

IS:2062 E250 Black Round Bars Dia 16mm to 200mm

Steelmet Industries - Bright Bars, Alloy Steels, Free Cutting Steels, Stainless Steels

Description

IS:2062 E250 Hot Rolled Bars / Black Bars - Delivery Conditions

Section	Round
Size Range	16mm to 200mm
Condition	Hot Rolled
Tolerance offered	As per IS:2062
Standard	Hot Rolled Bars to generally conform to IS:2062
Straightness	As per IS:1852 where applicable
Ovality	Not specifically controlled, but within tolerance limits
Lengths offered	In full lengths up to 12000 mm / 40ft. With prior agreement, fixed/custom lengths can also be offered.
Straightened	No, as rolled condition.
Polished	No
End Cut Condition	Generally supplied with as-rolled ends. Special end cuts or deburred ends can be offered upon request.
Colour Coding	Both ends are colour coded for easy identification. Buyer's colours can also be applied.
Rust Preventive	Hot Rolled Bars can be supplied with rust preventive coating upon request
Packing	Loose or Bundled with tie strings or wire and/or packed in chosen packing material
Test Report	Test Certificates for Chemical, Mechanical, and Physical properties as per agreement

Typical Mechanical Properties	• Tensile Strength: 410 - 540 MPa • Yield Strength: 250 MPa min • Elongation: 23% min

Chemical Composition	• Carbon (C): 0.23% max • Manganese (Mn): 1.50% max • Phosphorus (P): 0.045% max • Sulfur (S): 0.045% max • Silicon (Si): 0.40% max • Iron (Fe): Balance
Applications	IS:2062 E250 is widely used in structural applications, general engineering, and fabrication jobs such as making frames, beams, and other load-bearing components.
Melting & Refining Method	IS:2062 E250 is generally produced using Basic Oxygen Furnace (BOF) or Electric Arc Furnace (EAF) methods, with secondary refining like Ladle Refining Furnace (LRF) to maintain consistent quality.
Rolling Route	The material is produced via the Continuous Casting route, where molten steel is cast into billets and then hot rolled into desired bar sizes.
Quality Control	Strict quality control processes are implemented, including chemical analysis, mechanical testing, and dimensional checks to ensure product quality.
Surface Condition	Hot Rolled Bars may have a scale-covered surface, which can be removed through pickling, shot blasting, or machining as per customer requirements.
Traceability	Each batch is fully traceable back to its heat number, ensuring documentation of all chemical and mechanical properties.

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Key Chemical Elements and Mechanical Properties

Property	IS2062 E250 Grade A	IS2062 E250 Grade B	IS2062 E250 Grade C
Yield Strength (MPa)	â?¥ 250	â?¥ 250	â?¥ 250
Tensile Strength (MPa)	410 - 560	410 - 560	410 - 560
Elongation (%)	â?¥ 23	â?¥ 23	â?¥ 23
Carbon Content (%)	â?¤ 0.23	â?¤ 0.22	â?¤ 0.20
Sulfur Content (%)	â?¤ 0.045	â?¤ 0.045	â?¤ 0.040
Phosphorus Content (%)	â?¤ 0.045	â?¤ 0.045	â?¤ 0.040
Carbon Equivalent (CE)	0.42 max	0.42 max	0.42 max
Impact Test (J)	Not required	20 J @ 0Â°C	27 J @ 0Â°C

This table provides a quick comparison of the different grades (A, B, C) of IS2062 E250 structural steel based on key mechanical and chemical properties.

Equivalent Steel Grades to IS2062 E250

- **Indian Standard (IS)**: IS2062 E250

- **American (ASTM)**:
  - ASTM A36
  - ASTM A572 Grade 42
  - ASTM A572 Grade 50
  - ASTM A992
  - ASTM A514 Grade 50
- **European (EN)**:
  - EN 10025 S275JR
  - EN 10025 S275J0
  - EN 10025 S275J2G3
  - EN 10025 S235JR
  - EN 10025 S355JR
- **Japanese (JIS)**:
  - JIS G3101 SS400
  - JIS G3106 SM400A
  - JIS G3106 SM490A
- **British (BS)**:
  - BS 4360 Grade 43A
  - BS EN 10025 S275JR
  - BS EN 10025 S355JR
- **German (DIN)**:
  - DIN 17100 St 44-2
  - DIN EN 10025 S275JR
  - DIN EN 10025 S355JR
- **Korean (KS)**:
  - KS D3503 SS400
  - KS D3515 SM400A
  - KS D3516 SM490A
- **Russian (GOST)**:
  - GOST 380-2005 St3sp/ps
  - GOST 27772 Grade 09G2S
  - GOST 19281-89 St3
- **French (AFNOR)**:
  - NF A35-501 A37

