2,150
	139-140	AR2209	36	2,150
	160	AR2206	27	2,000
	160	AR2208	29.5	2,000
	160	AR2209	34	2,000
	160	AR2213SC	39	2,086
6.5mm x 54	100	AR2206	38	2,800
(Mannlicher-Schoenauer)	100	AR2208	40	2,800
18" Barrel	120	AR2206	36.5	2,700
	120	AR2208	38.5	2,700
	120	AR2209	42.5	2,700
	129-130	AR2206	35.5	2,500
	129-130	AR2208	37.5	2,500
	129-130	AR2209	41.5	2,500
	140	AR2206	33.5	2,350
	140	AR2208	35.5	2,350
	140	AR2209	39.5	2,350
	160	AR2206	31.5	2,100
	160	AR2208	33.5	2,100
	160	AR2209	37.5	2,100
	160	AR2213	39	2,100
6.5mm x 53R	120	AR2206	33	2,500
(Dutch Mannlicher)	120	AR2208	35	2,500
25 1/2" Barrel	140	AR2206	30	2,200
	140	AR2208	32	2,200

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
6.5mm x 53R	155	AR2206	32	2,350
(Dutch Mannlicher)	155	AR2208	35	2,350
25 1/2" Barrel (cont)	160	AR2206	31.5	2,300
	160	AR2208	34.5	2,300
260 Remington	95	AR2206	39.5	3,225
24" Barrel	95	AR2208	42	3,245
	95	AR2209	49.7	3,285
	100	AR2206	37	3,055
	100	AR2208	39.5	3,030
	100	AR2209	45	3,075
	100	AR2213SC	48.8C	3,055
	107	AR2206	39.5	3,055
	107	AR2208	41.5	3,125
	107	AR2209	49	3,165
	107	AR2213SC	51.0C	3,027
	120	AR2206	37	2,795
	120	AR2208	39	2,880
	120	AR2209	46.5	2,960
	120	AR2213SC	50.0C	2,955
	120	AR2217	51.00C	2,815
	125	AR2206	36.2	2,735
	125	AR2208	37.5	2,785
	125	AR2209	44.3	2,865
	125	AR2213SC	48.00C	2,862
	125	AR2217	51.00C	2,821
	140	AR2206	33.5	2,510
	140	AR2208	36	2,575
	140	AR2209	42	2,675
	140	AR2213SC	45.7	2,686
	140	AR2217	50.5	2,730
	142	AR2206	35.4	2,590
	142	AR2208	37.5	2,645
	142	AR2209	44.5	2,735
	142	AR2213SC	48.0C	2,747
	160	AR2209	43	2,540
	160	AR2213SC	46	2,540
	160	AR2217	50.00C	2,595
6.5mm x 54	120-125	AR2206	33	2,500
Mauser	120-125	AR2208	35	2,500
20" Barrel	140	AR2206	30	2,200
	140	AR2208	32	2,200
6.5mm Swedish	85	AR2206	43	3,250
(6.5mm x 55)	85	AR2208	44	3,295
24" Barrel	85	AR2209	52.00C	3,283
	100	AR2208	42	3,177
	100	AR2209	50.00C	3,172
	100	AR2213SC	51.00C	2,883
	120	AR2208	39	2,785
	120	AR2209	46	2,840
	120	AR2213SC	49.5C	2,802
	120	AR2217	52	2,787
	120	AR2214	50.00C	2,600
	129	AR2208	37.5	2,664
	129	AR2209	45.5	2,703
	129	AR2213SC	48.50C	2,689
	129	AR2217	52	2,707
	140	AR2208	35.5	2,490
	140	AR2209	42	2,590
	140	AR2213SC	47.0	2,586
	140	AR2217	51.5C	2,651
	140	AR2214	49.50C	2,620
	160	AR2208	36	2,354
	160	AR2209	43	2,450
	160	AR2213SC	48.0C	2,524
	160	AR2217	50.00C	2,517
6.5mm/06	87	AR2206	50	3,500
(.256 Newton)	87	AR2208	53	3,500
24" Barrel	87	AR2209	58.5	3,500
	87	AR2213	62	3,500
	120	AR2206	45	3,250
	120	AR2208	48	3,250

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
6.5mm/06 (.256 Newton) 24" Barrel (cont)	120	AR2209	53.5	3,250
	120	AR2213	57.5	3,250
	140	AR2208	45.5	3,100
	140	AR2209	51	3,100
	140	AR2213	55	3,100
	140	AR2214	61	3,100
	160	AR2209	48.5	2,900
	160	AR2213	52.5	2,900
	160	AR2214	58.5	2,900
6.5mm Remington Magnum 26" Barrel	85	AR2209	57	3,564
	85	AR2213SC	61	3,570
	100	AR2209	55	3,327
	100	AR2213SC	60	3,416
	120	AR2209	52	3,080
	120	AR2213SC	59	3,286
	129	AR2209	51	2,994
	129	AR2213SC	58	3,155
	140	AR2209	49	2,780
	140	AR2213SC	54	2,943
264 Winchester Magnum 24" Barrel	85	AR2209	61	3,669
	85	AR2213SC	73	3,812
	100	AR2209	59	3,570
	100	AR2213SC	71	3,680
	100	AR2217	77	3,428
	120	AR2209	57	3,190
	120	AR2213SC	65	3,369
	120	AR2217	72	3,185
	129	AR2209	56	3,177
	129	AR2213SC	65	3,206
	129	AR2217	71	3,187
	140	AR2209	53	2,965
	140	AR2213SC	61	3,065
	140	AR2217	68	3,019
	160	AR2209	50	2,686
	160	AR2213SC	57	2,886
	160	AR2217	65	2,860
6.5mm x 68 Schuler 25" Barrel	85	AR2209	65	3,700
	85	AR2213	72	3,700
	85	AR2213SC	73	3,705
	100	AR2213	70	3,550
	100	AR2213SC	71	3,547
	120	AR2213	67	3,300
	120	AR2213SC	68	3,309
	140	AR2213	62	3,000
	140	AR2213SC	63	2,993
270/303 24" Barrel	100	AR2206	35	2,750
	100	AR2208	39	2,750
	100	AR2209	44	2,750
WARNING: For SMLE Actions, reduce these loads by at least two grains.	130	AR2206	33	2,500
	130	AR2208	36.5	2,500
	130	AR2209	42.5	2,500
	150	AR2208	33.5	2,350
	150	AR2209	40	2,350
270 Winchester 24" Barrel	90	AR2208	55	3,596
	90	AR2209	62C	3,603
	100	AR2208	52	3,397
	100	AR2209	59.4	3,401
	110	AR2208	48.7	3,248
	110	AR2209	57	3,267
	110	AR2213SC	62C	3,214
	120	AR2208	47	3,010
	120	AR2209	55	3,069
	120	AR2213SC	62C	3,112
	130	AR2208	46	2,931
	130	AR2209	54.3	3,012
	130	AR2213SC	60.00C	3,019
	130	AR2217	64C	3,025

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
270 Winchester	135	AR2208	45	2,902
24" Barrel (cont)	135	AR2209	53.5	2,994
	135	AR2213SC	59.5C	3,010
	140	AR2208	43.7	2,772
	140	AR2209	52	2,870
	140	AR2213SC	58C	2,888
	140	AR2217	63C	2,979
	150	AR2209	49	2,724
	150	AR2213SC	55.7	2,804
	150	AR2217	59C	2,831
	160	AR2209	49	2,646
	160	AR2213SC	54	2,673
	160	AR2217	59C	2,765
	180	AR2213SC	50.5	2,501
	180	AR2217	54	2,540
270 Weatherby Magnum	90	AR2209	70	3,631
26"Barrel	90	AR2213SC	78	3,631
	90	AR2217	81	3,269
	100	AR2209	69	3,509
	100	AR2213SC	77	3,666
	100	AR2217	81	3,287
	110	AR2213SC	76	3,482
	110	AR2217	81	3,242
	130	AR2209	66	3,262
	130	AR2213SC	70	3,205
	130	AR2217	81	3,259
	140	AR2209	64	3,140
	140	AR2213SC	68	3,112
	140	AR2217	80	3,145
	150	AR2209	63	2,986
	150	AR2213SC	68	3,057
	150	AR2217	79	3,132
	160	AR2209	61	2,738
	160	AR2213SC	65	2,901
	160	AR2217	78	3,051

