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6.5 creedmoor 140 eld match load data h4350

Last year I asked 173 of the highest-ranking precision rifle shooters in the country about the load that were running in their match ammunition. These were the guys who finished highest in the entire season in both the Precision Rifle Series and the National Rifle League (learn more about PRS and the NRL). It was the first year I asked about the specific powder and weight of charging that they charged. I made it completely optional because I wasn't sure if everyone was willing to share or would know the details from the top of my head as they took the test. I asked them to just leave this question blank if they didn't remember the exact weight they were running. Of the 173 shooters that surveyed, 162 of them said they would manually load ammunition and 82% of these guys were willing to share their load data with all of us! Thank you to all the shooters who completed the survey! This article will cover what bullets, cases, sleepers, powders, and charging weights of these elite shooters shooting 6mm Creedmoor or 6.5 Creedmoor find to work best in their rifles. What works best is it often depends on the specific cartridge you're using, so I'm going to cover the load data for each of the other popular precision rifle cartridges that at least 5 of these top-ranked shooters have been using in these other articles: Although I'd like to feel lucky to know what to load any of these top shooters are running, this dataset is the sum of over 100 truly world-class shooters, so what rich and unique dataset you draw from insight from! Having such a large sample size allows us to draw more meaningful conclusions about what payloads and components seem to work well in many rifle configurations. It can be difficult to find good load data for several of these cartridges, so I know it will help many shooters. And while some of us like to tinker with loads, knowing what load other great shooters find as a sweet spot on the cartridge can help minimize room time reloading and maximize time in range. I think even the guys who completed the survey will be interested to see what their fellow competitors found that worked best in their rifles. Important: Always refer to the comprehensive handling instructions and start with the minimum recommended loads and work your way up. Many of these shooters can be running hot loads, and just because the load is safe in rifles doesn't mean they'll be in yours. There are plenty of factors that differ from them to you, including the exact dimensions of the chamber/barrel, brass specifications, weight handling, batches of powder, seat depth and tension, etc., so it's important to follow precautions, safe loading practices can result in serious injury (including death) or damage to weapons by the user or bystanders. Technical data and information are based on response from other shooters under specific conditions and circumstances. The author has not independently verified the accuracy of the data and cannot be responsible for errors in published load data. Since this site and its affiliates have no control over individual loading practices and/or components used, PrecisionRifleBlog.com or its affiliates assume no responsibility for the use of this data. This information is used at your sole discretion and you bear all risks. The 6mm Creedmoor Load Data 6mm Creedmoor (6CM) was the second most popular cartridge used by these top scorers, with 20% of top scorers choosing to run it. It was only behind the 6mm Dasher in terms of popularity. The 6mm Creedmoor has 25% more chassis capacity than the 6mm Dasher and other 6BR-based cases, which means you can usually run some heavier balls and/or a little faster muzzle velocity. These things make for better ballistics, which means a flatter trajectory and less wind drift. However, that extra horsepower usually is at the expense of a shorter exact barrel life than smaller cases, and you'll probably have to manage a bit more recoil. In a precise rifle game, we all make trade-offs and try to strike what we consider to be the right balance of ballistic performance, recoil, consistency and barrel life. Of course many shooters feel like the 6mm Creedmoor was the right ticket! 