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- NF A35-501 E24-2
- NF EN 10025 S275JR
- NF EN 10025 S355JR

- **Italian (UNI)**:
  - UNI 7070 Fe 430B
  - UNI EN 10025 S275JR
  - UNI EN 10025 S355J0

- **Canadian (CSA)**:
  - CSA G40.21 300W
  - CSA G40.21 260W
  - CSA G40.21 350W

- **Australian (AS/NZS)**:
  - AS/NZS 3678 Grade 250
  - AS/NZS 3678 Grade 350
  - AS/NZS 1594 HA250

- **Swedish (SS)**:
  - SS 1411
  - SS 1412
  - SS 1442

- **Chinese (GB)**:
  - GB/T 700 Q235B
  - GB/T 1591 Q345B
  - GB/T 3274 Q420B

- **Turkish (TS)**:
  - TS 7070 St 37-2
  - TS 7070 St 44-2
  - TS EN 10025 S275JR

- **Brazilian (NBR)**:
  - NBR 7007 A36
  - NBR 7008 A572 Grade 42
  - NBR 16271 S235JR

- **South African (SABS)**:
  - SABS 1431 Grade 300W
  - SABS 1431 Grade 350WA

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- SABS 500/1

- **Mexican (NMX)**:
  - NMX-B-506-C St 42
  - NMX-B-506-C Gr 50
  - NMX-B-026-1997

- **Finnish (SFS)**:
  - SFS 2357 Fe 430B
  - SFS 2371 SS13
  - SFS 2414 Fe510B

- **Spanish (UNE)**:
  - UNE 36080 AE 235B
  - UNE 36081 S275JR
  - UNE 36083 S355JR

- **Czech (Ä?SN)**:
  - Ä?SN 41 1373 11 375
  - Ä?SN 42 1381 S275JR
  - Ä?SN 42 0595 S355J2

- **ISO**:
  - ISO 630-2 S275JR
  - ISO 4950-1 Fe430B
  - ISO 898-1 8.8

- **MIL (Military Standard)**:
  - MIL-S-22698C Grade A
  - MIL-S-22698C Grade B
  - MIL-A-12560

- **Argentinian (IRAM)**:
  - IRAM IAS U500-259
  - IRAM IAS U500-409
  - IRAM 14035 Fe 430

- **Polish (PN)**:
  - PN EN 10025 S275JR
  - PN-EN 10025-2 St3
  - PN 8451 Fe360B

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- **Norwegian (NS)**:
  - NS 143-83 B
  - NS EN 10025 S275JR
  - NS 2300 S355JR
- **Romanian (STAS)**:
  - STAS 500/2-80 OL 37-2
  - STAS 438/1 Fe360A
  - STAS 1194 Fe 430
- **Belgian (NBN)**:
  - NBN 35-101 S235JR
  - NBN 35-501 S275JR
  - NBN EN 10025 S355J2
- **Dutch (NEN)**:
  - NEN 3850 S275JR
  - NEN 1872 Fe360B
  - NEN 1522 St 44-2
- **Austrian (Ã?NORM)**:
  - Ã?NORM B4300 FE 430 B
  - Ã?NORM EN 10025 S275JR
  - Ã?NORM 2250 St 37-2
- **Indonesian (SNI)**:
  - SNI 07-2052 SNI A36
  - SNI A572 Grade 42
  - SNI 7397-2008 S235JR
- **Singapore (SS)**:
  - SS 400
  - SS S275JR
  - SS 485
- **Malaysian (MS)**:
  - MS 1313 Grade 275
  - MS 2025 Fe360B
  - MS 1233 St37
- **Philippines (PNS)**:

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  - PNS 06-153 SS275
  - PNS 49 235B
  - PNS 1932 Fe430

- **Thai (TIS)**:
  - TIS 1227 SS400
  - TIS 1340 Grade 275
  - TIS 1697 Grade 300

- **Pakistani (PS)**:
  - PS 1610 Grade 275
  - PS 2300 Fe430B
  - PS 2330 St 37-2

- **UAE (UAE Standards)**:
  - UAE.S. 380-2010 G250

- **Vietnamese (TCVN)**:
  - TCVN 1650-2008
  - TCVN 1557-1998
  - TCVN 8490:2011

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