

TECHNICAL DATA SHEET BITUMEN – PENETRATION GRADE 80/100

Paving Grade Petroleum Bitumen conforming to ASTM D946/D946M – AASHTO M20 specification family

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Product	Bitumen, Penetration Grade 80/100 (Pen 80/100)
Origin	Republic of Türkiye and/or Republic of Iraq (origin declared per Sales Contract and Certificate of Origin)
Supersedes	None – first issue
Prepared by	ATABAŞ GLOBAL – Technical & Commercial Department

1. ISSUER

Issuer / Supplier	ATABAŞ GLOBAL DIŞ TİCARET ANONİM ŞİRKETİ
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2. PRODUCT DESCRIPTION

Bitumen Penetration Grade 80/100 is a medium-soft paving grade bitumen produced by the vacuum distillation of selected crude oils, with atmospheric residue further processed to achieve the required consistency. It is a homogeneous, black, thermoplastic, semi-solid product at ambient temperature, free from water and visible foreign matter, and is characterised by a needle penetration of 80–100 dmm at 25 °C. The grade combines good workability at moderate mixing and compaction temperatures with adequate cohesion and adhesion to mineral aggregates, making it suitable for road construction in temperate to cool climates and in applications where flexibility at lower service temperatures is required.

The product is supplied strictly in accordance with the specification in Section 4 and is accompanied by a refinery Certificate of Quality (CoQ) for every batch. Where required by the Sales Contract, independent third-party inspection (SGS, Bureau Veritas, Intertek or equivalent) is arranged at loading.

3. APPLICATIONS

- Hot mix asphalt (HMA) binder for base, binder and wearing courses in temperate and cold climates.
- Surface dressing, chip seal and tack/prime coat manufacture (including as feedstock for cutback and emulsion production).
- Feedstock for bitumen emulsions (cationic and anionic) and for polymer-modified bitumen (PMB) manufacture.
- Airfield pavement and municipal road maintenance where lower stiffness and improved low-temperature cracking resistance are required.
- Industrial uses including waterproofing compounds, roofing felts and mastic asphalt (subject to end-user evaluation).



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4. SPECIFICATION

Standard specification for Penetration Grade 80/100 as traded by ATABAŞ GLOBAL. Test methods reference ASTM International; equivalent EN/ISO/AASHTO/IP methods are accepted for inspection purposes where stated in the Sales Contract.

Property	Test Method	Unit	Specification
Penetration at 25 °C, 100 g, 5 s	ASTM D5 / EN 1426	0.1 mm (dmm)	80 – 100
Softening Point (Ring & Ball)	ASTM D36 / EN 1427	°C	45 – 52
Ductility at 25 °C, 5 cm/min	ASTM D113	cm	min. 100
Flash Point (Cleveland Open Cup)	ASTM D92 / EN ISO 2592	°C	min. 225
Specific Gravity at 25/25 °C	ASTM D70	–	1.01 – 1.05
Solubility in Trichloroethylene (or CS ₂)	ASTM D2042 / ASTM D4	% by mass	min. 99.0 (CS ₂ : min. 99.5)
Loss on Heating (TFOT, 163 °C, 5 h)	ASTM D1754 / ASTM D6	% by mass	max. 0.5
Drop in Penetration after Heating	ASTM D5 / ASTM D6	%	max. 20
Retained Penetration after TFOT	ASTM D5	% of original	min. 47
Ductility of Residue after TFOT at 25 °C	ASTM D113	cm	min. 75
Kinematic Viscosity at 135 °C	ASTM D2170 / EN 12595	mm ² /s (cSt)	min. 250 (typical 260 – 330)
Penetration Index (PI)	EN 12591 Annex A	–	–1.5 to +1.0
Water Content	ASTM D95	% by volume	max. 0.2 (typically nil)
Spot Test (Heptane–Xylene)	AASHTO T102	–	Negative
Appearance	Visual	–	Homogeneous, black, free from water and visible impurities

Note: Properties are guaranteed at the time and place of loading as evidenced by the refinery CoQ and/or independent inspection report. Retained penetration and residue ductility are reported when required by the Buyer or the destination specification.

5. HANDLING AND APPLICATION TEMPERATURES

Operation	Recommended Temperature	Remarks
Bulk storage (heated tank)	130 – 150 °C	Maintain minimum temperature required for pumping; avoid prolonged storage above 160 °C to limit oxidative hardening
Pumping / transfer	140 – 160 °C	Viscosity approx. 150 – 250 mm ² /s in this range
Loading into road/rail tankers or bitutainers	150 – 170 °C	Loading temperature recorded on B/L or CMR
Mixing with aggregate (HMA)	150 – 165 °C	Target binder viscosity 170 ± 20 mm ² /s
Compaction	125 – 145 °C	Complete rolling before mat cools below approx. 90 °C
Maximum handling temperature	190 °C	Never exceed; risk of degradation, fume generation and fire
Drum re-melting	120 – 160 °C	Indirect heating only; open drum lids progressively to vent



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6. PACKAGING AND DELIVERY OPTIONS

Form	Description	Typical Net Weight / Capacity
Bulk – hot liquid	Insulated heated road tankers, rail tank cars or dedicated bitumen tanker vessels; delivered at 150 – 170 °C	20 – 30 MT per road tanker; vessel parcels per Sales Contract
Bitutainers (ISO tank-type containers)	20 ft insulated bitumen containers with heating coils; suitable for multimodal transport and re-heating at destination	18 – 22 MT net per unit
New steel drums	180 kg net (±2 kg) new closed-head steel drums, 0.4 – 0.6 mm plate, filled at 150 – 160 °C and sealed after cooling; palletised or loose-stowed in 20 ft containers	180 kg per drum; approx. 110 – 130 drums (19.8 – 23.4 MT) per 20 ft container
Drums – small size	150 kg or 200 kg steel drums on request	Per Buyer specification

Drums are marked with product name, grade, gross/net weight, batch number, production date, origin and ATABAŞ identification. Alternative packaging (e.g. jumbo bags) is not recommended for this grade owing to its softness at ambient temperature; requests are assessed case by case.