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
7-30 Waters	120	AR2209	41	2,724
24" Barrel	120	AR2213SC	41	2,561
	139	AR2209	38	2,418
	139	AR2213SC	39	2,384
	154	AR2209	37	2,308
	154	AR2213SC	37	2,161
7mm-08 Remington	100	AR2208	45.7	3,277
24" Barrel	115	AR2208	46.3	3,216
	120	AR2208	45	3,117
	120	AR2209	50.00C	3,039
	130	AR2208	43.5	3,004
	130	AR2209	50.00C	2,998
	139	AR2208	43.5	2,877
	139	AR2209	50.00C	2,906
	140	AR2208	42.2	2,819
	140	AR2209	48.00C	2,868
	145	AR2208	41.5	2,745
	145	AR2209	48.00C	2,801
	150	AR2208	41.3	2,731
	150	AR2209	48.50C	2,823
	154	AR2208	41.2	2,666
	154	AR2209	48.00C	2,743
	154	AR2213SC	49.50C	2,625
	160	AR2208	39	2,562
	160	AR2209	46	2,665
	160	AR2213SC	49.50C	2,627
	162	AR2208	41	2,644
	162	AR2209	48.00C	2,714
	162	AR2213SC	48.50C	2,555
	168	AR2208	40	2,540
	168	AR2209	47.20C	2,637
	168	AR2213SC	49.00C	2,545

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
7mm-08 Remington	175	AR2208	37.5	2,344
24" Barrel (cont)	175	AR2209	45.00C	2,491
	175	AR2213SC	49.00C	2,516
7mm Shooting Times Eastener (7mm STE)	120	AR2206	39.5	2,900
	120	AR2208	42	2,900
22" Barrel	120	AR2209	49	2,873
	139	AR2209	48	2,676
7mm Mauser (7mm x 57)	100	AR2208	48	3,250
	100	AR2209	54.00C	3,166
24" Barrel	110	AR2208	45.5	3,081
	110	AR2209	54.00C	3,046
	120	AR2208	44	2,979
	120	AR2209	51.00C	2,945
	120	AR2213SC	52.50C	2,777
	130	AR2208	42	2,800
	130	AR2209	50	2,848
	140	AR2208	37.7	2,516
	140	AR2209	46.5	2,682
	140	AR2213SC	49.50C	2,719
	150	AR2208	36	2,372
	150	AR2209	44	2,513
	150	AR2213SC	48	2,542
	160	AR2208	35	2,261
	160	AR2209	42.5	2,399
	160	AR2213SC	46	2,415
	168	AR2208	37.5	2,404
	168	AR2209	42.5	2,378
	168	AR2213SC	46	2,393
	168	AR2217	52.00C	2,485
	175	AR2208	35	2,178
	175	AR2209	37	2,159
	175	AR2213SC	40	2,201
	175	AR2217	44.5	2,239

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
280 Remington (7mm Remington Express)	100	AR2208	51.3	3,433
24" Barrel	100	AR2209	60.5	3,379
	100	AR2213SC	63.0C	3,266
	115	AR2208	49.0	3,170
	115	AR2209	58.5	3,234
	115	AR2213SC	62.0C	3,190
	120	AR2208	47.2	3,032
	120	AR2209	56.0	3,114
	120	AR2213SC	62.0C	3,112
	130	AR2208	45.5	2,890
	130	AR2209	53.2	2,939
	130	AR2213SC	59.0C	3,001
	140	AR2208	45.5	2,838
	140	AR2209	53.5	2,918
	140	AR2213SC	58.5	2,927
	145	AR2208	43.0	2,690
	145	AR2209	48.8	2,714
	145	AR2213SC	53.0	2,727
	150	AR2208	42.0	2,611
	150	AR2209	53.7	2,709
	150	AR2213SC	60.0C	2,797
	160	AR2208	42.5	2,555
	160	AR2209	49.5	2,610
	160	AR2213SC	55.0	2,660
	162	AR2208	42.0	2,573
	162	AR2209	49.5	2,614
	162	AR2213SC	54.5	2,644
	168	AR2208	42.2	2,523
	168	AR2209	50.0	2,586
	168	AR2213SC	54.5	2,605
	175	AR2209	46.5	2,447
	175	AR2213SC	51.0	2,477

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
284 Winchester	100	AR2209	57	3,169
24" Barrel	100	AR2213SC	59	3,090
	115-120	AR2209	56	3,090
	115-120	AR2213SC	59	3,036
	125-130	AR2209	55	3,030
	125-130	AR2213SC	58	3,013
	139-140	AR2209	54	2,957
	139-140	AR2213SC	58	2,954
	145-150	AR2209	53	2,869
	145-150	AR2213SC	57	2,893
	154-160	AR2209	52	2,754
	154-160	AR2213SC	57	2,803
	168	AR2209	51	2,692
	168	AR2213SC	54	2,690
	175	AR2209	50	2,597
	175	AR2213SC	54	2,630
	195	AR2209	46	2,380
	195	AR2213SC	50	2,414
7mm x 61	120	AR2206	54.5	3,250
Sharp & Hart	120	AR2208	57.5	3,250
24" Barrel	120	AR2209	64	3,250
	139-140	AR2206	53	3,100
	139-140	AR2208	56	3,100
	139-140	AR2209	62.5	3,100
	150	AR2206	52	3,000
	150	AR2208	55	3,000
	150	AR2209	61.5	3,000
	150	AR2213	63	3,000
	160-162	AR2206	51	2,800
	160-162	AR2208	54	2,800
	160-162	AR2209	60.5	2,800
	160-162	AR2213	62	2,800
	175	AR2208	52	2,700
	175	AR2209	59	2,700
	175	AR2213	60.5	2,700

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
7 mm Remington	100	AR2208	59	3,487
Magnum	100	AR2209	69	3,494
24" Barrel	100	AR2213SC	75	3,499
	110	AR2208	58.5	3,356
	110	AR2209	68.5	3,357
	110	AR2213SC	73	3,367
	120	AR2208	57	3,218
	120	AR2209	65	3,226
	120	AR2213SC	68.5	3,236
	130	AR2208	54	2,998
	130	AR2209	61.5	3,082
	130	AR2213SC	66	3,051
	140	AR2209	59	2,927
	140	AR2213SC	64	2,950
	140	AR2217	70	3,036
	150	AR2209	57	2,859
	150	AR2213SC	62	2,986
	150	AR2217	68	2,936
	160	AR2209	55.5	2,745
	160	AR2213SC	60	2,787
	160	AR2217	66	2,839
	162	AR2209	58	2,799
	162	AR2213SC	64	2,871
	162	AR2217	70	2,905
	170	AR2209	60	2,767
	170	AR2213SC	65	2,806
	170	AR2217	71	2,806
	175	AR2209	54	2,617
	175	AR2213SC	58	2,660
	175	AR2217	64.5	2,692
7 mm Weatherby	140	AR2209	68.5	3,248
Magnum	140	AR2213SC	74	3,258
24" Barrel	140	AR2217	79.00C	3,273

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
7 mm Weatherby Magnum 24" Barrel (cont)	150	AR2209	68	3,180
	150	AR2213SC	72	3,152
	150	AR2217	79.00C	3,225
	160	AR2209	65	2,950
	160	AR2213SC	70	2,971
	160	AR2217	75.00C	2,994
	175	AR2209	63.7	2,899
	175	AR2213SC	67.5	2,895
	175	AR2217	74.70C	3,022
7 mm Shooting Times Westerner 24" Barrel	120	AR2209	73	3,350
	120	AR2213SC	78.5	3,348
	120	AR2217	86	3,405
	139	AR2209	71	3,183
	139	AR2213SC	76.5	3,181
	139	AR2217	85.5	3,284
	145	AR2213SC	72	3,063
	145	AR2217	77	3,120
	150	AR2213SC	68	2,923
	150	AR2217	72.5	2,982
	150	AR2218	84.00C	3,027
	160	AR2213SC	74	3,037
	160	AR2217	80.7	3,084
	160	AR2218	90.00C	2,970
	175	AR2217	74	2,944
	175	AR2218	89.00C	2,973
	195	AR2218	88.00C	2,880
7.35mm Carcano (1938) 21" Barrel	128	AR2207	33	2,500
	128	AR2206	37	2,500
	128	AR2208	41	2,500
	150	AR2206	35	2,450
	150	AR2208	39	2,450
30 M1 Carbine 18" Barrel	93	AR2205	14.5	1,900
	93	AR2207	15.5	1,900
	100	AR2205	14	1,850
	100	AR2207	15	1,850
	110	AR2205	13.5	1,800
	110	AR2207	14.5	1,800
30/30 Winchester 24" Barrel	110	AR2207	25.5	2,409
	110	AR2208	38.0C	2,572
	130	AR2207	24.5	2,234
	130	AR2208	36.0C	2,496
	150	AR2207	24.0	2,110
	150	AR2208	34.5	2,349
	170	AR2207	22.5	1,918
	170	AR2208	33.0	2,168
30/40 Krag 24" Barrel	100	AR2205	16	1,706
	100	AR2207	34	2,886
	110	AR2207	34	2,804
	110	AR2209	51	2,492
	130	AR2207	33	2,565
	130	AR2209	51	2,535
	150	AR2207	32	2,366
	150	AR2209	49	2,388
	150	AR2213SC	49	2,306
	165	AR2209	48	2,242
	180	AR2209	46	2,110
	200	AR2209	44	2,018
	220-225	AR2209	42	1,947
300 Savage 22" Barrel	100	AR2207	35.5	2,900
	100	AR2206	39.5	2,900
	100	AR2208	42	2,900
	110	AR2207	35	2,700
	110	AR2206	37.5	2,700
	110	AR2208	41	2,700
	130	AR2207	34	2,550
	130	AR2206	36.5	2,550
	130	AR2208	40	2,550

