

Description of HBI:

Hot Briquetted Iron (HBI) is a premium, high density steel industry raw material containing 90-94% total iron (Fe) in a nearly pure form, which is used in electric arc furnace (EAF) and basic oxygen furnace (BOF) steelmaking and blast furnace (BF) ironmaking applications.

Hot Briquetted Iron Association (HBIA) Producer Members certify product chemistry, maintain product quality consistent with ISO standards, and follow International Maritime Organization (IMO) guidelines for safe ocean shipping.

-Please visit the Reference Library in the Technical Section of

www.hbia.org

for technical papers and presentations on HBI subjects.

Consistent Quality
Known Suppliers
Easy Handling
Safe Product

What Is HBI?

STEEL'S MOST
VERSATILE
METALLIC



Hot Briquetted Iron Association Ltd.
344 W. John Street
Matthews, NC 28105, USA
Phone: +1-704-815-3285
Fax: +1-704-841-4251
Web: www.hbia.org
Email: director@hbia.org





**Definition of HBI Listed in IMO* as:
Direct Reduced Iron (A) Briquettes,
hot-moulded**

* International Maritime Solid Bulk Cargoes (IMSBC) Code, which on 1 January 2011 supersedes the Code of Safe Practice For Solid Bulk Cargoes (BC Code), 1994 Edition.

HBI is a compacted form of Direct Reduced Iron (DRI), a metallic material manufactured by processes that reduce (i.e., remove oxygen from) iron oxide fines, lump, and pellets at temperatures below the melting point of iron.

IMO defines HBI as: “A material emanating from a densification process whereby the direct reduced iron (DRI) feed material is at a temperature greater than 650°C at time of moulding and has a density greater than 5000kg/m³. Fines (under 6.35 mm) not to exceed 5%.”

HBI Advantages:

- High bulk density of 2500 - 3300 kg/m³ (156 - 206 lbs/ft³).
- Known, consistent chemistry certified by the producer.
- Minimal (trace) amounts of undesirable chemical elements (Cu, Ni, Cr, Mo, Sn, Pb, and V).
- High thermal and electrical conductivity.
- Low reactivity with fresh and saltwater (reoxidation).
- Resistant to degradation resulting from handling and weathering.
- Compatible with all bulk materials handling equipment.
- Safe and easy to store in all types of weather.

HBI Characteristics:

IMO Class: MHB

Group: B

Approximate Stowage Factor (m³/t): 0.3-0.4

Size: Length: 50 to 140 mm (1.97-5.5)

Width: 40 to 100 mm (1.6-3.9 in)

Thickness: 20 to 50 mm (0.79-1.97 in)

Weight: 0.2 to 3.0 kg (0.5-6.6 lbs)

Fines: not to exceed 5% under
6.35 mm (0.25 in)

**Typical HBI Chemistry
(ranges by % wt.)**

Fe (total)	90-94%
Fe (metallic)	83-88%
C	0.8 - 1.7%
P ₂ O ₅	0.02 - 0.11%
S	0.003 - 0.03%
Gangue (SiO ₂ , Al ₂ O ₃ , CaO, MgO, MnO)	1.95 - 5.1%
Residuals (Cu, Ni, Cr, Mo, Sn, Pb, V)	Minimal (trace)

