What is metallurgical coal?

Metallurgical (met) coal (sometimes referred to as coking coal) is a naturally occurring sedimentary rock found within the Earth's crust. Categories of met coal include hard coking coal, semi-hard coking-coal, semi-soft coking coal and pulverized coal for injection (PCI). These apply to the different quality grades of met coal, all of which are used to make steel.

Met coal typically contains more carbon, less ash and less moisture than thermal coal, which is used for electricity generation.

Facts about met coal

- Coal is formed from prehistoric vegetation that has been heated and compressed over millions of years.
- The energy we get from coal today comes from the sunlight that was absorbed by plants that were alive millions of years ago.
- The equipment used to mine coal is huge! Excavators can weigh up to 800 tonnes and haul trucks can carry up to 300 tonnes of material per load.
- Met coal was first used to make steel in China in the 11th Century.
- It takes around 770 kilograms of met coal to make the steel for a typical mid-sized car.

How is met coal used?

The majority of steel is used in:

- Construction
- Transport
- Household appliances

How is steel made?

Met coal is heated above 1,000°C in a coking oven to create coke – a hard, porous lump. The coke is then added to a blast furnace with iron ore. Hot air and PCI are introduced, creating a flame temperature over 2000°C.

The burning coal and coke produces carbon monoxide, which, along with the high temperature, converts the iron ore into a liquid. This molten ‘pig iron’ is transported to a steel shop, where impurities are removed and alloys are added to make steel.
Why does BHP mine met coal?

Met coal is an essential ingredient in the production of steel.

Steel is one of the most widely used building materials on earth, and we expect it to remain so in the coming decades.

In 2020, BHP produced around 70 million tonnes of met coal. That's enough to produce enough steel to build the Burj Khalifa (the world’s tallest building) over 1,600 times!

Where does BHP mine met coal?

BHP has nine operating metallurgical coal mines in the Bowen Basin area of Central Queensland in Australia.

Where do we export met coal?

Our met coal is shipped to steel mills and coking plants in China, India, Japan, South East Asia, South Korea, Europe, and Latin America.