

## Solar Energy South Africa

# Photovoltaic panel iron briquette



**51.2V 300AH**



## Overview

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Does iron ore briquette emit 80% less CO<sub>2</sub>?

Vale, has successfully tested a new type of iron ore briquette that emits 80% less CO<sub>2</sub> compared to pellets. This briquette is adapted for the direct reduction route, a cleaner method for steel production that uses natural gas instead of coke, which emits less carbon and other greenhouse gases.

What is a green briquette?

The “green briquette” is made of iron ore and an agglomerant technological solution, which can be obtained with the use of sand provided by the treatment of mine tailings, and is capable of resisting elevated blast furnace temperatures without disintegrating.

Does Vale have a green briquette?

Today 98% of Vale’s total emissions are related to its chain of suppliers and clients. “The ‘green briquette’ is part of the revolutionary line of iron ore products offered by Vale throughout its history, as the result of significant investment in research and innovation. Up until the 1960s, our basic product was lump, that has high iron content.

Could a new briquette help decarbonise steel production?

Vale says it has successfully tested a new type of iron ore briquette, adapted for the direct reduction route, which will contribute to the decarbonisation of steel production.

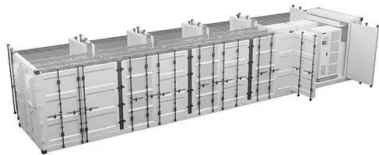
What are iron ore briquettes?

Announced in 2021, these iron ore briquettes began to be developed by us around 20 years ago at our Ferrous Metals Technology Center in Nova Lima, Minas Gerais. They are the latest in a long line of iron ore products we have offered over the course of our history, resulting from major investments in research and innovation.

How does the iron ore briquette contribute to Vale's commitment?

The iron ore briquette contributes to Vale's commitment to reduce scope 3 net emissions by 2035, reduce scope 1 and 2 emissions by 33% by 2030 and achieve neutrality by 2050. Source: PRESS RELEASE

## Photovoltaic panel iron briquette

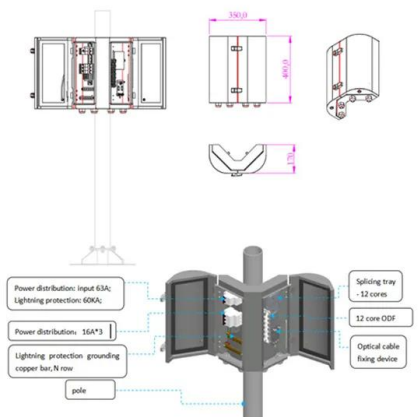


### Hot briquetted Iron (HBI)

Hot Briquetted Iron (HBI) is a type of iron that is converted into small and compacted pieces in the process of direct reduction of iron. In this process, iron ore is first crushed and then separated from its oxygen using natural gas or ...

## Life cycle assessment of Al-Cu-Ag-Si recycling process from

As raw materials become increasingly scarce, it is important to efficiently recycle PV panels to recover the highest quantity and quality of secondary raw materials. This study evaluates the ...



## How do solar cells work? Photovoltaic cells explained

There are many photovoltaic cells within a single solar module, and the current created by all of the cells together adds up to enough electricity to help power your home. A standard panel used in a rooftop residential array ...

## Vale's New Iron Ore Briquette To Help Steelmakers Cut ...

Vale, has successfully tested a new type of iron ore briquette that emits 80% less CO2 compared to pellets. This briquette is adapted for the direct reduction route, a cleaner method for steel

production that uses natural gas instead of coke,  
...



## Hot Briquetted Iron (HBI): A Guide to Shipping, Handling & Storage

Hot Briquetted Iron (HBI) is the densified briquette form of Direct Reduced Iron (DRI). DRI is discharged hot from the reduction furnace and screwed into the nip between - two counter ...

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