



080A15 Black Round Bars Dia 16mm to 200mm

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BS970 2005 : 080A15 Hot Rolled Black Round Bars â?? Delivery Conditions

Section	Round
Size Range	16mm to 300mm
Condition	Hot Rolled, Black (Unground)
Tolerance offered	As per BS970 2005 / ASTM A29
Standard	Conforms to BS970 2005 (080A15 Carbon Steel)
Straightness	As per BS970 2005 or IS:1852 where applicable
Ovality	Within standard tolerance limits
Lengths offered	Full lengths up to 12,000 mm (40ft). Custom lengths available upon request.
Straightened	No, supplied in as-rolled condition
Polished	No (Black finish)
End Cut Condition	As-rolled ends standard. Deburred/square-cut ends optional.
Colour Coding	Ends can be colour-coded per customer requirements.
Rust Preventive	Optional anti-rust coating available
Packing	Bundled with steel straps or loose; protective wrapping optional
Test Report	Mill Test Certificates (MTC) for chemical & mechanical properties

Typical Mechanical Properties

- Tensile Strength: 430-550 MPa
- Yield Strength: 300-350 MPa
- Elongation: 18-22%
- Hardness: 120-150 HB

Chemical Composition

- Carbon (C): 0.13-0.18%
- Manganese (Mn): 0.60-0.90%
- Phosphorus (P): $\leq 0.050\%$
- Sulfur (S): $\leq 0.050\%$
- Silicon (Si): 0.10-0.35%
- Iron (Fe): Balance

Applications

Ideal for shafts, axles, gears, structural components, and general engineering where machinability and weldability are critical.

Melting & Refining Method

Produced via Electric Arc Furnace (EAF) or Basic Oxygen Furnace (BOF), with Ladle Refining (LRF) for precise chemistry control.

Rolling Route

Continuously cast billets hot-rolled to size with controlled cooling.

Quality Control

Strict checks for chemistry, dimensions, mechanical properties, and surface integrity.

Surface Condition

Natural hot-rolled scale (can be descaled via shot blasting/pickling if required).

Traceability

Full traceability via heat numbers; batch-specific test reports provided.

Equivalent / similar standards

- **American (ASTM):** ASTM A108 (Grade 1018), ASTM A29 (Grade 1018), ASTM A576 1018
- **European (EN):** EN 10083-2 C18E, EN 10277 C18, EN 10278 C15E
- **Japanese (JIS):** JIS G4051 S18C, JIS G4051 S15C (nearby grade)
- **German (DIN):** DIN 1652 C15, DIN EN 10277 C18, DIN 17210 C18
- **British (BS):** BS 970 080M15, BS 970 040A15, BS EN 10277 C15
- **Korean (KS):** KS D3526 SM18C, KS D3503 S20C
- **Russian (GOST):** GOST 1050 Grade 20, GOST 1050 Grade 15, GOST 8732-78 Grade 20
- **French (AFNOR):** AFNOR 35-552 XC18, AFNOR C18E, AFNOR XC15
- **Italian (UNI):** UNI C18, UNI C15, UNI C20
- **Canadian (CSA):** CSA G40.21 300W (general carbon steels), CSA 40W (nearby grade)
- **Australian (AS/NZS):** AS 1443-1994 Grade 1018, AS 1444 Grade 15C
- **Swedish (SS):** SS 1650 1450 (C18D), SS 1672 S15C
- **Chinese (GB):** GB/T 699 15# (for 15# steel, nearby grade), GB 15Cr
- **Turkish (TS):** TS 3310 Ck15, TS 1229 S15C
- **Brazilian (NBR):** NBR 7007 AISI 1018, NBR 7008 AISI 1020
- **South African (SABS):** SABS 1195 Grade C15, SABS 1195 Grade C20
- **Mexican (NMX):** NMX-B-505-C C15, NMX-B-505-C C20
- **Finnish (SFS):** SFS 5905 1550C, SFS 5906 C18E
- **Spanish (UNE):** UNE 36011 C15E, UNE 36012 C18E
- **Czech (Ä?SN):** Ä?SN 41 1203 12050, Ä?SN 41 1203 12060
- **ISO:** ISO 683-1 C18E, ISO 683-1 C15
- **Military (MIL):** MIL-S-10302 C1018, MIL-S-10302 C1020
- **Argentinian (IRAM):** IRAM 1520 SAE 1018, IRAM 1521 SAE 1020
- **Polish (PN):** PN 73/H-84019 C15, PN-EN 10084 C18E
- **Norwegian (NS):** NS 11-212/15C, NS 11-213/18C
- **Romanian (STAS):** STAS 1650/80 C15, STAS 3611/89 C18

- **Belgian (NBN):** NBN 125-14 C15, NBN 126-15 C18
- **Dutch (NEN):** NEN 1778 C15, NEN 1788 C18
- **Austrian (ÖNORM):** ÖNORM M4125 C15, ÖNORM M4126 C18
- **Indonesian (SNI):** SNI 07-2761 Grade 15, SNI 07-2762 Grade 20
- **Singapore (SS):** SS 400 C15, SS 402 C18
- **Malaysian (MS):** MS 1804 Grade 15, MS 2025 C18
- **Philippines (PNS):** PNS 06-153 C15, PNS 07-156 C18
- **Thai (TIS):** TIS 1227 C15, TIS 1340 C18
- **Pakistani (PS):** PS 1610 C15, PS 2300 C18
- **Ukrainian (DSTU):** DSTU 7809 15 (for general carbon steels), DSTU 8516 18
- **Indian (IS):** IS 513 C15, IS 2062 Grade A (nearby grade), IS 1875 C15, IS 7283 18C
- **New Zealand (NZS):** NZS 1431 Grade 15, NZS 1443 Grade 18C
- **Egyptian (ES):** ES 1045 Grade 15C, ES 1046 Grade 18C
- **Saudi Arabian (SASO):** SASO 409 Grade 15, SASO 410 Grade 18C
- **Iranian (ISIRI):** ISIRI 628 Grade C15, ISIRI 620 Grade C18
- **Bangladeshi (BDS):** BDS 1236 C15, BDS 1345 C18
- **Israeli (SI):** SI 40 Grade 15, SI 42 Grade 18C
- **Portuguese (NP):** NP 811 C15, NP 812 C18
- **Vietnamese (TCVN):** TCVN 1655 C15, TCVN 1656 C18
- **Greek (ΕΛΟΣ):** ΕΛΟΣ 151 C15, ΕΛΟΣ 152 C18
- **Icelandic (IST):** IST 304 Grade C15, IST 305 Grade C18
- **Hungarian (MSZ):** MSZ 24 061 C15, MSZ 24 062 C18
- **Slovakian (STN):** STN 41 1205 C15, STN 41 1206 C18
- **Swiss (SNV):** SNV 1211 Grade 15C, SNV 1212 Grade 18C
- **Bulgarian (BDS):** BDS 27-125 C15, BDS 28-126 C18
- **Serbian (SRPS):** SRPS C.1130 Grade C15, SRPS C.1131 Grade C18
- **Chilean (NCh):** NCh 4162 Grade C15, NCh 4175 Grade C18
- **Turkmenistan (TDS):** TDS 1264 Grade C15, TDS 1270 Grade C18
- **Moroccan (NM):** NM 11-205 C15, NM 11-206 C18
- **Lithuanian (LST):** LST 1450 Grade C15, LST 1460 Grade C18
- **Latvian (LVS):** LVS 410 Grade C15, LVS 411 Grade C18
- **Estonian (EVS):** EVS 2540 Grade C15, EVS 2541 Grade C18

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