Hornady Bullets Reloading Data

Precision and Performance: A Comprehensive Guide to Hornady Bullets Reloading Data

For the dedicated handloader, the pursuit of accuracy is a journey marked by meticulous attention to detail. At the heart of this journey lies the selection of components, and few names command as much respect as Hornady. Known for their innovative bullet designs and commitment to precision, Hornady offers a vast array of projectiles for everything from varmint hunting to long-range competition. However, the key to unlocking their full potential is not just the bullet itself, but the critical information that governs its safe and effective use: Hornady bullets reloading data. This guide will delve deep into the world of reloading data for these renowned bullets, providing you with the knowledge to develop safe, accurate, and powerful loads for your specific firearm.

Understanding and correctly applying reloading data is the single most important safety and performance factor in the handloading process. It is the bridge between a pile of components and a cartridge that performs exactly as intended. For Hornady bullets, this data is meticulously developed in their own ballistics laboratories, using pressure-tested equipment to ensure both safety and accuracy. This article will explore the sources of this data, how to interpret it, and how to use it to build loads that maximize the potential of your Hornady bullets.

The Foundation of Safe Reloading: What is Hornady Reloading Data?

Hornady bullets reloading data is a collection of verified cartridge specifications that detail the safe and optimal combination of components for a given caliber and bullet. This data is not a suggestion; it is a proven recipe. It typically includes the specific Hornady bullet model and weight, the type and brand of primer, the specific cartridge case (often specifying the

manufacturer or trim length), and crucially, the powder type and charge weight range. This information is presented in a tabular format within their **Hornady Handbook of Cartridge Reloading**, now in its 11th edition, and is also available through their online reloading data center.

The data is generated using standardized test barrels and equipment, providing a consistent baseline. This is critical because variables like barrel length, chamber dimensions, and even the temperature on the day of firing can affect pressure. The data provided by Hornady represents a safe starting point, with a "Start" charge and a "Maximum" charge. The start charge is typically a reduction of 10% from the maximum, allowing reloaders to work up their loads safely. The maximum charge is the highest pressure-tested load that should never be exceeded. Adhering strictly to Hornady bullets reloading data is the first and most important rule of responsible handloading.

Why Hornady Bullets are a Top Choice for Reloaders

Before diving deep into the data, it is worth understanding why Hornady bullets are so popular among the reloading community. Several key innovations and design philosophies set them apart.

- **Innovative Bullet Designs:** Hornady is famous for designs like the **ELD-X** (Extremely Low Drag - eXpanding) and **ELD Match** (Extremely Low Drag Match), which utilize Heat Shield tips to resist aerodynamic heating and maintain a high ballistic coefficient. This translates to flatter trajectories and less wind drift at long distances.
- **Consistent Manufacturing:** Hornady maintains exceptionally tight tolerances in bullet weight, diameter, and concentricity. This consistency is fundamental to achieving small groups on target.
- **Boat Tail and Spitzer Profiles:** Nearly all Hornady rifle bullets feature a boat tail design, which reduces drag and improves downrange performance. Combined with a sharp spitzer point, these bullets are optimized for long-range flight.
- **InterLock and SST Lines:** For hunting, lines like the **InterLock** and **SST** (Super Shock Tip) offer reliable expansion and deep penetration, making them favorites for deer and other medium to large game. The InterLock ring mechanically locks the core to the jacket, preventing separation.
- **V-MAX and A-MAX for Varmints and Targets:** The **V-MAX** is a polymer-tipped varmint bullet designed for explosive fragmentation, while the **A-MAX** (and later ELD Match) were developed for extreme accuracy in target shooting.

This diverse product line means that for any shooting discipline, there is likely a Hornady bullet perfectly suited for the task. However, each of these distinct bullet designs requires its own specific reloading data. Using data for an SST bullet when loading a V-MAX could lead to dangerous pressure spikes or poor accuracy.

Sourcing Your Hornady Reloading Data: The Official Channels

There are two primary, authoritative sources for Hornady bullets reloading data. Using any other unverified source is a gamble you should not take.

The Hornady Handbook of Cartridge Reloading

This is the gold standard. The latest edition, the 11th Edition, contains data for hundreds of cartridges and thousands of loads. Each edition is updated to include new cartridges and new Hornady bullets. The book is more than just a collection of tables; it includes a wealth of educational content on the reloading process, safety, and ballistics. For the serious reloader, this handbook is an indispensable investment. It is the definitive source for Hornady bullets reloading data, providing the full context for each load.

Hornady Online Reloading Data Center

For those who prefer a digital solution, Hornady offers a free **online reloading data center** on their official website. This tool allows you to select your cartridge, bullet weight, and specific bullet model (e.g., 308 Winchester, 168 Grain ELD Match). It then generates a table of all tested loads for that specific combination. This is incredibly convenient and is always up-to-date with the latest tested loads. You can also filter by powder brand or bullet type. This digital resource is an excellent complement to the printed handbook.