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
300 Savage	150	AR2207	32.5	2,400
22" Barrel (cont)	150	AR2206	35	2,400
	150	AR2208	38.5	2,400
	165	AR2206	33	2,250
	165	AR2208	36.5	2,250
	180	AR2206	31.5	2,100
	180	AR2208	35.5	2,100
	200	AR2206	29	2,000
	200	AR2208	33.5	2,000
7.5mm x 55 Swiss	125	AR2209	51	2,839
31" Barrel	125	AR2213SC	52	2,811
	150	AR2209	49	2,610
	150	AR2213SC	51	2,659
	165-168	AR2209	48	2,524
	165-168	AR2213SC	49	2,578
	180	AR2209	46	2,566
	180	AR2213SC	47	2,424
307 Winchester	110	AR2206	44	2,800
24" Barrel	110	AR2208	48	2,800
	110	AR2209	50	2,600
	110	AR2213SC	50	2,451
	130	AR2206	43	2,700
	130	AR2208	45	2,700
	130	AR2209	49	2,700
	130	AR2213SC	50	2,400
	150	AR2206	41	2,500
	150	AR2208	44	2,500
	150	AR2209	48	2,500
	150	AR2213SC	49	2,349
	170	AR2206	39	2,400
	170	AR2208	42	2,400
	170	AR2209	47	2,400
	170	AR2213SC	47	2,290
	180	AR2213SC	47	2,289
	200	AR2206	38	2,300
	200	AR2208	39	2,300
	200	AR2209	46	2,300
	200	AR2213SC	46	2,207
308 Winchester	110	AR2207	40	3,168
(7.62mm)	110	AR2208	50C	3,237
24" Barrel	125	AR2207	39.5	2,988
	125	AR2208	50C	3,135
	130	AR2206	47.50C	3,025
	130	AR2208	48.00C	2,985
	144	AR2206	45	2,890
	144	AR2208	47.00C	2,890
	150	AR2208	47.0C	2,937
	155	BM2	43.5	2,750
	155	AR2206	44.5	2,825
	155	AR2208	46.5	2,835
	168	BM2	43.5	2,695
	168	AR2206	43.7	2,705
	168	AR2208	45.5	2,730
	168	AR2209	47.00C	2,425
	175	AR2206	41.5	2,590
	175	AR2208	43.5	2,600
	190	AR2208	42	2,520
	190	AR2209	48.00C	2,470
7.62mm x 54R	110	AR2206	50	3,100
(Russian)	110	AR2208	53	3,100
24" Barrel	110	AR2209	61	3,100
	130	AR2206	48	2,900
	130	AR2208	51	2,900
	130	AR2209	58.5	2,900
	150	AR2206	46	2,700
	150	AR2208	49	2,700
	150	AR2209	56.5	2,700

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
7.62mm x 54R (Russian) 24" Barrel (cont)	165	AR2206	44	2,550
	165	AR2208	47	2,550
	165	AR2209	54.5	2,550
	180	AR2206	42.5	2,400
	180	AR2208	45.5	2,400
	180	AR2209	53	2,400
	200	AR2208	43.5	2,250
	200	AR2209	50.5	2,250
	200	AR2213	53	2,250
	220	AR2208	41.5	2,100
	220	AR2209	48.5	2,100
	220	AR2213	51	2,100
30-06 Springfield 24" Barrel	110	AR2208	59.0	3,452
	125	AR2208	57.2	3,267
	130	AR2208	53.5	3,154
	150	AR2208	51.0	2,975
	150	AR2209	62.0C	3,068
	155	AR2208	50.7	2,958
	155	AR2209	62.0C	3,038
	165	AR2206	50.0	2,840
	165	AR2208	52.0	2,865
	165	AR2209	59.0C	2,835
	165	AR2213	60.0C	2,825
	168	AR2208	50.5	2,859
	168	AR2209	59.0	2,897
	180	AR2208	46.5	2,608
	180	AR2209	57.5	2,798
	180	AR2213SC	60.0	2,710
	190	AR2208	46.5	2,608
	190	AR2209	56.5	2,692
	190	AR2213SC	61.0C	2,668
	200	AR2208	45.5	2,501
	200	AR2209	53.0	2,544
	200	AR2213SC	57.5C	2,577
	220	AR2208	45	2,382
	220	AR2209	53	2,435
	220	AR2213SC	57.5C	2,458
	250	AR2209	47.5	2,156
	250	AR2213SC	52.5C	2,237
30-06 Improved 24" Barrel	130	AR2209	65	3,250
	130	AR2213	70	3,250
	150	AR2209	62.5	3,100
	150	AR2213	67	3,100
	165	AR2209	59.5	3,000
	165	AR2213	63.5	3,000
	180	AR2209	58	2,900
	180	AR2213	62	2,900
	200	AR2209	56	2,750
	200	AR2213	60	2,750
300 Holland & Holland Magnum 24" Barrel	110	AR2209	73	3,550
	110	AR2213SC	83	3,611
	125-130	AR2209	72	3,394
	125-130	AR2213SC	81	3,362
	150	AR2209	71	3,202
	150	AR2213SC	78	3,313
	165	AR2209	69	3,164
	165	AR2213SC	77	3,099
	200	AR2209	66	2,909
	200	AR2213SC	72	2,932
	220-225	AR2209	64	2,717
	220-225	AR2213SC	70	2,714
	250	AR2209	62	2,493
	250	AR2213SC	67	2,563
308 Norma Magnum 24" Barrel	110	AR2209	77	3,506
	110	AR2213SC	80	3,563

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
308 Norma Magnum	130	AR2209	74	3,292
24" Barrel (cont)	130	AR2213SC	79	3,302
	130	AR2217	84	3,333
	150	AR2209	73	3,180
	150	AR2213SC	76	3,258
	150	AR2217	83	3,279
	168	AR2213SC	75	3,140
	168	AR2217	79	3,123
	180	AR2209	69	3,000
	180	AR2213SC	73	3,022
	180	AR2217	76	2,940
	190	AR2217	74	2,891
	200	AR2209	67	2,850
	200	AR2213SC	70	2,889
	200	AR2217	73	2,859
	220	AR2209	65	2,700
	220	AR2213SC	68	2,697
	220	AR2217	70	2,672
	250	AR2217	68	2,501
300 Winchester Magnum	110	AR2208	72.5	3,660
26" Barrel	110	AR2209	79	3,610
	110	AR2213SC	84C	3,540
	110	AR2217	85C	3,392
	125	AR2208	70	3,462
	125	AR2209	73	3,424
	125	AR2213SC	80	3,347
	125	AR2217	85C	3,418
	130	AR2206	57	3,250
	130	AR2208	68.5	3,398
	130	AR2209	74	3,250
	130	AR2213	82C	3,383
	150	AR2208	60	3,108
	150	AR2209	72	3,205
	150	AR2213SC	78	3,207
	150	AR2217	85C	3,255
	155	AR2208	59.70	3,090
	155	AR2209	74	3,215
	155	AR2213SC	79C	3,166
	155	AR2217	85C	3,160
	165	AR2208	58.5	3,000
	165	AR2209	70	3,042
	165	AR2213SC	75.5	3,055
	165	AR2217	84	3,207
	168	AR2208	58.2	2,964
	168	AR2209	70	3,034
	168	AR2213SC	75.5	3,023
	180	AR2209	67	2,918
	180	AR2213SC	73C	2,966
	180	AR2217	81C	3,042
	190	AR2209	67	2,863
	190	AR2213SC	73C	2,937
	190	AR2217	81C	2,990
	200	AR2209	66	2,753
	200	AR2213SC	72	2,814
	200	AR2217	79C	2,883
	220	AR2209	65	2,622
	220	AR2213SC	71	2,693
	220	AR2217	78	2,750
	250	AR2213	64	2,434
	250	AR2217	70	2,484
300 Weatherby Magnum	125	AR2208	69	3,492
26" Barrel	125	AR2209	82.5	3,545
	125	AR2213SC	90C	3,590
	150	AR2208	63	3,142
	150	AR2209	72.5	3,156
	150	AR2213SC	79	3,168
	150	AR2217	88C	3,264