6mm Creedmoor Bullets Canopy look at the bullets the top shooters were running in their 6 Creedmoor Rifles: On the chart above, different colors represent where the shooter landed in rank. For example, black indicates shooters who finished in the top ten in PRS, the darkest blue is the people who finished 11-25 in PRS, and the brighter the blue, the further they finished in the general classification. The green colours represent the top scorers in the NRL, where the darkest green is in the top 10, the average green is 11-25, and the bright green is the scorers who have landed between 26 and 50 in the season rankings. The chart legend lists the league and ranks each color it represents, but basically the darker the color, the higher the scorers placed. One of the unique aspects of the 6 Creedmoor is the number of guys who used match-grade factory ammunition rather than manually loading ammo. 6 of the 13 shooters who said they would launch a Hornady 108gr ELD Match bullet said they were firing that from Hornady match ammunition factory. And we're not talking about guys who ended up low on the leaderboard either – one shooter using Hornady factory ammunition took 14th place in the overall PRS Open Division! Only a decade ago it would have been unheard of to try to compete at this level of competition with factory, but production has come a long way! One of the irresistible aspects of the Creedmoor 6mm and 6.5 Creedmoor is the inexpensive ammunition option for factory matches. You can reload if you want, but there is always an option to just buy a box of ammunition from the shelf, which many shooters value. If you exclude guys who run factory ammo, and just looked at what handball decided to run (because they could choose something), then you want to see only 7 handloaders gone with Hornady 108gr ELDM compared to the 12 that went with the 115gr Tubb DTAC RBT bullet. There were also 7 shooters running the Berger 105gr Hybrid, so these 3 balls combine to represent what 90% of handloaders chose to run in their 6 Creedmoor rifles. I noticed that these three bullets were very popular in most 6mm cartridges, so you'll notice the topic over the next few articles. There was also a top shooter in every league using the Nosler 105gr RDF bullet, which is a fairly new bullet design. RDF stands for Reduced Drag Factor, and Nosler says their RDF missiles have the highest B.C. of all match-class missiles on the market. (Learn more about Nosler RDF) 6mm Creedmoor Powder 27 shooters said to manually load 6 Creedmoor, with 63% of those who use the H4350. There were a few other powders some of these shooters decided to use. Here's a breakdown of all the rifle powders these top shooters were reloading in their 6 Creedmoors: Hodgdon H4350-17 shooters (63%), the exact powder weight breakdown shown in the chart belowAlliant Reloder 16-5 shooters (19%). Four shooters using 105gr or 108gr balls said they ran powder weight loads from 40.0-42.2, with two scorers using 40.0-40.2gr. One shooter used r16 with DTAC 115gr, and he used a charging weight of 38.4gr. Hodgdon H4831SC = 2 shooters (7%), with charging weights of 43.0gr with DTAC 115gr and 43.7gr with 108gr ELDMAlliant Reloder 26 = 2 shooters (7%), both using 115gr balls with charging weights of 43.5 and 43.8grHodgdon Varget = 1 shooter with powder loading weight of 36.0gr with 105gr Hybrid Since more than 60% of shooters were running Hodgdon H4350, I want to show a more detailed distribution of powder weights charges these shooters said that I have used on my research. The color in the graph represents the weight of the ball with which the powder load was paired. Although it seems that the 13 shooters that provided their exact weight of the H4350 powder charge in 6mm Creedmoor are spread quite significantly, 77% of them fit between 40.4 and 41.6 gr. That's only a 1.2 grain difference, so it seems that a lot of guys find a sweet spot in this relatively narrow range. Guys running in this range (i.e. 40.4-41.6gr H4350) with 26 barrels and 115gr balls reported average muzzle velocity speeds of 2950-3040 fps. Guys who charged a 105gr or 108gr ball over h4350 and shooting them with 26 barrels reported muzzle velocity speeds of 2960-3100 fps. 6mm Creedmoor Check out what brand 6mm Creedmoor brass these top shooters prefer: Wow, this is a lot of different brands of Creedmoor 6 brass! Last year Lapua started offering a brass factory for the 6mm Creedmoor, so I expected it to be the biggest selection of these top scorers – but I was clearly wrong! That's why we like to look at data, not just say what we think! © Hornady 6mm Creedmoor brass is clearly the most popular, 3 to 1 over the next most popular brands. Peterson Brass also came up with a surprise with as many represented as Lapua, including a shooter in the top ten of both prs and nr. Gunwerks brass also appeared in the top ten in PRS, so it is clearly capable. Alpha Munitions is an American premium brass manufacturer that some have said is as consistent as even European brands (i.e. Lapua and Norma), and it looks like at least a few of these top scorers would agree. Finally, Norm brass, Sig Sauer brass and even starline brass each had one shooter represented. 