

224-32 FA Data Sheet



PO Box 150

314 Hwy 239

Freedom, WY 83120

Phone (307) 883-2468

Fax (307) 883-2005

Email: freedom@freedomarms.com

Web site: www.freedomarms.com

Following is information, including loading data, for the 224-32 FA cartridge. This information and loading data is only applicable to firearms manufactured by Freedom Arms, Inc. for the 224-32 FA. This information should be read and understood even if you don't plan to reload the 224-32 FA. For your safety and the safety of those around you read and understand the Model 97 Instruction Manual. If you don't have a manual, you can download one at www.freedomarms.com or contact us so we can mail you one free of charge.

No single part of the following information is more important than the rest of the information. Therefore, please completely read and understand all the information before attempting to load or shoot the 224-32 FA. This reloading information is provided as a supplement to assist proficient handloaders in finding suitable loads for their needs. There are many good handbooks available for the beginning handloaders. It is suggested that someone starting out loading obtain and study one or more of these manuals. Most firearms dealers can provide the manuals and technical support to assist the beginning handloaders.

Due to the inability of Freedom Arms, Inc. to control your reloading procedures, Freedom Arms, Inc. accepts no liability in any way for the use or misuse of this data. It is the sole responsibility of the person using this data to make sure they are using safe and proper loading procedures, that the firearm to be used is in safe mechanical condition and the components are correct for the intended load. Failure to do so may result in serious personal injury and/or death to the individual or bystanders as well as damage to the firearm.

Please proceed with caution. Make the shooting sports safe and enjoyable for all of those that choose to participate in this fascinating and exciting sport. As always, make sure the proper safety gear is being used when loading ammunition or shooting firearms.

Check our web site (www.freedomarms.com) periodically for updates to this data sheet.

About the 224-32 FA.

The 224-32 FA is a proprietary cartridge of Freedom Arms, Inc. which utilizes the 327 Federal case. The goal in designing this cartridge was to get a high performance .22 centerfire cartridge that would work in a revolver. This cartridge was designed with small critters in mind but still being able to handle up to coyotes at fairly long ranges. As of this writing the 224-32 FA is only available for hand forming and loading, in other words, there is no factory ammunition available.

Following are a few tips and cautions for the experienced reloader on loading the 224-32 FA. Beginning reloaders should study several loading manuals and get instruction from a qualified reloader before attempting to use this data.

224-32 FA Case.

The 224-32 FA case is very simple to make. Basically just lube the 327 Federal case and run it into the properly adjusted sizing/forming die, then trim the case to 1.115/1.120 overall length. The sizing/forming die should be adjusted to set the headspace at .005 to .010. This cartridge headspaces off the shoulder, not the rim. This is easily checked by inserting a formed and trimmed case into a chamber, rotate it around so the case head shows at the top of the loading gate cutout in the receiver, then use a .005 shim as a go gage and a .010 shim as a no go gage between the case head and firewall. If forming primed cases, care must be taken to not get lube inside the case. Annealing is not required or even suggested as annealing will cause premature case sticking when fired.

After fireforming the case it can still take 2 to 4 additional firings (depending on load used) before the case is fully formed. Therefore be careful using the top loads before the cases are fully formed as case capacity will be slightly less which will cause higher pressure. Due to this it is important to keep the cases in batches according to how many times the cases have been fired.

Case life has shown to be good. You may loose an occasional case when forming but the majority of cases will last through at least ten firings. Usually, when using the upper end loads the primer pockets will stretch enough by the time ten to fifteen shots have been fired that the cases should be discarded. Before loading the cases check for neck cracks. Also, if you don't feel sufficient resistance when seating a new primer the case should be discarded. If you experience case separation close to the head it is usually due to too much headspace.

Bullets

At this time only load data for the 40 gr. bullets have been provided as this weight seems to give the best performance. Both the Sierra Blitz King and Hornady V-Max have performed well in this cartridge.

Powder

So far the two best powders for the 224-32 FA have been IMR4227 and AA1680. The IMR4227 isn't as temperature sensitive. The AA1680 has a slower burn rate which will give more trouble free results as well as better accuracy. This cartridge has a small case capacity so be precise on weighing out the powder. A few tenths of a grain variance in a case that only holds 10 to 12 grains is a lot of variance.

Primer

The 224-32 FA is setup to use a small pistol primer. This primer has shown to provide reliable and consistent ignition of the powder. Both WSP and CCI 500 primers were tested with both giving similar results. As always, care must be taken to seat the primer below the case head to prevent recoil from firing a cartridge that is not aligned with the barrel.

The 327 Federal cases come primed with the Federal 205 primer which is a small rifle primer. These primers can be used for firing forming as long as the reduced powder charge shown below is used. Small rifle primers should not be used for your regular loads as they provide too much ignition which will cause premature rotational binding of the cylinder.

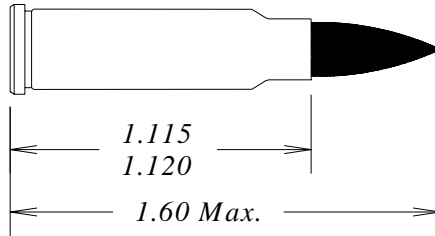
Loading Dies

Loading dies designed specifically for the 224-32 FA are available from Freedom Arms. Setting the sizing/forming die as described above is important. Form and trim the cases one at a time until you have the proper headspace. This should be checked each time you resize the cases for loading.

The seating die also has a crimp ring in it. None of the loads tested were crimped but the crimp ring was included in the die so later if a particular bullet requires crimping the die would be setup for it.

Loading recommendations for the Freedom Arms 224-32 FA.

Bullet Diameter: .224
Primer Size: Small Pistol
Case Trim Length: 1.115"
Maximum Case Length: 1.120"
Maximum Cartridge Length: 1.600"
Shell Holder: #23 RCBS



All velocities are based on a Model 97 with 10 inch barrel.
Expect a reduction of approximately 100 fps between the standard barrel lengths.
Barrel forcing cone life is expected to be 3,000 to 5,000 rounds depending on loads used.
Keep cartridges and chambers clean and dry when firing, otherwise case set back and cylinder rotational binding will occur.

Fireform Loads

40 gr. Blitz King or V-Max	Starting Load	Fps	Max. Load	Fps
IMR 4227	9.5	1830	10	1940
AA 1680	12	1900	12.5	2020

Standard Loads

40 gr. Blitz King or V-Max	Starting Load	Fps	Max. Load	Fps
IMR 4227	10	1900	12	2270
AA 1680	12.5	1965	14.5	2295

Starting standard loads assume the case has only been fireformed.
Max standard loads assume the case has been fired a few times.
Load and shoot small batches of these cartridges until you are sure you have the process and loads down correctly. Pulling these small bullets can be a pain in the butt if the load is improper.

Warning!

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

Keep all reloading components, ammunition and firearms out of reach of children at all times!

Be Safe, when carrying your firearm keep an empty chamber under the firing pin.

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