SAFETY DATA SHEET (MSDS / SDS)

BITUMEN – PENETRATION GRADE 80/100

Prepared in accordance with UN GHS (Rev. 10), Regulation (EC) No 1907/2006 (REACH) Annex II as amended, Regulation (EC) No 1272/2008 (CLP), Turkish KKDİK/SEA Regulations, OSHA 29 CFR 1910.1200, and IMDG/ADR/RID/IATA transport rules – 16-section format

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Related Technical Data Sheet	ATB-TDS-BIT-80100-2026-001
Language / Region	English – international / all modes of transport

SECTION 1 – IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier

Trade name	Bitumen Penetration Grade 80/100 (Pen 80/100; Paving Grade Bitumen; Asphalt Cement AC 80/100)
Chemical name	Asphalt (Bitumen); residues (petroleum), vacuum
CAS No.	8052-42-4
EC / EINECS No.	232-490-9
EC Index No.	Not assigned
REACH Registration No.	Substance registered by EU/EEA manufacturers and importers under EC 232-490-9. ATABAŞ GLOBAL does not hold its own REACH registration; importers into the EU/EEA are responsible for compliance with REACH Title II.
UFI	Not applicable (substance, not a mixture)

1.2 Relevant identified uses and uses advised against

Identified uses	Binder for road construction and asphalt mixtures; surface dressing; feedstock for bitumen emulsions, cutbacks and polymer-modified bitumen; industrial waterproofing and roofing products. Professional and industrial use only.
Uses advised against	Consumer use. Any use above 190 °C. Use in contact with water or in closed vessels without venting.

1.3 Details of the supplier of the safety data sheet

Issuer / Supplier	ATABAŞ GLOBAL DIŞ TİCARET ANONİM ŞİRKETİ
Registered Office	Huzur Mahallesi, Azerbaycan Caddesi, Skyland İstanbul 4 B Blok, 27. Kat, Daire 389-390-391, Sarıyer, İstanbul, Republic of Türkiye
Operational Office	Huzur Mah. Azerbaycan Cad., Skyland İstanbul 4 B Ofis Bloğu, 27. Kat, No: 389-390-391, Sarıyer, İstanbul, Republic of Türkiye
Trade Registry / Tax No.	İstanbul Ticaret Sicili No. 227479-5 | VKN 8360813811 | MERSIS 0836081381100001
LEI	9845006780A7A3AD9005
Telephone	+90 212 801 64 60
E-mail / Web	ceo@atabas.com.tr | www.atabas.com.tr

1.4 Emergency telephone number

Supplier emergency contact	+90 212 801 64 60 (Monday–Friday 09:00–18:00, GMT+3); ceo@atabas.com.tr
National emergency (Türkiye)	112 (Emergency); Ulusal Zehir Danışma Merkezi (UZEM) 114 – 24 h
Transport emergency	Contact carrier's 24-h emergency number shown on the transport document; in the EU consult national ADR/ECHA poison centres; USA/Canada CHEMTREC +1 703 527 3887 (international collect)

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance

Regulation (EC) No 1272/2008 (CLP) / UN GHS: Not classified as hazardous for supply at ambient temperature. The substance is a UVCB petroleum substance which, on the basis of available data, does not meet the criteria for classification in any physical, health or environmental hazard class. The product is, however, normally handled and transported as a hot liquid (150 – 190 °C), at which point it presents serious physical hazards that are not captured by the classification system and are addressed below.

2.2 Label elements

Hazard pictogram	None required under CLP / GHS
Signal word	None (supplementary: "WARNING – HOT MATERIAL" recommended on bulk containers)
Hazard statements	None required
Precautionary statements	None required
Supplementary information (EUH)	EUH210 – Safety data sheet available on request
Recommended supplementary labelling for hot handling	Contains hot material – may cause severe thermal burns. Do not allow contact with water. Vapours may contain hydrogen sulphide. Avoid breathing fumes.

2.3 Other hazards

- Thermal burns: product is handled at 150 – 190 °C. Molten bitumen adheres to skin and continues to transfer heat, causing deep, severe burns.
- Hydrogen sulphide (H_2S): may be released from hot bitumen and accumulate to toxic or lethal concentrations in tank head-spaces, tanker compartments and other confined spaces. H_2S is extremely toxic (LC50 approx. 444 ppm/4 h rat), flammable, and causes rapid olfactory fatigue so that odour cannot be relied upon as a warning.
- Frothing / boil-over: contact of hot bitumen with water (moisture in tanks, drums, lines, rain) causes instantaneous steam generation and violent eruption of hot product.
- Fire: combustible liquid when hot (flash point > 225 °C). Vapours and H_2S may form flammable mixtures in confined spaces above the liquid.
- Bitumen fumes generated during hot application are classified by IARC (Monograph 103) as Group 2B – possibly carcinogenic to humans (occupational exposure to straight-run bitumen fumes during road paving). Repeated inhalation may cause irritation of the eyes and respiratory tract.
- PBT/vPvB: not PBT and not vPvB in accordance with REACH Annex XIII. Endocrine-disrupting properties: none identified.
- Solidified product is slippery and, when spilled at ambient temperature, may present a tripping hazard.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Component	CAS No.	EC No.	Concentration (% w/w)	CLP Classification
Asphalt (bitumen) – a complex UVCB combination of high-molecular-weight organic compounds containing a relatively high proportion of hydrocarbons > C25 with high carbon/hydrogen ratios, plus small amounts of sulphur-, nitrogen- and oxygen-containing compounds	8052-42-4	232-490-9	≥ 99.5	Not classified
Hydrogen sulphide (in head-space vapour of hot product only – not a constituent of the liquid as supplied)	7783-06-4	231-977-3	Trace (< 0.1)	Flam. Gas 1A H220; Press. Gas; Acute Tox. 2 (inh.) H330; Aquatic Acute 1 H400

Note: Bitumen is an EU "Note L" exempt petroleum substance for the purposes of carcinogen classification where it can be shown that it contains < 3 % (w/w) DMSO extract (IP 346). Penetration-grade bitumen typically contains no measurable polycyclic aromatic hydrocarbons of concern in free form.

