



By Raul Lutas / 26th September 2022

What is the Density of Steel?

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Plain steel has a density of around 7.85g/cm³, 7850kg/m³, or approximately 490 pounds per square foot, depending on your preferred measurements. This means that steel is a very dense metal, making it such a sturdy and reliable material for use within the construction industry's most demanding situations. Local steel suppliers such as those that Buy A Beam are able to create superb beams and columns with immense load capacities.

When buying steel online, it's understandable that you'll wish to know everything about what you're buying. High-quality steel is a significant investment, but one that infinitely pays off through the incredible level of versatility that well-fabricated steel beams and columns provide. Oftentimes, buyers will need to understand the **dimensions of steel**, including its length, height, width, weight and density.



What is Density?

In more general terms, density refers to the amount of something in a given space. Some materials are denser than others as there is more of the specific material in a given space than in other materials. That is to say, its molecules are more tightly packed. Steel is incredibly dense when compared to other materials, and understanding why your steel beams are so dense may be vital if you're looking to buy steel online.

In a more scientific sense, density is defined as the mass per unit volume, and whilst this may mean the same thing in practice, the empirical way to measure and define volume can seem quite complex.

In an algebraic expression, density is $p=m/V$, or density (p) equals mass (m) divided by volume (V).

Density is an intensive property of materials, meaning that no matter how much steel is removed, its density will remain the same.

What is Steel's Density

Steel has a density of 7.85g/cm³, which means that compared to most other metals, steel is a very dense material, with twice the density of titanium and three times the density of aluminium. Steel's density makes it strong and durable, and this, along with being affordable on a large scale, is what makes steel beams and steel columns so widely renowned as a staple of the construction industry.

Steel is also one of the only ways to use a strong, environmentally conscious and resistant material for steel railings, gates and steel frames. Its density has a big part to play in making steel such a versatile material.

How to Use Your Knowledge of Density While Selecting Materials

While selecting a material for your project, you'll want to consider a few very significant physical factors. This will include density, conductivity and melting point.

These factors will all significantly affect how useful a building material can be when used in a building, and falling short at just one of these factors can often completely exclude a material from use on an industry-wide scale. This is what makes steel such a popular choice across the **construction industry**. It's strong, sturdy and reliable.

Find Local Steel Fabrication Experts at Buy a Beam

Buy a Beam's online shop makes it quick and easy to connect with a local steel fabricator and supplier wherever you are, with an understanding of what you need, providing you with timely updates and delivery.

Any steel you buy through Buy a Beam has the highest level of quality assurance. We want you to get precisely what you've paid for, from steel beams to steel bars and steel angle irons. The local steel fabricators we work with are some of the most experienced in the industry.

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