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
300 Weatherby Magnum 26" Barrel (cont)	165	AR2208	62	3,000
	165	AR2209	74	3,074
	165	AR2213SC	80	3,113
	165	AR2217	89.7C	3,216
	180	AR2209	73.5	3,022
	180	AR2213SC	81.5	3,096
	180	AR2217	88.5C	3,152
	200	AR2209	71	2,866
	200	AR2213SC	77.5	2,869
	200	AR2217	85C	2,963
	220	AR2209	70	2725
	220	AR2213SC	75.7	2,766
	220	AR2217	82.5	2,833
30-378 Weatherby 26" Barrel	150	AR2213SC	104	3,555
	150	AR2217	114	3,598
	165	AR2213SC	100.5	3,391
	165	AR2217	112	3,495
	180	AR2213SC	100	3,301
	180	AR2217	111	3,412
	180	AR2218	120.00C	3,229
	190	AR2217	108	3,316
	190	AR2218	120.00C	3,243
	200	AR2218	117.00C	3,227
	220	AR2217	104	3,084
	220	AR2218	118.50C	3,145
300 Remington Ultra Mag 24" Barrel	150	AR2213SC	94	3,410
	150	AR2217	102	3,455
	165	AR2213SC	90	3,255
	165	AR2217	98	3,320
	180	AR2213SC	89	3,165
	180	AR2217	96	3,220
	180	AR2218	108.00C	3,160
	190	AR2213SC	85	3,070
	190	AR2217	93	3,130
	190	AR2218	105.00C	3,085
	200	AR2217	83	2,850
	200	AR2218	98.00C	2,910
	220	AR2217	89	2,865
	220	AR2218	100.50C	2,850
7.62mm x 39 (Russian) 22" Barrel	122-125	AR2207	26.5	2,378
	150	AR2207	24.5	2,122
310 Cadet (Martini Action) 22" Barrel	**L** 110	AR2205	11	1,500
	120 **Jacketted**	AR2205	9	1,270
32-20 WCF 24" Barrel	80	AR2205	16	2,150
	100	AR2205	14	1,950
	L 115	AP-70N	4	1,260
	115 **Jacketted**	AR2205	13	1,800
	L 125	AP-70N	3.7	1,225
7.7mm x 58 Japanese 26" Barrel	150	AR2206	42.5	2,500
	150	AR2208	46	2,500
	150	AR2209	51	2,514
	150	AR2213SC	55	2,445
	180	AR2206	39	2,250
	180	AR2208	42.5	2,250
	180	AR2209	47	2,309
	180	AR2213SC	50	2,233
303 British 24" Barrel	125	BM2	44	2,920
	125	AR2206	46.00C	2,880
	125	AR2208	47.00C	2,925
	150	BM2	40.4	2,645
	150	AR2206	43	2,700
	150	AR2208	43.4	2,710
	150	AR2213SC	49	2,295

(C) = Compressed load **L** = Lead Projectile

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
303 British	174	AR2206	39	2,515
24" Barrel (cont)	174	AR2208	41	2,520
	174	AR2209	47.00C	2,450
	180	AR2206	40	2,445
	180	AR2208	39.5	2,410
	180	AR2209	47C	2,435
	180	AR2213SC	47	2,238
	215	AR2206	39	2,250
	215	AR2208	39.5	2,265
	215	AR2209	45.00C	2,185
7.65mm x 53	150	AR2206	42	2,565
(7.65mm Mauser)	150	AR2208	43.5	2,590
29" Barrel	150	AR2209	49	2,614
	175	AR2206	36.5	2,325
	175	AR2208	38.5	2,350
	175	AR2209	47	2,454
32 Remington	170	AR2207	23	1,900
22" Barrel	170	AR2206	27	1,900
	170	AR2208	28.5	1,900
32 Winchester Special	170	AR2206	30	1,900
20" Barrel	170	AR2207	27	2,168
	170	AR2208	32	1,925
32-40 Winchester	170	AR2207	19	1,650
24" Barrel	170	AR2206	26	1,825
	196 Hoch	AR2205	13	1,367
8mm Mauser (8x57)	125	AR2207	42	3,054
23" Barrel	125	AR2209	54	2,480
	150	AR2207	41	2,848
	150	AR2209	54	2,552
	150	AR2213SC	57	2,452
	170	AR2209	54	2,507
	170	AR2213SC	57	2,418
8mm-06	150	AR2206	51	3,000
24" Barrel	150	AR2208	54	3,000
	175	AR2206	48.5	2,800
	175	AR2208	52	2,800
	220	AR2209	52	2,400
	220	AR2213	56	2,400
8mm x 68 Schuler	125	AR2209	73	3,300
26" Barrel	125	AR2213	77	3,300
	150	AR2209	70	3,100
	150	AR2213	75	3,100
	170	AR2209	68	2,950
	170	AR2213	72	2,950
	220	AR2209	62	2,650
	220	AR2213	65.5	2,650
8mm Remington	125	AR2209	83	3,488
Magnum	150	AR2209	79	3,272
24" Barrel	170-175	AR2209	77	3,128
	170-175	AR2213SC	82	3,144
	180-185	AR2209	75	3,007
	180-185	AR2213SC	80	3,024
	200	AR2209	73	2,919
	200	AR2213SC	79	2,932
	220-225	AR2213SC	78	2,871
338-06	200	AR2209	65	2,710
24" Barrel	225	AR2209	62	2,744
	250	AR2209	60	2,569
	250	AR2213SC	61	2,408
	275	AR2213SC	59	2,348
338 Winchester	160	AR2208	63	3,150
Magnum	160	AR2209	72	3,155
24" Barrel	160	AR2213SC	78C	3,130
	175	AR2206	58	2,930
	175	AR2208	59	2,940

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
338 Winchester Magnum	175	AR2209	70	3,050
24" Barrel	175	AR2213	73.5	3,040
	175	AR2213SC	76	3,041
	180	AR2208	63.5	3,087
	180	AR2209	74.5	3,157
	180	AR2213SC	78C	3,067
	200	AR2208	58.5	2,805
	200	AR2209	72.5	2,969
	200	AR2213SC	77.50C	2,965
	210	AR2208	58.5	2,784
	210	AR2209	70	2,855
	210	AR2213SC	75.50C	2,888
	225	AR2208	57.5	2,680
	225	AR2209	69.5	2,785
	225	AR2213SC	74.50C	2,792
	250	AR2209	67.5	2,657
	250	AR2213SC	71.50C	2,655
	250	AR2217	76C	2,622
	275	AR2209	63.5	2,447
	275	AR2213SC	69	2,502
	275	AR2217	76C	2,564
340 Weatherby Magnum	200	AR2209	80	3,000
24" Barrel	200	AR2213	88	3,000
	200	AR2213SC	90	3,040
	225	AR2209	78	2,850
	225	AR2213	84	2,850
	225	AR2213SC	86	2,889
	250	AR2209	76	2,700
	250	AR2213	81	2,700
	250	AR2213SC	83	2,784
	250	AR2214	90	2,700
	275	AR2209	74	2,550
	275	AR2213	78	2,550
	275	AR2213SC	80	2,569
	275	AR2214	86	2,550

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
357 Magnum Rifle	110	AP-70N	8	1,670
20" Barrel	110	AR2205	21	2,233
	125	AP-70N	7.6	1,526
	125	AR2205	20	2,122
	140	AP-70N	7	1,356
	140	AR2205	18	1,930
	150	AP-70N	6.7	1,323
	150	AR2205	16.5	1,775
	L 158	AP-50N	5.3	1,200
	158	AP-70N	6.3	1,147
	L 158	AP-70N	6.7	1,380
	L 158	AP-90	7.5	1,415
	158	AR2205	16	1,668
	L 158	AR2205	11.5	1,382
	170	AR2205	14.5	1,535
	180	AR2205	13.7	1,325
35 Remington	180	AR2207	32	2,172
20" Barrel	180	AR2206	38	2,050
	180	AR2208	40.5	2,196
	200	AR2207	30.5	1,999
	200	AR2206	35	1,900
	200	AR2208	39.5	2,139
	220-225	AR2207	29	1,867
	220-225	AR2206	34	1,750
	220-225	AR2208	38	1,998
356 Winchester	180	AR2205	30	2,238
20" Barrel	180	AR2207	43	2,600
	200	AR2207	40	2,383
	250	AR2207	37	2,133
358 Winchester	180	AR2207	43	2,711
26" Barrel	200	AR2207	41	2,532
	220	AR2207	41	2,502
	250	AR2207	39	2,312

