



## Featuring Jamo Performance Parts

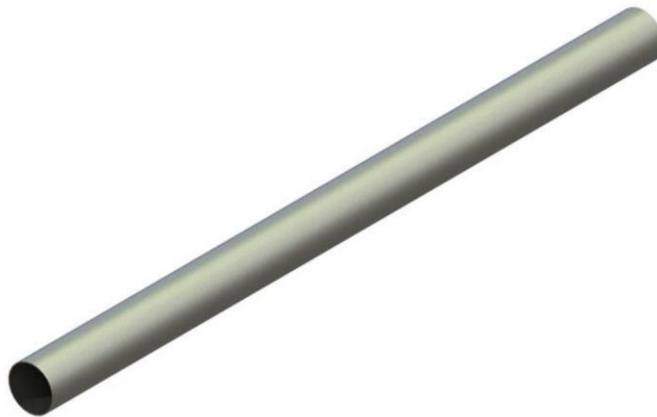
Given the conditions it endures, the choice of material for your exhaust system is crucial. It must be able to withstand extreme temperatures and exposure to the elements, so it has to be strong and durable. At the same time, the exhaust tubing needs to be easy enough to bend and weld into different shapes and lengths.

For most street and performance applications, steel is the metal of choice. But not all steels are created equal. That's why understanding their relative strengths and limitations can go a long way in helping you choose the right grade for your aftermarket exhaust system. With that in mind, let's take a closer look at a trio of the most frequently used materials: Aluminized Steel, 409 Stainless Steel, and 304 Stainless Steel.

**Aluminized Steel:** The most affordable of the three, aluminized steel also is easier to work with than stainless steel. An aluminum-silicon alloy coating helps protect it from rust, but if it gets scratched or damaged the underlying steel becomes susceptible to corrosion. You also need to watch for internal rusting, which happens most often when moisture builds up inside the exhaust in cold temperatures and the vehicle isn't running long enough for it to evaporate. The durability of aluminized steel exhausts may vary significantly by location: In moderate climates, you can expect a lifespan of 3-5 years, while in drier areas it may last upwards of 8 years.



**409 Stainless Steel:** This is the material of choice for most modern factory exhaust systems. It strikes a balance between cost and longevity, generally lasting between 8-10 years in moderate climates. It's not as expensive as the higher-grade 304 stainless steel but does compromise slightly on toughness and corrosion resistance. It's predominantly (up to 90%) iron, which means it can develop surface rust. But this can be cleaned with a wire brush to maintain its functionality. However, once 409 stainless steel loses its luster, it can't be polished back to its original finish. Despite this, it still offers better rust resistance than aluminized steel.



**304 Stainless Steel:** Also the most expensive option, 304 stainless steel is some of the highest quality material used for exhaust parts. It can last 10 years or more in a moderate climate, and maintains its toughness through extreme heat and cold. It will not rust for many years, but it may turn a golden brown color over time after being exposed to high temperatures. This golden brown color can, however, be polished back to the original finish. With high amounts of chromium (up to 20%) and nickel (up to 10%), it offers an ideal mix of strength and resistance to corrosion. The high nickel content protects against fatigue and rust, and provides outstanding weldability, while the chromium also prevents rust and increases its tensile strength. It's not uncommon to find 304 grade steel used in the smaller components—exhaust tips, flanges, etc.—of 409 steel systems.



Selecting the right material can make all the difference in the performance and longevity of your exhaust system. An informed decision is a smart decision, so consider the pros and cons of each metal type carefully. And, if you need more information or help deciding which material is best for your application, our team at [Jamo Performance Parts](#) is always available to assist.