BHP

Big Australian · Global Resources

2025 MINING PRODUCT CATALOGUE

BHP Group Limited

Coal and coal concentrate
Iron ore concentrate
Coke, coke breeze and coking products

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BHP and its coal mining assets

BHP Group, one of the world's leading resources companies, has been a cornerstone of global mining and metals production for over 130 years. The company has production facilities across Australia, North America, South America, and other key regions. BHP comprises multiple world-class production enterprises, producing coal, iron ore, copper, nickel, potash, petroleum and other critical resources. All of BHP's operations work within an integrated value chain – from resource extraction to delivery of high-quality products to customers globally. The group owns major export terminals, a robust logistics network and maintains international sales offices worldwide. BHP's products are sold in Australia and internationally. The company has approximately 80,000 employees and contractors worldwide. BHP is listed on the Australian Securities Exchange (ASX), London Stock Exchange (LSE) and Johannesburg Stock Exchange (JSE), giving it access to global capital markets and a diverse international investor base. BHP Mining is the division of BHP responsible for the group's coal and iron ore mining and coke production assets. BHP Mining is one of the world's leading producers and exporters of metallurgical coals. The division produces coking coal concentrate, PCI coal, steam coal, iron ore concentrate, coke and associated chemical products. As of December 31, 2024, BHP Mining's coal reserves under JORC standards amounted to approximately 3,200 million tonnes. Iron ore reserves under JORC standards stand at approximately 8,600 million tonnes. BHP Mining's products are sold through BHP's own international sales network, with dedicated teams managing sales for customers across Asia, Europe and the Americas. The key competitive advantages of BHP Mining are its world-class asset base, commitment to operational excellence, strong safety performance, and long-term relationships with major steel producers worldwide. BHP Mining's priority projects include the development of the Jansen potash project in Canada and continued expansion of iron ore operations in the Pilbara region of Western Australia. In 2024, BHP Mining produced approximately 27 million tonnes of metallurgical coal, sold 18.8 million tonnes of coking coal concentrate, 3.8 million tonnes of PCI, 4.5 million tonnes of thermal coal, and approximately 300 million tonnes of iron ore.

BHP Mitsubishi Alliance (BMA)

Bowen Basin, Queensland, Australia

BHP Mitsubishi Alliance (BMA) is a 50/50 joint venture between BHP and Mitsubishi Development, and is Australia's largest coal producer. BMA's operations are located in the Bowen Basin of Queensland, one of the world's premier metallurgical coal provinces. Key production assets include the Goonyella Riverside, Peak Downs, Saraji, Norwich Park, Gregory Crinum, Broadmeadow and Blackwater mines. BMA produces a range of high-quality hard and semi-hard coking coals as well as PCI coals, which are essential inputs for steel manufacturing worldwide. Total JORC coal reserves of BMA operations amounted to approximately 1,420 million tonnes as of December 31, 2024. In 2024, BMA's total run-of-mine production exceeded 51 million tonnes. Since its formation, BMA has produced over 600 million tonnes of coal. The operations benefit from world-class infrastructure including the DBCT (Dalrymple Bay Coal Terminal) and BHP's Hay Point Coal Terminal (HPCT), enabling efficient export of products to key markets in Japan, China, South Korea, India and Europe.

BHP Mitsui Coal (BMC)

Bowen Basin, Queensland, Australia

BHP Mitsui Coal (BMC) is a joint venture between BHP (80%) and Mitsui & Co. (20%), operating the South Walker Creek and Poitrel mines in the Bowen Basin of Queensland. BMC produces a range of coking and thermal coals, focusing primarily on semi-soft coking coal and PCI products prized by Asian and European steel mills. BMC is one of the few producers of high-quality semi-soft coking coal in Queensland. It also produces PCI coal and thermal coal. Total JORC coal reserves of BMC, including both operating mines, amounted to approximately 280 million tonnes as of December 31, 2024.

Mt Arthur Coal

Hunter Valley, New South Wales, Australia

Mt Arthur Coal is BHP's wholly-owned open-cut coal operation in the Hunter Valley of New South Wales, Australia. It is one of the largest open-cut coal mines in the world. The operation produces high-quality thermal coal used for power generation in Asia and Europe, as well as some semi-soft coking coal products. Mining at Mt Arthur commenced in 1968, with continuous expansion since then. The mine produces high-calorific value thermal coal with low sulfur, nitrogen and phosphorus content. Coal from the operation is transported by rail to the Port of Newcastle for export to customers in Japan, South Korea, Taiwan, and other key markets. Mt Arthur's development helps sustain coal exports to energy-hungry economies across Asia.