(C) = Compressed load **L** = Lead Projectile

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
35 Whelen	180	AR2206	58.5	2,785
22" Barrel	180	AR2208	60	2,764
	200	AR2206	55.5	2,675
	200	AR2208	57	2,653
	220-225	AR2206	53.5	2,580
	220-225	AR2208	56	2,588
	250	AR2206	52	2,450
	250	AR2208	55	2,486
350 Remington Magnum	180	AR2207	51	2,808
26" Barrel	180	AR2206	59	2,960
	180	AR2208	62	3,000
	200	AR2207	48	2,512
	200	AR2206	55	2,780
	200	AR2208	60	2,828
	220	AR2207	46	2,423
	220	AR2206	52	2,550
	220	AR2208	57	2,600
	250	AR2207	42	2,190
	250	AR2206	51	2,450
	250	AR2208	55	2,600
	250	AR2209	58	2,500
358 Norma Magnum	180	AR2208	66	3,100
24" Barrel	180	AR2209	79	3,100
	200	AR2208	65	3,000
	200	AR2209	78	3,000
	250	AR2208	63	2,700
	250	AR2209	75	2,778
358 Shooting Times Alaskan	225	AR2209	87	3,119
24" Barrel	250	AR2209	84	2,933
	250	AR2213SC	90	2,984
	250	AR2217	90	2,810
	265	AR2209	83	2,895
	275	AR2209	81	2,785
	300	AR2209	77	2,633
9mm x 57 Mauser	250	AR2206	41.5	2,250
24" Barrel	250	AR2208	45	2,250
	280	AR2206	45	2,100
	280	AR2208	49	2,100
9.3mm x 62 Mauser	231-234	AR2206	58	2,600
24" Barrel	258	AR2206	55.5	2,450
	258	AR2208	58	2,450
	270	AR2206	52	2,300
	270	AR2208	54.5	2,300
	270	AR2209	59	2,300
	285-286	AR2206	51	2,200
	285-286	AR2208	53.5	2,200
	285-286	AR2209	58	2,200
	293	AR2206	50.5	2,150
	293	AR2208	53	2,150
	293	AR2209	57.5	2,150
9.3mm x 64 Brennecke	231-234	AR2208	68	2,700
26" Barrel	231-234	AR2209	73	2,700
	258	AR2208	66.5	2,500
	258	AR2209	70.5	2,500
	285-286	AR2208	63	2,300
	285-286	AR2209	67.5	2,300
	293	AR2208	62	2,250
	293	AR2209	67	2,250
	293	AR2213	71	2,250
38-55 Winchester	**L** 250	AR2207	24	1,740
24" Barrel	255	AR2207	28	1,788
375 Winchester	200	AR2207	38.00C	2,480
24" Barrel	220	AR2207	34	2,233

(C) = Compressed load

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
375 Holland & Holland Magnum 24" Barrel	200	AR2208	76	3,121
	210	AR2208	72.5	3,023
	235	AR2208	70	2,819
	250	AR2208	66.5	2,642
	250	AR2209	83.00C	2,733
	270	AR2208	67	2,620
	270	AR2209	83.00C	2,694
	300	AR2208	62	2,454
	300	AR2209	81.50C	2,645
378 Weatherby Magnum 24" Barrel	235	AR2209	109	3,224
	235	AR2213SC	117	3,202
	270	AR2209	105	3,091
	270	AR2213SC	115	3,102
	300	AR2209	100	2,940
	300	AR2213SC	112	2,926
38-40 26" Barrel	130	AR2205	28	2,000
	180	AR2205	24.5	1,750
404 Jeffery 26" Barrel	400	AR2206	63	2,100
	400	AR2208	71	2,100
	400	AR2209	80	2,100
416 Remington Magnum 24" Barrel	350	AR2208	82	2,622
	400	AR2208	77	2,407
	400	AR2209	88.00C	2,395
416 Weatherby Magnum 24" Barrel	300	AR2209	122	3,051
	350	AR2209	118	2,891
	400	AR2209	110	2,687
	400	AR2213SC	120	2,703
	400	AR2217	120	2,419
416 Rigby 24" Barrel	350	AR2209	102	2,518
	400	AR2209	100	2,414
	400	AR2213SC	106	2,422
	400	AR2217	110	2,409

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
44-40 Winchester* 20" Barrel	**L** 200	AP-70N	7.3	1,069
	L 200	AS-30N	5	924
	L 200	AR2205	24	1,450
	L 215	AR2205	22	1,380
	240	AR2205	20	1,370

Data only for use in Winchester Model 92 & 94, Marlin Model 1894 and Remington Model 14.5 rifles in excellent condition. Either slug the bore to determine appropriate bullet diameters or use 0.427 inch diameters only. Do not use 0.429 inch bullets without first checking barrel bore size.

44 Remington Magnum (Rifle Only) ***Do not use these loads in pistol.*** 20" Barrel	**L** 165	AS-30N	5.5	1,147
	L 165	AP-70N	7.2	1,138
	180	AR2205	29	2,114
	L 185	AP-70N	7.4	1,180
	L 185	AS-30N	6	1,162
	L 200	AS-30N	6.4	1,172
	L 200	AP-70N	7.8	1,209
	200	AR2205	27	1,982
	210	AR2205	27	1,970
	225	AR2205	25.5	1,897
	L 240	AS-30N	6.2	1,062
	L 240	AP-70N	10.2	1,374
	240	AR2205	24	1,778
	270	AR2205	22.5	1,638
	280	AR2205	22	1,544
	300	AR2205	20	1,452
444 Marlin 24" Barrel	200	AR2207	51.20C	2,566
	225	AR2207	46.9	2,361
	240	AR2207	49.20C	2,499
	260	AR2207	45.5	2,194
	265	AR2207	47	2,273
	270	AR2207	46.5	2,261

(C) = Compressed load **L** = Lead Projectile

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
444 Marlin 24" Barrel (cont)	275	AR2207	44.5	2,172
	280	AR2207	42.5	2,108
	280	AR2208	52.00C	2,025
	300	AR2207	42.5	2,082
	300	AR2208	50.00C	1,914
45/70 Government Lever Actions 24" Barrel	300	AR2207	60	2,424
	350	AR2207	54	2,191
	350	AR2208	60.00C	2,013
This data is intended for the 1895 lever action Marlin rifles only.	400	AR2208	62C	2,065
	400	BM1	52	1,950
	400	BM2	56	1,955
	400	AR2206	56	1,935
	400	AR2207	48	1,920
45/70 Government Modern Rifles 24" Barrel	300	AR2207	63	2,532
	350	AR2207	56	2,300
NOTE: This data is for use in Ruger No.1 and No. 3 single shots, Browning Model 1885 Single Shot and Siamese Mauser Bolt Action Rifles	400	AR2207	53	2,108
	500	BM2	54	1,780
	500	AR2206	55	1,830
	500	AR2208	57	1,785
45/70 Government Trapdoor Rifle 24" Barrel	300	AR2205	40	1,935
	300	AR2207	50	1,970
	300	BM1	54	2,000
	300	BM2	60	2,035
	300	AR2206	60	2,030
	300	AR2208	63.00C	2,020
	L 385	AR2207	32	1,483
	L 385	AR2208	52.5	1,805
This data is intended for Springfield "Trapdoor" 1886, rolling block and antique replica rifles	400	AR2207	44	1,740
	400	BM1	46	1,665
	400	BM2	52	1,760
	400	AR2206	52	1,770
	400	AR2208	54	1,760
	L 405	AR2207	31	1,459
	L 405	AR2208	50	1,718

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
	L 485	AR2207	32	1,434
45-90 Winchester 24" Barrel	300	AR2207	36.5	1,500
	400	AR2207	30.5	1,350
577/450 Martini Henry 24" Barrel	**L** 400	AR2207	37	1,300
450 Nitro Express 24" Barrel	500	AR2208	84	2,150
	500	AR2209	100	2,150
458 Winchester Magnum 24" Barrel	300	AR2207	77.00C	2,784
	350	AR2206	77.5	2,450
	350	AR2207	72	2,548
	400	AR2206	74.5	2,320
	400	AR2207	67	2,323
	400	AR2208	77.00C	2,310
	450	AR2207	60	2,092
	450	AR2208	74.00C	2,195
	500	AR2206	71.5	2,125
	500	AR2207	58.5	1,987
	500	AR2208	74.00C	2,152
460 Weatherby Magnum 24" Barrel	350	AR2209	120	2,737
	350	AR2213SC	128	2,678
	400	AR2209	118	2,610
	400	AR2213SC	127	2,565
	500	AR2209	115	2,508
	500	AR2213SC	126	2,469
	600	AR2209	104	2,439
	600	AR2213SC	115	2,457
470 Nitro Express 24" Barrel	500	AR2209	112	2,141
	500	AR2213	115	2,150
	500	AR2213SC	119	2,159
	500	AR2217	125	2,063
	600	AR2213SC	105	1,941
	600	AR2217	115	1,933

(C) = Compressed load **L** = Lead Projectile

Sequence of numbers is correct in order of decreasing burning rates.

