

# Steel Street



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Thank you for listening.



# Steel Street

### What is steel?

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An infographic titled "What is steel?" showing the chemical composition of steel. It lists elements like Carbon, Manganese, Phosphorus, and Sulfur, along with their typical percentages. The source "Thecasesolutions.com" is mentioned at the bottom.

### References

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### What are the properties of steel?

An infographic titled "What are the properties of steel?" listing various properties such as strength, ductility, and corrosion resistance. It includes a small table or chart summarizing these properties. The source "Thecasesolutions.com" is mentioned at the bottom.

### What are the constituent parts of steel?

An infographic titled "What are the constituent parts of steel?" showing a diagram of a steel molecule or structure with labels for different parts like atoms and bonds. The source "Thecasesolutions.com" is mentioned at the bottom.

# What is steel?

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Steel is an alloy of iron and is one of the most diverse metals used in the construction industry. It is hard and grey in colour. When smelted in a blast furnace, other elements are used to enhance and manipulate its properties.

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Steel is widely used within the construction industry due to its favorable properties:

- High tensile and compressive strength rating.
- Highly durable.
- Can be formed to make components and parts.

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There are a number of different constituent components that form steel. Some of these are impurities and others are added due to their particular properties.

- Depends on the desired use.
- Elements can enhance/alter properties.

# *Iron*

Iron is the main constituent element that forms the basis of steel.

Properties include:

- Ductile
- Malleable
- Easily corroded (water and oxygen)

(Lenntech 2016)

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# *Carbon*

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Carbon is a non metallic element that is found within the chemical structure of iron and steel.

- Primarily used to strengthen low alloy and carbon steel.
- Only found in small quantities within alloy steel, as it can cause steel to become brittle.



# *Manganese*

Manganese is a metallic element that can be used in steel production.

- Increases the yield strength and hardness of low carbon steels.
- It can also combine with sulfur to reduce brittleness.

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