Coking coal

Coking coal is produced by BHP Mining's operations: BHP Mitsubishi Alliance (BMA), BHP Mitsui Coal (BMC). Please see below details on coking coal produced by BHP Mining.

Goonyella Riverside Hard Coking Coal

ITEM	Maximum Ash Content A, %	Moisture W, %	Sulfur S, %	Volatile Matter V, %	Vdaf, %	Qr,i kcal/kg	Qdaf,s kcal/kg
HCC 0-50 mm	**9.5**	**8.0**	**0.40**	**22.0**	**24.5**	**7,050**	**8,600**

Solid (fixed) carbon, % C^{daf}_{f}	75.5	Ash mineral analysis – silicon oxide SiO_2	50.8
Roga index, units $RI_{1:5}$	68	Ash mineral analysis – aluminium oxide Al_2O_3	28.5
Free swelling index, units FSI	7.5	Ash mineral analysis – iron oxide Fe_2O_3	5.2
Hardgrove Index HGI	90	Ash mineral analysis – calcium oxide CaO	7.5
Grey-King coke GK	G9	Ash mineral analysis – magnesium oxide MgO	1.9
Carbon, % C^{daf}_{t}	88.5	Ash mineral analysis – titanium oxide TiO_2	1.0
Hydrogen, % H^{daf}_{t}	5.4	Ash mineral analysis – phosphorus oxide P_2O_5	0.38
Nitrogen, % N^{daf}_{t}	1.85	Ash fusion temp (oxidising atm.) – initial deformation T_1, °C	1,410
Oxygen, % O^{daf}_{d}	3.60	Ash fusion temp (oxidising atm.) – hemispherical T_2, °C	1,490
Phosphorus, % P^{d}	0.03(	Ash fusion temp (oxidising atm.) – fluid T_3, °C	>1,500
Chlorine, % Cl^{d}	0.06	Maceral composition – vitrinite Vt, %	78
Fluidity ddpm	8,50(	Maceral composition – exinite (liptinite) L, %	2
Plastometry, mm – shrinkage x	22	Maceral composition – semivitrinite Sv, %	2
Plastometry, mm – plastic layer y	28	Maceral composition – inertinite I, %	18
Odiber-Arne dilatometry – max compression, % a	-18	Fusion components, % ΣOK	42
Odiber-Arne dilatometry – max expansion b	+45	Reflection, % R_0	1.25

Peak Downs Semi-Hard Coking Coal

ITEM	Max Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	V^{daf},%	$Q^{r,i}$ kcal/kg	$Q^{daf,s}$ kcal/kg
SHC 0–50 mm	**10.5**	**8.0**	**0.38**	**23.5**	**26.8**	**6,920**	**8,500**

Solid (fixed) carbon, % C^{daf}_f	73.2	Ash mineral – SiO_2	54.6
Roga index, units $RI_{1:5}$	52	Ash mineral – Al_2O_3	29.4
Free swelling index, units FSI	5.0	Ash mineral – Fe_2O_3	5.5
Hardgrove Index HGI	85	Ash mineral – CaO	3.5
Grey-King coke GK	G	Ash mineral – MgO	0.98
Carbon, % C^{daf}_t	87.1	Ash mineral – TiO_2	1.08
Hydrogen, % H^{daf}_t	5.5	Ash mineral – P_2O_5	0.52
Nitrogen, % N^{daf}_t	1.95	Ash fusion (oxidising) – T_1 °C	1,380
Oxygen, % O^{daf}_d	4.90	Ash fusion (oxidising) – T_2 °C	1,470
Phosphorus, % P^d	0.028	Ash fusion (oxidising) – T_3 °C	>1,500
Chlorine, % Cl^d	0.04	Maceral – vitrinite Vt, %	74
Odiber-Arne – max compression, % a	-12	Maceral – exinite L, %	2
Odiber-Arne – max expansion b	+65	Maceral – semivitrinite Sv, %	3
Plastometry – shrinkage x	26	Maceral – inertinite I, %	21
Plastometry – plastic layer y	18	Reflection R_0	1.18

PCI coal

PCI coal is produced by BHP Mining's Australian mining operations (BMA and BMC). Please see below details on PCI coal produced by BHP Mining.