7. STORAGE AND HANDLING

- Store hot bulk product in insulated, thermostatically controlled tanks fitted with temperature indicators; keep temperature as low as practicable consistent with pumpability.
- Ensure tanks and lines are free of water before receipt; contact between hot bitumen and water causes violent frothing (boil-over).
- Store drums upright, lids closed, on firm level ground, protected from direct sunlight and rain; maximum stacking two pallets high; store away from heat sources and oxidising agents.
- Rotate stock on a first-in-first-out basis. Typical shelf life of drummed product is 24 months from filling date when stored as recommended.
- Use only trained personnel wearing the personal protective equipment listed in the Safety Data Sheet ATB-SDS-BIT-80100-2026-001.

8. QUALITY ASSURANCE AND INSPECTION

Each production batch is tested at the refinery laboratory against the full specification in Section 4 and released with a Certificate of Quality. ATABAŞ GLOBAL operates management systems certified to ISO standards (BELCERT). At the Buyer's option and cost, or as specified in the Sales Contract, quantity and quality are determined at the loading point by an internationally recognised independent inspection company (SGS, Bureau Veritas, Intertek, Cotecna or equivalent), whose certificate is final and binding for the parties save fraud or manifest error. Retained samples are kept for a minimum of 90 days after loading.

9. STANDARD SHIPPING DOCUMENTATION

Document	Issuer	Remarks
Commercial Invoice	ATABAŞ GLOBAL	Original signed and stamped
Packing List / Weight Certificate	ATABAŞ GLOBAL / Refinery / Inspector	Drum count, gross/net weights, container and seal numbers
Bill of Lading / CMR / Rail Waybill	Carrier	Per Incoterms® 2020 delivery term agreed
Certificate of Quality (CoQ)	Refinery laboratory	Batch-specific test results
Certificate of Analysis / Quantity	Independent inspector	Where inspection is contracted
Certificate of Origin	Chamber of Commerce	Republic of Türkiye or Republic of Iraq as applicable; EUR.1 issued only where a preferential arrangement genuinely applies



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Safety Data Sheet	ATABAŞ GLOBAL	ATB-SDS-BIT-80100-2026-001 (16-section GHS format)
Dangerous Goods Declaration	Shipper	Required for hot bulk product only (UN 3257); not required for drummed product at ambient temperature

10. HEALTH, SAFETY AND ENVIRONMENT (SUMMARY)

Bitumen is not classified as hazardous under the UN GHS / EU CLP Regulation at ambient temperature. When handled hot, the principal hazards are severe thermal burns from contact, inhalation of bitumen fumes, accumulation of hydrogen sulphide (H₂S) in tank head-spaces, and frothing on contact with water. Fumes from road-paving bitumen are classified by IARC as Group 2B (possibly carcinogenic to humans). Full hazard information, first-aid, fire-fighting, spill response, exposure limits and transport classification are given in the Safety Data Sheet ATB-SDS-BIT-80100-2026-001, which must be consulted before handling.

11. CONFORMITY AND RELATED STANDARDS

The 80/100 grade is specified within the ASTM D946/D946M – AASHTO M20 penetration-graded family (regional 80/100 designation) and is widely accepted across the Middle East, Africa, South and Central Asia. It corresponds closely to EN 12591 grade 70/100 and can be tested and certified to EN 12591 on request. Equivalent national standards (e.g. TS EN 12591, IS 73, SANS 4001-BT1, GOST 22245 BND 90/130) may be referenced in the Sales Contract subject to prior technical confirmation.

SANCTIONS AND TRADE COMPLIANCE

ATABAŞ GLOBAL DIŞ TİCARET ANONİM ŞİRKETİ conducts its business in full compliance with the economic and trade sanctions regimes administered by the United States (OFAC), the European Union, the United Kingdom (OFSI) and the United Nations Security Council. ATABAŞ does not work with sanctioned countries, sanctioned companies, sanctioned individuals or sanctioned vessels, and does not supply, source, finance or transport goods in breach of these regimes. All counterparties are subject to Know-Your-Customer and sanctions screening before contract signature and throughout performance.

12. DISCLAIMER

The information contained in this Technical Data Sheet is provided in good faith and is believed to be accurate at the date of issue. It describes the typical characteristics of the product and does not constitute a warranty of suitability for any particular purpose. Contractual specifications are those set out in the applicable Sales and Purchase Agreement. ATABAŞ GLOBAL reserves the right to amend this document without prior notice. Users must satisfy themselves as to the suitability of the product for their intended application and must comply with all applicable laws and regulations. This document is the property of ATABAŞ GLOBAL DIŞ TİCARET ANONİM ŞİRKETİ and may not be reproduced in part without written consent.

Approved by	Hakan ATABAŞ – Founder & Chief Executive Officer
Signature / Company Stamp	
Date of Issue	27 August 2026



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