6 Creedmoor Primers Now let's look at the sleepers used for 6mm Creedmoor. This is more difficult than most other cartridges because you can buy brass for 6 Creedmoor, which has a small primer pocket or a large primer pocket. Hornady's original design was for a large pocket primer, but some believe the small sleepers produce more consistent muzzle speeds and may have higher pressures and/or have a longer brass lifespan because there is more metal in the housing head and less voids/holes. Peterson Brass seems to provide a good insight into this: Enclosures with small rifle backing pockets get more reloads than those with large pockets. There's more metal around the pocket, so they stick around for longer. This is an advantage for competition shooters. The first three or more times the housing is fired more forms into the firing chamber, resulting in more consistent muzzle speeds. So the more reloads you get after this period of intrusion, the better. But we also make a 6mm Creedmoor in large pockets of rifle sleeper. Larger sleepers tend to be less temperature sensitive - they work more reliably on cold days. So for someone who wants to use a gun to hunt deer LRP may be a better choice. I noticed the Graf.com product page for Peterson 6CM brass has this note: If you plan to load above SAAMI maximum pressures and are concerned about primer-pocket leakage, Peterson recommends you try the 6mm Creedmoor SRP (Small Prime Rifle). While they do not suggest charging by SAAMI maximum pressures, Peterson's small 6mm Creedmoor primer pocket has been shown to stick above SAAMI maximum pressures when tested in their universal receiver. I've heard of studies that have proven to be small rifle were better and others that turned out to be big were better - so there is still a heated debate it would be an episode to say that is the final answer to which it is better at this point. Fortunately, with the 6mm Creedmoor, unlike other cartridges, you have a choice of small or large backing pockets so everyone can choose the side they believe in. To the best of my knowledge, Hornady only offers 6CM brass with large backing pockets, Lapua only offers it with small backing pockets, and both Alpha Munitions and Peterson offer 6CM brass in large or small, as apparently some shooters won't buy either. As long-range shooters, we can have pretty strong reviews, right? © Finally, here's a list of all the sleepers 6mm Creedmoor handloaders said they were using in their payloads: Since many of these shooters were running brass Hornady (which has a large backing pocket), we shouldn't be surprised to see a lot of large rifle sleepers at the top of the list. The most popular choice was the Federal 210M Gold Medal Large Rifle Match Primer, with 55% of shooters who used large sleepers choosing it. There was also a top 10 shooter in both leagues, and several other shooters using Wolf Large Rifle Primers. Wolf primers are made in Russia, and according to BulletCentral.com, in many types of cartridges Wolf sleepers have shown excellent accuracy, and competitively low ES and SD. Wolf sleepers may require a little more strength to be properly seated. The CCI BR-4 Small Rifle Bench Rest Primers was the most popular choice among shooters opting for small rifle pockets. 6 Creedmoor – Exact Loads From The Top Pros While the aggregated data of what guys are running is valuable, I also wanted to share specific load data that some of the best of the best have used in their match ammo. Scott Satterlee and Phillip Velayo are not only world-class shooters, but they are both very competent long-range rifle instructors. I watched them both help other scorers in matches. They are some all-around good guys, and I know I'll appreciate their advice... so here are the loads these two are using in their 6mm Creedmoor rifles: #5 in PRS & #8 nr; Scott Satterlee Cassette: 6mm CreedmoorBullet: Nosler 105gr RDFPowder: 40.2gr retoder 16Case: PetersonPrimer: Wolf Large RifleMuzzle Velocity: 3075 fps from a 26 barrel (SD = 4 fps) Cartridge:6mm CreedmoorBullet: Superior Shooting Systems (Tubb) 115gr DTAC RBTPowder: 38.7gr with H4350Case: GunwerksPrimer: Federal 21 0M Match Large RifleMuzzle Velocity: 2900 fps with 26bar (SD = 7 fps) 6.5 Creedmoor is one of the most popular cartridges currently - and I'm a fan. I personally own a surgeon's bolt action rifle and JP LRP-07 chamber at 6.5CM. I have many friends ask me for gun advice, and find myself recommending 6.5 Creedmoor than anything else. If I could own only one rifle, I would probably choose 6.5 Creedmoor, Creedmoor, it would be a