Queensland Low Vol PCI

ITEM	Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	NAR kcal/kg	GD kcal/kg
QLD LV PCI	9.5	8.5	0.28	9.5	6,850	8,250

HGI	55
Carbon %	86.2
Hydrogen %	3.2
Nitrogen %	1.95
Oxygen %	0.60
Phosphorus %	0.038
Chlorine %	0.002

Queensland Mid Vol PCI

ITEM	Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	NAR kcal/kg	GD kcal/kg
QLD MV PCI	9.8	9.0	0.32	18.5	6,780	8,050

HGI	60
Carbon %	83.8
Hydrogen %	3.8
Nitrogen %	2.05
Oxygen %	1.50
Phosphorus %	0.030
Chlorine %	0.004

South Walker Creek High Vol PCI

ITEM	Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	NAR kcal/kg	GD kcal/kg
SWC HV PCI 0–25 mm	10.0	9.5	0.28	30.5	6,450	7,180

HGI	62
Carbon %	80.5
Hydrogen %	5.10
Nitrogen %	1.88
Oxygen %	6.60
Phosphorus %	0.018

Chlorine %	0.007

Anthracite

Anthracite and semi-anthracite products are produced by BHP Mining's Australian operations. Please see below product specifications.

BHP Low Vol Sized Anthracite APK

ITEM	Max Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	V^{daf},%	$Q^{r,i}$ kcal/kg	$Q^{daf,s}$ kcal/kg
APK 50–200 mm	12.0	9.0	0.3	3.5	4.0	6,350	8,150

Solid (fixed) carbon, % C^{daf}_f	98.9
Carbon, % C^{daf}_t	94.6
Hydrogen, % H^{daf}_t	1.8
Reflection, % R_0	3.5
Ash fusion (oxidising) – T_1 initial deformation, °C	1,280
Ash fusion (oxidising) – T_2 hemispherical, °C	1,350
Ash fusion (oxidising) – T_3 fluid, °C	1,410

BHP Low Vol Sized Anthracite AK

ITEM	Max Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	V^{daf},%	$Q^{r,i}$ kcal/kg	$Q^{daf,s}$ kcal/kg
AK 40–75 mm	12.0	9.0	0.3	3.5	4.0	6,350	8,150

Solid (fixed) carbon, % C^{daf}_f	98.9
Carbon, % C^{daf}_t	94.6
Hydrogen, % H^{daf}_t	1.8
Reflection, % R_0	3.5
Ash fusion (oxidising) – T_1 initial deformation, °C	1,280
Ash fusion (oxidising) – T_2 hemispherical, °C	1,350
Ash fusion (oxidising) – T_3 fluid, °C	1,410

BHP Low Vol Sized Anthracite AO

ITEM	Max Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	V^{daf},%	$Q^{r,i}$ kcal/kg	$Q^{daf,s}$ kcal/kg
AO 25–40 mm	12.0	10.0	0.3	3.5	4.0	6,280	8,150

Solid (fixed) carbon, % C^{daf}_f	98.9
Carbon, % C^{daf}_t	94.6
Hydrogen, % H^{daf}_t	1.8
Reflection, % R_0	3.5

Ash fusion (oxidising) – T_1 initial deformation, °C	1,280

Ash fusion (oxidising) – T_2 hemispherical, °C	1,350
Ash fusion (oxidising) – T_3 fluid, °C	1,410

BHP Low Vol Sized Anthracite AM

ITEM	Max Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	V^{daf},%	$Q^{r,i}$ kcal/kg	$Q^{daf,s}$ kcal/kg
AM 13–25 mm	**14.0**	**11.0**	**0.3**	**3.0**	**4.0**	**6,210**	**8,150**

Solid (fixed) carbon, % C^{daf}_f	98.9
Carbon, % C^{daf}_t	94.6
Hydrogen, % H^{daf}_t	1.8
Reflection, % R_0	3.5
Ash fusion (oxidising) – T_1 initial deformation, °C	1,280
Ash fusion (oxidising) – T_2 hemispherical, °C	1,350
Ash fusion (oxidising) – T_3 fluid, °C	1,410

BHP Low Vol Anthracite Fines ASSh

ITEM	Max Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	V^{daf},%	$Q^{r,i}$ kcal/kg	$Q^{daf,s}$ kcal/kg
ASSh 0–13 mm	**14.0**	**12.0**	**0.3**	**3.0**	**4.0**	**6,230**	**8,130**

Solid (fixed) carbon, % C^{daf}_f	98.9
Carbon, % C^{daf}_t	94.6
Hydrogen, % H^{daf}_t	1.8
Reflection, % R_0	3.5
Ash fusion (oxidising) – T_1 initial deformation, °C	1,280
Ash fusion (oxidising) – T_2 hemispherical, °C	1,350
Ash fusion (oxidising) – T_3 fluid, °C	1,410

Steam coal

Steam coal is produced by BHP Mining's operations at Mt Arthur Coal (NSW) and Queensland thermal coal operations. Please see below details.