RIFLE DATA

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
500 Jeffery 45" Barrel	535	AR2206	96	2,300

CALIBRE	BULLET WEIGHT (Grains)	POWDER TYPE	MAX. CHARGE WEIGHT (Grains)	NOM. VELOCITY
50 Browning Machine Gun 45" Barrel	655	AR2218	248	3,029
	750	AR2218	233	2,800
	800	AR2218	225	2,725

(C) = Compressed load
Sequence of numbers is correct in order of decreasing burning rates.

Cowboy Action Data

For the first time we present a separate section for Cowboy Action Data. Many of these loads were developed through an extensive program by the Hodgdon Powder Company Inc. of the USA, to whom we are indebted for their contribution.

Velocities for all cartridges listed are limited by the SAAMI maximum allowable pressures. Minimum loads are established by pressure. Loads with very low pressure may fail to function in very cold weather, resulting in a bullet becoming lodged in the bore (please see the Warnings section of this guide).

The average loss in velocity from the listed pressure barrel data when using a 4⅝ inch barreled revolver is 175 fps. A 7½ inch revolver will lose about 50 fps.

Carbines will generally develop velocities similar to those listed in the data. Some carbine/cartridge combinations will exceed the velocities listed.

Because of a wide variation in bullet diameter, chamber diameter, cylinder gap, case capacity and manufacturing variations in primers and powder, we suggest that you chronograph loads from your own firearms.

DO NOT LOAD BELOW MINIMUM RECOMMENDATIONS. Doing so could result in a bullet stuck in the bore.

Long Range Rifle Data

The loads listed below are representative of common calibres used. As there are so many cartridges which could be used, only a few are shown. DO NOT USE ANY FILLER MATERIAL WITH THESE LOADS, as fillers can alter pressure and velocities decidedly. Velocities are limited to approximately 1,600 fps due to excessive leading at higher velocities.

Use flat point bullets in tubular magazines.

Shotgun

Any load suitable for trap or skeet is suitable for Cowboy Action shooting. Shot loads of ⅞ oz., 1 oz. And 1⅛ oz. are all that is required. Heavier loads generate more recoil and are, at best, unpleasant to shoot and, at worst, add time to your score.

The loads included in this guide were selected for their performance and for the availability of components.

Remember:

1. Smooth shells come out of a double barreled shotgun better than ribbed shells.
2. NO STEEL SHOT.
3. NO SHOT LARGER THAN #4. Size 6, 7½ and 8 are most common.
4. CHECK YOUR RELOADS IN YOUR GUN FOR PROPER FUNCTION.

*Damascus barrels should be considered unsafe with ANY powder.

COWBOY LONG RIFLE

CALIBRE	BULLET WEIGHT (grains)	POWDER TYPE	STARTING LOADS			MAXIMUM LOADS		
			POWDER WEIGHT (grains)	VELOCITY (fps)	PRESSURE (cup)	POWDER WEIGHT (grains)	VELOCITY (fps)	PRESSURE (cup)
30-30 Winchester	160 Cast	AR2207	15.0	1420	15,000	17.0	1616	20,600
32-40 Winchester	196 Cast	AR2205	Reduce Maximum 3%			13.0	1267	18,000
38-55 Winchester	250 Cast	AR2207	18.5	1408	17,100	21.0	1608	23,700
45-70 Government	300 Cast	AR2207	30.0	1390	14,400	35.5	1641	16,100
		AR2208	45.0	1599	17,800	55.0	1880	20,600
	385 Cast	AR2207	28.0	1302	13,300	32.0	1483	14,700
		AR2208	42.5	1537	15,400	52.5	1805	21,800
	405 Cast	AR2207	27.0	1251	14,200	31.0	1459	17,100
		AR2208	40.0	1392	15,600	50.0	1718	20,900
	485 Cast	AR2207	28.0	1279	16,400	32.0	1434	20,400

*AR2205 Loads should not be reduced more than 3% due to inconsistency of velocity at the lower pressure.

COWBOY PISTOL

CALIBRE	BULLET WEIGHT (grains)	POWDER TYPE	STARTING LOADS POWDER WEIGHT (grains)	STARTING LOADS VELOCITY (fps)	STARTING LOADS PRESSURE (cup)	MAXIMUM LOADS POWDER WEIGHT (grains)	MAXIMUM LOADS VELOCITY (fps)	MAXIMUM LOADS PRESSURE (cup)
25-20 Winchester	71 Lead RNFP	AR2205	6.0	1146	13,700	7.0	1346	18,200
	85 Lead RNFP	AR2205	6.0	1129	18,500	7.0	1317	20,500
32 H & R Magnum	90 Lead RNFP	AP-70N	3.0	819	8,400	3.2	908	11,500
32-20 Winchester (Colt Pistol)	115 Lead RNFP	AP-70N	3.0	808	14,200	3.2	869	16,000
32-20 Winchester (Ruger Pistol & Rifle Data only)	115 Lead RNFP	AP-70N	3.2	869	16,000	4.0	1037	22,600
38 Special	125 Lead RNFP	AP-70N AS-30N	4.3 2.5	872 810	8,700 8,400	4.7 3.5	1036 978	16,800 13,900
	135 Lead RNFP	AP-70N AS-30N	4.1 2.6	924 767	13,400 11,400	4.6 3.3	1025 910	16,900 16,200
	158 Lead SWC	AP-70N AS-50N AS-30N	3.5 3.0 2.8	756 798 812	9,600 12,400 12,900	4.5 3.5 3.1	974 903 871	16,700 16,100 15,000
357 Magnum	125 Lead RNFP	AP-70N AS-30N	4.8 3.5	1046 984	11,000 11,900	6.8 5.3	1401 1260	34,200 33,000
	135 Lead RNFP	AP-70N AS-30N	4.8 3.4	986 914	11,700 12,200	6.5 5.1	1314 1207	27,800 30,200
	158 Lead SWC	AP-70N AS-30N	4.0 3.2	890 867	15,700 14,400	6.2 4.6	1247 1079	33,400 33,600
38-40 WCF (in psi)	180 Lead RNFP	AP-70N AS-30N	6.9 4.7	813 760	8,200 8,700	7.5 5.5	955 889	11,900 13,500
44-40 WCF (in psi)	200 Lead RNFP	AP-70N AS-30N	6.6 4.2	722 648	10,000 8,200	7.3 5.0	777 765	11,100 11,700
44 Russian	160-165 Lead RNFP	AS-30N	3.0	776	7,300	4.0	977	11,100
	200 Lead RNFP	AP-70N AS-30N	4.8 3.2	816 747	8,100 8,000	5.7 3.7	970 837	11,500 11,100
	240 Lead RNFP	AP-70N AS-30N	3.8 3.0	679 711	6,400 9,400	4.6 3.5	841 769	11,000 10,700

COWBOY PISTOL

CALIBRE	BULLET WEIGHT (grain)	POWDER TYPE	STARTING LOADS			MAXIMUM LOADS		
			POWDER WEIGHT (grains)	VELOCITY (fps)	PRESSURE (cup)	POWDER WEIGHT (grains)	VELOCITY (fps)	PRESSURE (cup)
44 Special	160-165 Lead RNFP	AP-70N	5.5	851	5,700	6.3	1042	10,900
		AS-30N	3.6	836	6,000	4.6	1009	13,400
	185 Lead RNFP	AP-70N	5.4	823	7,700	6.4	1031	13,900
		AS-30N	3.5	810	7,800	4.2	930	13,200
	200 Lead RNFP	AP-70N	5.5	802	8,200	6.5	960	12,900
		AS-50N	4.3	774	7,300	5.2	919	13,500
		AS-30N	3.5	748	7,800	4.5	891	14,000
	240 Lead SWC	AP-70N	4.9	721	8,000	5.6	873	13,300
		AS-50N	3.9	723	8,900	4.7	825	13,000
		AS-30N	3.2	669	9,000	4.0	771	13,500
44 Magnum	160-165 Lead RNFP	AP-70N	6.5	918	7,700	7.2	1059	11,500
		AS-30N	4.4	910	8,500	5.5	1064	15,500
	185 Lead RNFP	AP-70N	6.4	919	8,400	7.4	1070	12,600
		AS-30N	4.2	839	8,900	6.0	1043	18,400
	200 Lead RNFP	AP-70N	6.8	897	10,500	7.8	1045	15,400
		AS-50N	5.3	854	10,000	6.8	1044	18,300
		AS-30N	4.2	785	8,500	6.4	1028	20,200
	240 Lead SWC	AP-70N	6.5	852	11,700	7.6	1009	19,900
		AS-50N	4.5	737	9,900	6.5	970	21,700
		AS-30N	4.3	759	14,000	6.2	940	21,800
45 S & W (Schofield)	200 Lead RNFP	AP-70N	6.0	773	9,100	7.0	938	13,100
		AS-30N	4.0	733	8,300	5.0	845	13,100
	225-230 Lead RNFP	AP-70N	5.5	738	9,400	6.0	816	11,400
		AS-30N	4.0	697	9,400	4.7	783	13,600
	250 Lead RNFP	AP-70N	6.0	724	9,900	6.3	830	13,800
		AS-30N	4.0	674	11,000	4.2	710	12,500

