SAE1018 Black Round Bars Dia 16mm to 200mm

Description

SAE 1018 Hot Rolled Bars / Black Bars - Delivery Conditions

Section	Round
Size Range	16mm to 200mm
Condition	Hot Rolled
Tolerance offered	As per ASTM A29
Standard	Hot Rolled Bars to generally conform to ASTM A29
Straightness	As per ASTM A6 or 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: 440 MPa min • Yield Strength: 370 MPa min • Elongation: 15-20% min • Hardness: 126 HB max

Chemical Composition	• Carbon (C): 0.15-0.20% • Manganese (Mn): 0.60-0.90% • Phosphorus (P): 0.040% max • Sulfur (S): 0.050% max • Silicon (Si): 0.10-0.35% • Iron (Fe): Balance
Applications	SAE 1018 is commonly used in the manufacturing of shafts, pins, rods, spindles, and machinery parts where better weldability, machinability, and surface finish are required.
Melting & Refining Method	SAE 1018 is typically produced using Electric Arc Furnace (EAF) or Basic Oxygen Furnace (BOF) methods, followed by secondary refining techniques like Ladle Refining Furnace (LRF) to ensure consistent chemical composition and reduced impurities.
Rolling Route	The material is produced through the Continuous Casting route, where the molten steel is cast into billets, followed by hot rolling into the desired round bar sizes.
Quality Control	Rigorous quality control measures are implemented throughout the manufacturing process, including chemical analysis, mechanical testing, dimensional checks, and surface inspection to ensure the highest standards of product quality.
Surface Condition	Hot Rolled Bars may have a scale-covered surface, which can be removed by pickling, shot blasting, or machining as per customer requirements.
Traceability	Each batch is fully traceable back to its heat number, ensuring that all chemical and mechanical properties are well-documented and can be verified.

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 (Ã?NORM):** Ã?NORM M4125 C15, Ã?NORM 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 (Î?Î?Î?Î¤/Î?Î•):** Î?Î?Î?Î¤ 151 C15, Î?Î?Î?Î¤ 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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