great choice for both competitions and hunting. Plus it has a relatively long barrel lifespan, there are great factory chamber rifles including cartridges, as well as plenty of big factory, match grade ammunition options that are relatively affordable. In other words, it is a hot contribution for many good reasons! However, there were only 6 of those top scorers running 6.5 Creedmoor. I bet some reading this might want to clarify this – so I'll do my best. Although I'm a fan of the 6.5CM, I own rifles in it, and I recommend it often, and actually compete with the 6mm Creedmoor (see my match guns). Do not understand do not confuse, 6.5CM is very capable. If you've given 6.5 Creedmoor to one of those guys in the top 100, I bet they can still burn me in the match (and a lot of other people). It's more about shooting than cassette! But if you've given them 6mm instead of 6.5mm, you may be able to spot your own shots a little easier due to a bit less recoil, and that might help them improve the wind connection that was a little off before I caused it to miss over a longer range. Ballistics for 6CM are also slightly better than 6.5CM (in most cases), but this is at the expense of barrel life. There is no free lunch! So while I recommend the 6.5CM to a lot of friends, if I had a friend who really wanted to optimize their rifle specifically for precision rifle matches where terminal energy doesn't matter as it does in hunting or other applications, and they're willing to swap the barrel more often for a small advantage, then a 6mm Creedmoor or another 6mm cartridge might be a better choice. I believe that's why 7 out of 9 of these top precision rifle competitors shoot rifles at 6mm. There are still 23 of these top scorers running 6.5mm cartridges (including one that finished in the top 10), so it's clearly not a stupid choice – but at the absolute top of the sport, everyone is looking for the last bit of benefit and most believe that 6mm provides that for these competition styles. I know there are plenty of guys shooting 6.5 Creedmoor, so I wanted to provide them with as much help as I could, even though I only have the data to share with 6 of these top-ranked shooters. Keep in mind that while these guys are experts, this is still a relatively small sample size. I will try to present slightly more comments than normal to provide a context in which bias may occur due to the smaller sample size. First, one of these shooters said he was running factory ammunition. This should come as no surprise, as there are more great match-class factory ammunition options in 6.5 Creedmoor than any other non-NATO cartridge. Hornady Match Ammo in 140gr ELDM or 147gr ELD are both excellent choices, and I expected that's probably what the shooter was running – but Compete with Federal Premium Gold Medal Match with Berger 130gr Hybrid. Honestly, I didn't know The Federal Premium was loading Berger bullets for the Creedmoor 6.5. It's amazing! Like I said, there are many great options for match class ammo for 6.5 Creedmoor. And one final note is that a shooter using this federal bonus ammunition factory placed in the top 30 in the PRS Open Division, so this is really a class ammo match! 6.5 Creedmoor Bullets Okay, now let's dive into what bullets guys shooting 6.5 Creedmoor were using: It's probably no surprise to see half of the shooters were using Hornady 140gr ELD Match bullet in their 6.5 Creedmoor rifles. This shell is a great pair for the 6.5 Creedmoor in terms of speed that you are able to get and the BC ball. You can also see that there was one shooter with Hornady 147gr ELDM, Nosler 140gr RDF and Berger 130gr Hybrid. There is one bullet that is suspiciously missing from this group: the Berger 140gr Hybrid. This is another great option that would probably be well represented if it was had a little larger sample size. In an upcoming article I will show you what bullet shooters running 6.5x47 Lapua decided to load, and 65% of them chose the Berger 140gr Hybrid, so this is clearly a great bullet option in 6.5mm that just seems not to be represented among these 6 shooters. The chart below shows the most popular 6.5mm bullets used by these top scorers overall, not just those guys running in their 6.5 Creedmoors. You can see the Berger 140gr Hybrid is worth considering, along with some other outstanding match-class balls. 