COWBOY PISTOL

CALIBRE	BULLET WEIGHT (grain)	POWDER TYPE	STARTING LOADS			MAXIMUM LOADS		
			POWDER WEIGHT (grains)	VELOCITY (fps)	PRESSURE (cup)	POWDER WEIGHT (grains)	VELOCITY (fps)	PRESSURE (cup)
45 Long Colt	160-165 Lead RNFP	AP-70N	6.5	798	7,400	9.5	1197	12,900
		AS-30N	5.0	907	7,500	6.4	1083	13,500
	180 Lead RNFP	AP-70N	6.5	791	7,100	9.2	1161	13,900
		AS-30N	4.8	840	7,900	6.0	1016	13,800
	200 Lead RNFP	AP-70N	6.4	749	5,700	8.8	1067	13,600
		AS-30N	4.6	777	5,900	5.9	931	13,100
	215 Lead RNFP	AP-70N	6.8	777	6,300	8.6	1001	13,800
		AS-30N	4.6	754	6,400	5.7	889	13,400
	225-230 Lead RNFP	AP-70N	6.5	761	7,600	8.1	975	13,800
		AS-30N	4.4	734	7,600	5.4	865	13,900
	250 Lead RNFP	AP-70N	6.5	742	9,200	7.8	941	13,000
		AS-50N	5.4	786	9,200	6.0	866	13,400
		AS-30N	4.2	713	8,500	5.1	817	13,400

COWBOY SHOTSHELL

Category	SHOT WEIGHT (ounces)	POWDER TYPE	PRIMER TYPE	WAD TYPE	VELOCITY 1 (fps)	VELOCITY 1 CHARGE WEIGHT (Grains)	VELOCITY 1 PRESSURE (LUP)	VELOCITY 2 (fps)	VELOCITY 2 CHARGE WEIGHT (Grains)	VELOCITY 2 PRESSURE (LUP)	VELOCITY 3 (fps)	VELOCITY 3 CHARGE WEIGHT (Grains)	VELOCITY 3 PRESSURE (PSI)	VELOCITY 4 (fps)	VELOCITY 4 CHARGE WEIGHT (Grains)	VELOCITY 4 PRESSURE (PSI)
12 GA. 2 3/4" REMINGTON PREMIER PLASTIC SHELLS	1 OZ	AS-30N	Rem.209P	Rem.TGT 12	**1125**	16.8	6,600	**1180**	17.9	7,400	**1235**	18.9	8,100	**1290**	19.9	8,800
		AS-30N	Win. 209	WAA12SL		15.7	7,100		17.0	8,200		18.4	9,500		19.8	10,700
		AS-50N	Win. 209	WAA12SL		18.4	7,100		20.1	8,600		21.0	10,000			
		AS-50N	Rem. 209P	Rem. TGT 12		20.2	6,800		20.9	7,700		21.4	8,900			
	1 1/8 OZ	AS-30N	CCI 209	Windjammer	**1090**	16.6	6,400	**1145**	18.0	7,500	**1200**	19.4	8,600	**1255**		
		AS-30N	Rem. 209P	Rem. Fig 8		16.9	6,900		18.0	7,900		19.2	9,000			
		AS-50N	CCI 209	Windjammer		19.2	6,100		19.8	6,500		21.2	7,500		22.3	8,300
		AS-50N	Rem. 209P	WAA12		18.3	7,000		18.8	7,600		19.7	8,700		20.9	10,400
		AS-50N	Rem. 209P	Rem. Fig 8		18.6	6,400		19.6	7,000		20.9	7,500		21.7	9,100
		AP-70N	Win. 209	Rem. Fig 8	**1200**	22.5	8,900	**1255**	23.7	9,900	**1310**	25.0	10,800			
		AP-70N	Win. 209	WAA12		21.5	9,800		23.0	10,700						
		AP-70N	CCI 209	Windjammer		23.2	8,400		24.4	9,100		25.7	10,200			
12 GA. 2 3/4" WINCHESTER COMPRESSION-FORMED AA TYPE SHELLS	1 OZ	AS-30N	CCI 209	Rem. TGT 12	**1125**	16.6	6,700	**1180**	17.7	7,700	**1235**	18.7	8,500	**1290**	19.8	9,500
		AS-30N	Rem. 209P	Purple PC		17.6	6,400		18.6	6,800		19.5	7,200		20.5	7,600
		AS-30N	Win. 209	WAA12SL		16.0	7,400		17.2	8,300		18.5	9,200		19.8	10,200
		AS-50N	CCI 209	WAA12SL		19.2	6,700		20.6	7,500		22.3	8,800			
		AS-50N	Rem. 209P	Rem. TGT 12		20.8	5,900		21.5	7,100		22.3	7,800			
		AS-50N	Win. 209	WAA12SL		18.9	6,900		20.4	8,300		21.3	8,900			
	1 1/8 OZ	AS-30N	Rem. 209P	Red PC	**1090**	17.1	7,200	**1145**	18.4	7,800	**1200**	19.6	8,400	**1255**		
		AS-30N	Win. 209	WAA12		16.1	7,700		17.3	8,800		18.2	9,800			
		AS-30N	Win. 209	Rem. Fig 8		16.0	7,700		17.0	8,500		18.1	9,400			
		AS-50N	Rem. 209P	Rem. Fig 8					20.1	6,300		21.1	7,700		22.1	8,000
		AS-50N	Win. 209	WAA12		17.6	7,400		18.1	8,300		19.2	9,600		21.3	10,800
		AS-50N	Win. 209	RedPC		18.3	6,800		18.9	7,200		20.2	8,300		21.3	9,700
		AP-70N	Win. 209	Rem. Fig 8	**1200**	22.5	9,000	**1255**	23.5	10,000	**1310**	24.5	10,700			
		AP-70N	Win. 209	WAA12		22.0	10,000		22.7	10,600						
16 GA. 2 3/4" REMINGTON PREMIER SP PLASTIC SHELLS	1 OZ	AP-70N	Win. 209	Rem. SP 16	**1165**	18.5	8,800	**1220**	19.8	9,900	**1275**	20.5	10,400			
		AP-70N	Win. 209	WAA16		18.5	9,000		19.5	9,900		20.5	10,400			
16 GA. 2 3/4" WINCHESTER COMPRESSION-FORMED SHELLS	1 OZ	AP-70N	Win. 209	ACTIV G-28	**1165**	19.0	8,800	**1220**	20.3	9,700	**1275**	21.5	10,600			
		AP-70N	Win. 209	WAA16		19.0	9,200		20.0	10,300		20.7	11,000			
20 GA. 2 3/4" REMINGTON RXP PLASTIC SHELLS	7/8 OZ	AS-50N	Rem. 209P	RXP20	**1200**	14.0	10,700									
		AS-50N	Win. 209	WAA20		14.0	11,900									
		AP-70N	Win. 209	WAA20		15.8	9,600									
		AP-70N	Rem. 209P	RXP20		15.8	9,000									
20 GA. 2 3/4" WINCHESTER COMPRESSION-FORMED AA TYPE SHELLS	7/8 OZ	AS-50N	Rem. 209P	RXP20	**1200**	14.0	10,800									
		AS-50N	Win. 209	PC20		14.0	11,200									
		AS-50N	Win. 209	WAA20		14.0	11,800									
		AP-70N	Win. 209	WAA20		15.5	10,200									
		AP-70N	Rem. 209P	RXP20		15.8	9,800									

SHOT GUN POWDER BUSHING CHART AS-30N

CHARGE WEIGHT (grains)	LEE	PONSNESS WARREN	BLAIR	MEC	LYMAN	REDDING	PACIFIC DL-155 DL-155APF DL-105	PACIFIC DL-266	PACIFIC DL-366	TEXAN GT, FW, LT A, AP, D, DP	TEXAN M	HORNADY
16.0	.141	H		29								429
16.5	.148	F1				12	414	420	420	124	126	
	.155	I	429	30	H10	13						
17.0	.163	J		31						125	127	441
17.5		J1	441		H11		423	432	432		128	
18.0		J2		32		14				127	129	456
18.5	.171	G	450				432	441	441	128		
		G1		33							130	
19.0	.180				H11A		444	450	450	129	131	468
			459	34	H12							
19.5		M	465							130	132	
20.0	.189			35			453	459	462	131		483
20.5		N		36	H13	15				132		
21.0		O		37								495
21.5		P										
22.0	.198	Q		38								507
22.5				38A								
23.0												
23.5												

NOTE: This bushing chart does not represent recommended charge weights. It is intended only as a guide to the approximate weight of powder which will be dropped by the listed bushing. It is essential that charges being dropped weighed on each occasion a loading machine is used.