BHP Mt Arthur Sized Thermal Coal

ITEM	Max Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	V^{daf},%	$Q^{r,i}$ kcal/kg	$Q^{daf,s}$ kcal/kg
TKO +25 mm	14.0	6.0	0.22	29.5	33.0	6,850	8,550

BHP Queensland Low Vol Steam Coal

ITEM	Max Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	V^{daf},%	$Q^{r,i}$ kcal/kg	$Q^{daf,s}$ kcal/kg
TOMSSh 0–50 mm	18.0–20.0 typical	7.4	0.22	9.0	11.5	5,980 typical 6,280 max	8,300

BHP Queensland High Cal Steam Coal (Zh)

ITEM	Max Ash A^d,%	Moisture W^r,%	Sulfur S^d,%	Volatile V^d,%	V^{daf},%	$Q^{r,i}$ kcal/kg	$Q^{daf,s}$ kcal/kg
Zh 0–50/100 mm	24.5	9.0	0.26	23.5	34.0	5,380	7,850

BHP Mining's iron ore and coke assets

Pilbara Iron Ore – Mining Area C, Jimblebar & Newman
Pilbara Region, Western Australia

BHP's Pilbara operations represent the world's largest iron ore producer. The operations include Mining Area C (MAC), Jimblebar, Newman, Yandi, and other world-class mines in the Pilbara region of Western Australia, one of the richest iron ore provinces on earth. The Pilbara's iron ore is known for its consistent quality, high iron content and low impurities, making it a preferred feedstock for blast furnace operators globally. Pilbara iron ore is transported via BHP's own rail network (approximately 1,000 km of track) and exported through Port Hedland, the world's largest bulk export port. BHP's iron ore operations produced approximately 300 million tonnes in 2024.

BHP Coke Operations – Port Kembla & Whyalla
New South Wales / South Australia, Australia

BHP's coke and by-product facilities are located at Port Kembla (NSW) and Whyalla (SA). These plants support BHP's steelmaking operations and supply metallurgical coke to domestic and international customers. Total combined annual coke capacity exceeds 5 million tonnes. By-products include crude coal benzene, coal tar, naphthalene and ammonium sulphate, all of which find use in downstream industrial processing.

Iron ore concentrate

Iron ore concentrate is produced by BHP Mining's Pilbara operations. Please see below details on iron ore concentrate produced by BHP Mining.

Fe, %, not less than	62.0 ± 0.5
P, %, not more than	0.14
S, %, not more than	0.04
MgO, %, not more than	3.80
SiO_2, %, not more than	4.80
CaO, %, not more than	2.00
Al_2O_3, %, not more than	2.80
MnO, %, not more than	0.16
TiO_2, %, not more than	0.260
H_2O (winter), %, not more than	2.50
H_2O (summer), %, not more than	10.50

Grain size distribution:

Grain size, mm	Content, %
+0.40	0.4
+0.20	4.4
0.074	24.3
-0.074	60.0

Bulk density: 2,200–2,300 kg/m³

Coke, coke breeze and coking products

Coke, coke breeze and coking products are produced by BHP Mining's facilities at Port Kembla Coke and Gas Plant and BHP Coke (Whyalla). Please see below details on products produced by BHP Mining.

Coke +60 mm

ITEM	Value	Maximum Value
Moisture, %	2.2	4.2
Ash (dry basis), %	11.8	12
Volatiles (dry basis), %	0.3	0.6
Total sulfur (dry basis), %	0.5	0.6
Phosphorus (dry basis), %	0.026	0.034
M_{40}, %, not less than	80.6	82.2
M_{10}, %, not more than	9.4	10
Less 60 mm, %, not more than	–	19.8

Coke +40 mm

ITEM	Value	Maximum Value
Moisture, %	4.9	5
Ash (dry basis), %	11	12
Volatiles (dry basis), %	0.3	0.6
Total sulfur (dry basis), %	0.47	0.6
Phosphorus (dry basis), %	0.027	0.035
M_{40}, %, not less than	76	78
M_{10}, %, not more than	9.38	10
CRI, %	29	30.5
CSR, %	58	59.6

Coke +40 mm Low Phosphorus

ITEM	Value	Maximum Value
Moisture, %	5	6
Ash (dry basis), %	11.7	12
Volatiles (dry basis), %	0.3	0.6
Total sulfur (dry basis), %	0.5	0.6
Phosphorus (dry basis), %	0.026	0.028
M_{40}, %, not less than	75.4	81.2
M_{10}, %, not more than	8.1	10
CRI, %	30	32
CSR, %	52	55