6.5 Creedmoor Powder 5 of these top scorers said they reload for 6.5 Creedmoor, but data on what kind of powder they use was more spread out than some other cartridges. There really is no way to show patterns in data for this reason. However, in order to provide the most complete data I can for all my 6.5 Creedmoor shooter friends, even with a relatively small sample size, I'll simply provide the individual loads these shooters said they were using on the survey: Rank Bullet Powder Primer Case Barrel Length Muzzle Velocity SD #9 in NRL Hornady 140gr ELDM 43.5gr H4350 Fed 210M Gunwerks 26 2750 15 #38 in NRL Nosler 140gr RDF 41.8gr Retoder 16 CCI #200 Norma 23 2670 7 #43 in NRL Hornady 140gr ELDM 41.9 IMR 4451 CCI BR-2 Prime 26 2800 12 #79 in PRS Hornady 147gr ELDM 43.0gr Reloder 23 CCI #450 Peterson SRP 26 2790 2 #97 in PRS Hornady 140gr ELDM 41.9 H4350 Fed 205M Alpha SRP 26 2796 3.6 Please remember that these guys may be running hot loads. And just because it's safe in their rifles doesn't mean they'll be safe in their own. Read my featured tip in the introduction to this article and read the extensive handling instructions for safe loading. 6.5 Creedmoor Of the top 5 reloading scorers 6.5 Creedmoor, all were using a different brand of brass! I get the feeling that these 5 shooters can be the type of guys who like to buck the trend, and go their own way! © I can certainly appreciate it! As for brass, there was 1 shooter using each of these brands: Alpha MunitionsGunwerksNormaPetersonPrime Ammo It was surprising to see them all spread out, but what was more surprising was that none of them used Hornady or Lapua brass! While all the brands I mentioned above produce high quality cases, this seems to be another area where a small sample size can distort the results. We've seen that 44% of shooters using 6mm Creedmoor chose to run Brass Hornady, so it seems very likely that if we had a larger sample size you could see Hornady as one of the more popular brass brands for the 6.5 Creedmoor. Also on all 150+ shooters who were polled and said they reloaded their match ammunition, 72% of them were running Lapua brass. Lapua has been doing 6.5 Creedmoor brass for a few years, so it's shocking that there are no more of these guys using it. I don't want to insert my own prejudices here, but once again it seems very likely that if we had a larger sample size we could see a significant number of Lapua brass guns, more similar to what we saw with the 6mm Creedmoor. For context, the chart below shows the most popular brass brands in all shooters, regardless of what cartridges they were used for. None of the brass manufacturers offer cases for every contribution these guys have been using, but most of them offer brass for the very popular 6.5 Creedmoor. I hope this helps fill parts of the larger image that perhaps this small sample size may be missing. 6.5 Creedmoor Primers Similar to brass brands, 5 shooters who reload match ammo used 5 different types of sleepers. I feel the pattern here! There was one shooter using each of the following sleepers: As we saw for the Creedmoor 6mm, this is a mix of both small and large rifle sleepers because various brass manufacturers offer 6.5 Creedmoor brass with large backing pockets or small backing pockets... and several brands offer both. While all the sleepers these guys are using are clearly excellent options because you are able to choose from any small or large underlay rifle with a 6.5 Creedmoor, I thought it would be helpful to take into account the overall popularity of the various brands and primer models these top ranking shooters have used in their match ammunition in all cartridges. CCI and Federal absolutely dominate in terms of popularity of the primer. Just scan the left side of this chart and notice how many times you see CCI or Federal. Isn't that interesting, see a complete lack of sleepers from companies like Winchester? In this whole crowd there was only one shooter shooter Primer. This does not mean that they are not able or of high quality, it is simply interesting to see that they are not represented in this group. A clear favorite overall is the CCI #450 Small Rifle Magnum Primer... huge margin. As I mentioned in a previous post, the CCI #450 is a magnum primer, but from what I've heard it produces some very low standard deviations (SD) in muzzle velocity, which means that the ammo is a very consistent shot-to-shot. I've also heard that the magnum primer shows no signs of pressure as fast as some of the other soft sleepers, so guys may be able to run a bit higher pressure with it. I can't say for sure why so many of these shooters prefer it, but the data clearly show that they do. Do you like this kind of data? This is one of several posts based on the prs top scorer's gear survey. To be the first to find out when the next result set will be published sign up to receive new posts via email. © Copyright 2020 PrecisionRifleBlog.com, All Rights Reserved. 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