SHOT GUN POWDER BUSHING CHART AS-50N

CHARGE WEIGHT (grains)	LEE	PONSNESS WARREN	BLAIR	MEC	LYMAN	REDDING	PACIFIC DL-155 DL-155APF DL-105	PACIFIC DL-266	PACIFIC DL-366	TEXAN GT, FW, LT A, AP, D, DP	TEXAN M	HORNADY
13.7	.105			21								
14.0												375
14.3				22								378
14.6												381
												384
14.9				23								387
												390
15.2	.116	D										393
15.5		D1		24								396
16.0	.122	E		25								402
16.5	.128	E1		26								408
				27								414
17.0		E2										
17.5	.134	F1		28								420
18.0				29								423
18.5	.141	H				12				124		429
19.0		I	429	30	H10	13	414	420	420	125	126	435
19.5	.148	J		31							127	441

NOTE: This bushing chart does not represent recommended charge weights. It is intended only as a guide to the approximate weight of powder which will be dropped by the listed bushing. It is essential that charges being dropped weighed on each occasion a loading machine is used.

SHOT GUN POWDER BUSHING CHART AS-50N

CHARGE WEIGHT (grains)	LEE	PONSNESS WARREN	BLAIR	MEC	LYMAN	REDDING	PACIFIC DL-155 DL-155APF DL-105	PACIFIC DL-266	PACIFIC DL-366	TEXAN GT, FW, LT A, AP, D, DP	TEXAN M	HORNADY
20.0		J1	441		H11		423	423	432	126	128	447
20.5	.155	K	450	32		14				127		453
							432	441	441		129	
21.0				33						128	130	459
21.5	.163	L			H11A					129		465
			459		H12		444	450	450		131	
22.0				34						130		471
22.5	.171	M	465								132	477
23.0				35			453	459	462	131	133	483
23.5	.180	N		36		15	462	479	474	132		489
24.0		O			H13							495
24.5	.189	P		37								501
25.0		Q		38								507
25.5												
26.0	.198			38A								

NOTE: This bushing chart does not represent recommended charge weights. It is intended only as a guide to the approximate weight of powder which will be dropped by the listed bushing. It is essential that charges being dropped weighed on each occasion a loading machine is used.

SHOT GUN POWDER BUSHING CHART AP-7ON

CHARGE WEIGHT (grains)	LEE	PONSNESS WARREN	BLAIR	MEC	LYMAN	REDDING	PACIFIC DL-155 DL-155APF DL-105	PACIFIC DL-266	PACIFIC DL-366	TEXAN GT, FW, LT A, AP, D, DP	TEXAN M	HORNADY
12.7		C									112	
13.0		C		16								330
13.5				17							113	
13.6										111		
14.0		D1		18						112	114	342
14.5				19							115	
15.0	.095										116	354
15.5		E		20						113	117	
16.0				21						114		366
		E1		22						115		
16.5										116	118	372
	.105											
17.0		E2		22							119	378
		D								117		
17.4				23								384
	.110	D1								118	120	
18.0		F									121	390
18.5	.116	F1		24								393
19.0		F6		25						119	122	402
19.4	.122		26							120	123	405

NOTE: This bushing chart does not represent recommended charge weights. It is intended only as a guide to the approximate weight of powder which will be dropped by the listed bushing. It is essential that charges being dropped weighed on each occasion a loading machine is used.

SHOT GUN POWDER BUSHING CHART AP-7ON

CHARGE WEIGHT (grains)	LEE	PONSNESS WARREN	BLAIR	MEC	LYMAN	REDDING	PACIFIC DL-155 DL-155APF DL-105	PACIFIC DL-266	PACIFIC DL-366	TEXAN GT, FW, LT A, AP, D, DP	TEXAN M	HORNADY
20.0	.123	G		27						121	124	411
20.6		G1								122		417
21.0	.134			28						123		420
21.5							423	420	420		126	423
22.0		H		29		12				124	127	429
22.5	.141			30	H10		432	432	432		128	432
23.0		I	429			13				125		438
23.5	.148			31	H11					126		441
						14				127		
24.0	.151	J	441				447	447	447		129	447
24.5	.155	J1		32							130	450
25.0		K					456	456	456	128	131	456
	.163	L	450	33						129		
26.0			459	34			468	468	468		132	468
				35						130	133	
27.0	.171	M	465				480	480	480	131		480
28.0		N		36		15				132		489
29.0		O		37	H13					133		501

NOTE: This bushing chart does not represent recommended charge weights. It is intended only as a guide to the approximate weight of powder which will be dropped by the listed bushing. It is essential that charges being dropped weighed on each occasion a loading machine is used.

APPROXIMATE ADI POWDER EQUIVALENTS

ADI	ALLIANT	DUPONT	WINCHESTER	HODGDON	VECTAN	NORMA	ACCURATE ARMS	ADI
AP-30N						**R-1**		**AP-30N**
	Bullseye							
AS-30N	**Red Dot**			**Clays**	**AS**	**N2010**	**NITRO 100**	**AS-30N**
AP-50N	**Red Dot**	**PB**	**W231**	**HP 38**			**AA 2**	**AP-50N**
AS-50N	**Green Dot**	**700X**	**WST**	**International**			**AA 5**	**AS-50N**
AP-70N	**Unique**	**SR 7625**		**Universal**				**AP-70N**
	Herco		**WSF**		**A1**			
AP-90		**800X**	**WAP**	**HS-6**			**AA 7**	**AP-90**
AP-100		**SR 4756**						**AP-100**
			W540					
	Blue Dot		**W571**	**HS-7**			**AA 9**	
	2400				**Ba 6**			
			W296	**H110**				
AR2205		**IMR4227**		**H4227**		**R-123**	**AA1680**	**AR2205**
AR2207	**Reloader 7**	**IMR4198**	**W680**	**H4198**	**Tu 2000**	**N200**		**AR2207**
BM1								**BM1**
				H322				
BM2		**IMR3031**		**BENCHMARK**			**AA2015**	**BM2**
AR2206	**Reloader 12**			**BLC(2)**	**Tu 3000**		**AA2230**	**AR2206**
			W748	**H335**				
		IMR4895		**H4895**	**Tu 5000**		**AA2460**	
AR2208		**IMR4064**					**AA2520**	**AR2208**
		IMR4320				**N201**		
						N202	**AA2700**	
	Reloader 15			**H380**		**N203**		
AR2209		**IMR4350**	**W760**	**H414/H4350**	**Tu 7000**	**N204**		**AR2209**
	Reloader 19			**H450**		**N205**		
AR2213		**IMR4831**	**WMR**			**MRP**	**AA3100**	**AR2213**
AR2213SC				**H4831**				**AR2213SC**
	Reloader 22	**IMR7828**			**Tu 8000**			
AR2217				**H1000**				**AR2217**
AR2214								**AR2214**
AR2218				**H870/H50BMG**			**AA8700**	**AR2218**

NOTE: These tables are only approximate, showing equivalence within about 5%.

Actual burning rates can be different depending upon calibre, weapon, loading components and practices, as well as from powder lot to powder lot. As a consequence it must be understood that we cannot accept any responsibility for the use of this information in any way.

BURNING RATES

Product	Burning Rate	Examples Of Application		
		Shotgun	Pistol	Rifle
AS-30N	Fastest	12 Gauge Trap/Skeet Load		
AP-30N	↑		.38 Special	
AS-50N	I	12 Gauge Trap/Sporting		
AP-50N	I		.45 ACP	
AP-70N	□	12 Gauge Field Load	40-40 Winchester	
AP-90	I		9mm Luger	
AP-100	□		.40 S&W	
AR2205	□	410 gauge	.44 Magnum	.22 Hornet
AR2207	I		.7mm TCU	.222 Remington
BM1	□			.223 Remington
BM2	I			.22-250 Remington
AR2206	I			30-30 Winchester
AR2208	I			.308 Winchester
AR2209	I			30-06 Springfield
AR2213	I			.270 Winchester
AR2213SC	I			300. Win. Magnum
AR2214	↓			7mm Rem. Magnum
AR2218	Slowest			.30/378 Weatherby

THIS HANDLOADING GUIDE IS SUPPLIED FREE OF CHARGE TO THE SHOOTER BY ADI

ADI powders are sold at all major gunshops

ADI

ACN 008 642 751

A Transfield Thomson-CSF Company

For handloading/technical information:

ADI Limited, Ordnance
Propellants, Explosives and Chemicals
Bayly St, Mulwala, NSW 2647, Australia
Tel: (03) 5742 2200 Fax: (03) 5744 1873

For Distribution Information:

ADI Limited, Ordnance
Marketing and Product Development
509 St Kilda Rd, Melbourne, VIC 3004, Australia
Tel: (03) 9868 6100 Fax: (03) 9868 6146