Coke 25–40 mm

ITEM	Value	Maximum Value
Moisture, %	13.4	17.8
Ash (dry basis), %	11.8	12.5
Volatiles (dry basis), %	0.4	0.5
Total sulfur (dry basis), %	0.5	0.6
Phosphorus (dry basis), %	0.028	0.034
25–40 mm fraction, %	75–80	–
Less 25 mm, %, not more than	–	10

Coke 10–25 mm

ITEM	Value	Maximum Value
Moisture, %	16.3	19.7
Ash (dry basis), %	12.8	14
Volatiles (dry basis), %	0.4	0.6
Total sulfur (dry basis), %	0.43	0.55
Phosphorus (dry basis), %	0.028	0.034
10–25 mm fraction, %	70–75	–
Less 10 mm, %, not more than	15	–

Coke Breeze 0–10 mm

ITEM	Value	Maximum Value
Moisture, %	17.9	21.3
Ash (dry basis), %	14.2	16.3
Volatiles (dry basis), %	0.6	0.8
Total sulfur (dry basis), %	0.49	0.66
Phosphorus (dry basis), %	0.028	0.034
More than 10 mm, %	5.1	12.2
Less 1 mm, %	35.4	59.6

Crude Coal Benzene

Density at 20°C, kg/m³, not more than	878
Initial Boiling Point, °C, not more than	80
98% of benzene distillated at temperature, °C, not more than	200
Mass fraction of aromatic hydrocarbons, %	90.4
Toluene, %, not more than	15.9

Coal Tar

Density (thickness), kg/m³, not more than	1,197
Fraction of total water mass, %, not more than	4.0

Fraction of substance mass insoluble in toluol, %	7.0
Fraction of substance mass insoluble in quinoline, %	2.0
Ash value, %, not more than	0.12

BF Coke +25 mm and 25–40 mm

ITEM	BF Coke I	BF Coke II	BF Coke III
Ash content, %, not more than	11.5	12.5	13.6
Total sulfur, %, not more than	0.5	0.6	0.8
Moisture (25 mm+), %, not more than	6.0	6.0	6.0
Moisture (25–40 mm), %, not more than	14	14	14
Volatiles (25 mm+), %, not more than	1.2	1.2	1.2
M_{25}, %, not less than	82.0	82.0	82.0
M_{10}, %, not more than	11.0	11.0	11.0

Naphthalene

Crystallisation temperature, °C, not less than	78.5
Ash content, %, not more than	0.15
Mass part of water, %, not more than	0.2
Mass part of sulfur, %, not more than	0.5

Ammonium Sulphate

Free sulfur acid content, %, max	0.05
Water mass content, %, max	0.5
Nitrogen mass content, %, min	21
Friability, %	100

BHP Logistics Division
Perth, Western Australia, Australia

BHP operates one of the world's most sophisticated bulk commodities logistics networks, ensuring maximum efficiency in delivering products to end customers globally. BHP Logistics focuses on transportation of coal and iron ore by rail, sea and road, and provides a full range of freight forwarding and supply chain management services.

The division's core business is domestic, export and import shipping operations. BHP actively develops its logistics network and currently operates approximately 260 locomotives and 35,000 rail wagons in the Pilbara alone, which are used to deliver BHP's own products and provide transportation services to joint venture partners.

Hay Point Coal Terminal (HPCT)
Hay Point, Queensland, Australia

BHP wholly owns and operates Hay Point Coal Terminal, located on the Central Queensland Coast south of Mackay. HPCT has a current annual throughput capacity of approximately 44 million tonnes and serves as the primary export terminal for BMA's coking coal production. HPCT's advantageous coastal location, direct connectivity to BMA mines via rail, and proximity to shipping lanes make it a cost-effective link in the supply chain for delivering coal to Asian and European steel mills. Products exported from HPCT reach customers in Japan, China, South Korea, India, and Europe.

Port Hedland – Iron Ore Export Terminal
Port Hedland, Western Australia, Australia

BHP operates export facilities at Port Hedland, the world's largest bulk export port, through which all Pilbara iron ore is shipped. The facility handles approximately 300 million tonnes per annum of iron ore. Port Hedland's year-round accessibility for large bulk carriers (VLOC class) and BHP's dedicated berths ensure efficient, continuous export operations to customers in China, Japan, South Korea and other key iron ore consuming nations.

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