Critical Warning: Never use reloading data found on forums, social media, or from unverified sources. Even if another reloader claims a specific load worked for them, their firearm, components, and conditions are different from yours. Only use data directly from Hornady or a reputable powder manufacturer that has specifically tested the load with that exact Hornady bullet.

How to Read and Interpret Hornady Reloading Data Tables

Once you have your source of Hornady bullets reloading data, you must be able to read it correctly. A typical data table includes the following columns:

1. **Bullet**: The specific Hornady bullet model and weight (e.g., 150 gr. FMJ-BT, 178 gr. ELD-X).
2. **Powder**: The specific brand and type of smokeless powder (e.g., Hodgdon H4350, Accurate 2520, IMR 4064). Different lots of the same powder may vary slightly, so always start low.
3. **Primer**: The manufacturer and type of primer Hornady used in their test (e.g., Federal 210, CCI 200). Primers can influence pressure, so stick to the recommended type if possible.
4. **Case**: The case manufacturer used (e.g., Hornady, Winchester, Remington). Case capacity can vary between brands, which affects pressure.
5. **Starting Charge (Grns)**: The minimum recommended charge weight in grains. This is your safe starting point.
6. **Maximum Charge (Grns)**: The maximum safe charge weight as tested by Hornady. **Do not exceed this charge.**
7. **Velocity (fps)**: The muzzle velocity in feet per second. The table will show the velocity for the starting and maximum charges. Actual velocity in your firearm will likely vary.
8. **Cartridge Overall Length (COL or OAL)**: The maximum overall length of the loaded cartridge. This is critical for proper feeding from the magazine and for ensuring the bullet does not engage the rifling too deeply, which can spike pressure. Hornady data often lists a standard COL. For match bullets, you may choose to seat them longer to touch the lands, but you must start with a shorter length and work up carefully, always checking for pressure signs.

Example Interpretation: If the table shows for a .308 Winchester, 168 grain ELD Match: Powder: IMR 4064, Start Charge: 44.0 grs., Max Charge: 47.0 grs., COL: 2.800". You should start at 44.0 grains of IMR 4064, seat the bullet to 2.800", and fire a few rounds to check for function and accuracy. You can then incrementally increase the charge in 0.3 or 0.5 grain steps, watching for pressure signs (e.g., flattened primers, difficult extraction), until you reach the maximum of 47.0 grains or find the most accurate load.

Safety First: Crucial Considerations When Using Hornady Data

Reloading is a safe and rewarding hobby when practiced with discipline. Ignoring safety protocols can lead to catastrophic equipment failure and personal injury. These rules are non-negotiable when using Hornady bullets reloading data.

- **Always Start with the Starting Charge:** Never begin with the maximum charge. Work up your loads in small increments (0.3-0.5 grains for rifle cartridges).
- **Use Only the Listed Components:** Do not substitute components. If the data calls for a specific primer brand or case, use that or a known equivalent. Never mix powder types.
- **Check Cartridge Overall Length:** A bullet seated too deeply can increase pressure, while one seated too far out can jam into the rifling. Always measure and adhere to the recommended COL.
- **Inspect Your Brass:** After firing, inspect the case head for signs of excessive pressure, such as a flattened or cratered primer, an ejector swipe mark, or a shiny ring on the case head. If you see these, the load is too hot.
- **Use a Reliable Powder Scale:** A digital or beam scale accurate to 0.1 grain is essential. Do not trust volumetric measures for precision rifle loading.
- **One Variable at a Time:** When developing a load, only change one variable at a time (e.g., powder charge, then bullet seating depth). This allows you to isolate the effect of each change.
- **Be Wary of Temperature:** Some powders are more temperature-sensitive than others. A load developed in 70°F weather may produce higher pressure on a 100°F day. Always leave a margin of safety.

Developing Accurate Loads: From Data to the Range

Having the correct Hornady bullets reloading data is just the first step. The art of hand loading comes in refining that data to suit your specific rifle. Every barrel is unique, and the "most accurate load" for your friend's rifle may not be the best for yours.

Starting Your Ladder Test: Once you have chosen your bullet and powder from the data, you will conduct a "ladder test" or "charge weight test." Load five rounds at the starting charge, then five at a slightly higher charge (e.g., 0.5 grain increments),

and continue until you reach the maximum charge or hit pressure signs. Label each group clearly and head to the range. Fire each group at a clean target, aiming at the same point of aim for all. After firing, measure the group sizes and look for nodes where the group size is smallest. These nodes indicate a charge weight where your rifle's harmonic vibration is most stable, leading to better accuracy.

Seating Depth Optimization: After you find a promising charge weight, you can fine-tune accuracy by adjusting the bullet seating depth. This is particularly effective with match bullets. Start at the recommended COL and