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

Route	First aid measures
General	Remove casualty from the source of exposure. Seek medical attention for all thermal burns and any suspected H_2S exposure. Show this Safety Data Sheet to the attending physician.
Skin contact – hot product	Immediately cool the affected area with copious amounts of cold running water for at least 15 minutes, or until pain subsides; do not use ice. DO NOT attempt to remove adhering bitumen from the skin – it forms a sterile protective layer over the burn. Do not use solvents, kerosene or petroleum products to remove it. Cover with a clean dry dressing and transfer to hospital. Removal of bitumen must be carried out only by medical staff (e.g. with warm liquid paraffin/medical-grade mineral oil or sunflower oil over 24–72 h).
Skin contact – cold product	Wash with soap and water. Adhering solid bitumen may be softened with medical-grade mineral oil or petroleum jelly. Do not use solvents.
Eye contact	Hot product: irrigate immediately with copious cool clean water for at least 15 minutes. Do not attempt to remove solidified bitumen from the eye. Obtain immediate ophthalmological attention. Cold product: rinse with water; remove contact lenses if present and easy to do; seek medical advice if irritation persists.
Inhalation (fumes / H_2S)	Rescuers must wear self-contained breathing apparatus before entering the area. Remove casualty to fresh air, keep warm and at rest. If breathing is irregular or has stopped, give artificial respiration (avoid mouth-to-mouth if H_2S exposure is suspected; use a resuscitation mask or bag-valve device) and administer oxygen if trained. Obtain medical attention immediately; H_2S victims who appear to recover may relapse (pulmonary oedema, delayed).
Ingestion	Unlikely route of exposure. Do not induce vomiting. Rinse mouth with water. If hot product has been ingested, give small sips of cold water and obtain immediate medical attention (risk of oesophageal burns and obstruction).

4.2 Most important symptoms and effects, both acute and delayed

Contact with hot product: severe, deep thermal burns; adhering material; risk of shock. Fumes: irritation of eyes, nose and throat, headache, nausea; prolonged exposure may cause bronchitis and dermatitis. H_2S: at low concentrations eye irritation and headache; at high concentrations sudden loss of consciousness, respiratory paralysis and death; delayed pulmonary oedema possible up to 48 h after exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treat thermal burns symptomatically; do not debride adhering bitumen mechanically. Bitumen may be softened and removed gradually with warm sterile liquid paraffin, Polysorbate-based ointments or similar hydrophobic agents once cooling is complete. Circumferential bitumen burns of the limbs, neck or chest may have a tourniquet effect as the material contracts on cooling – monitor for compartment syndrome and consider early splitting of the bitumen cast. H_2S poisoning: supportive care with 100 % oxygen; observe for at least 24 – 48 h.

SECTION 5 – FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable	Dry chemical powder, carbon dioxide, foam (alcohol-resistant or standard hydrocarbon foam applied gently), sand, earth, steam or water fog to cool containers and control fumes. Small fires in tanks may be extinguished by covering to exclude air.
Unsuitable	DO NOT use water jets or direct water streams on burning or hot bitumen – violent frothing and boil-over will spread the fire and eject hot product.

5.2 Special hazards arising from the substance

Combustible when heated above its flash point (> 225 °C COC). Flammable vapours and H_2S may accumulate in tank head-spaces and ignite explosively. Hazardous combustion products: dense black smoke, carbon monoxide, carbon dioxide, sulphur dioxide, hydrogen sulphide, oxides of nitrogen, aldehydes, unburnt hydrocarbons and polycyclic aromatic compounds. Burning bitumen may flow and spread fire. Sealed drums may rupture when heated; pressure build-up in heated tanks must be relieved.

5.3 Advice for fire-fighters

Wear full protective clothing and positive-pressure self-contained breathing apparatus (EN 137 / NIOSH-approved). Cool exposed containers and tanks with water spray from a protected position; do not allow water to enter tanks. Prevent fire-fighting run-off from entering drains and watercourses. Fight fire from upwind and from a safe distance; consider allowing controlled burn-out of tank fires under expert supervision.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away and upwind. Hot product: wear heat-resistant gloves, face shield, full-body heat-resistant clothing and safety boots (see Section 8); test the atmosphere for H_2S and oxygen deficiency before approaching low-lying or confined areas; if H_2S is present, use SCBA. Allow hot spillage to cool and solidify before recovery. Eliminate all ignition sources. Cold product: avoid walking on solidified spillage (slippery).

6.2 Environmental precautions

Prevent entry into drains, sewers, surface water, soil and groundwater by bunding with sand or earth. Hot bitumen solidifies rapidly on contact with cold water and will float or sink depending on density and temperature; it is essentially insoluble and immobile once cold. Inform the relevant authorities if the product has entered a watercourse or drain, or if soil contamination is significant. On water, contain with booms and recover mechanically.

6.3 Methods and material for containment and cleaning up

Hot spillage: allow to cool and solidify; dam with sand or earth to limit spread. Solidified material: break up and shovel into suitable labelled containers for recovery or disposal. Residual stains may be cleaned with a suitable proprietary bitumen cleaner or biodegradable solvent in accordance with local regulations; do not use gasoline or chlorinated solvents. Contaminated sand/earth should be treated as waste (Section 13).

6.4 Reference to other sections

See Section 8 for personal protection and Section 13 for disposal.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

- Handle hot product only in closed systems with adequate mechanical ventilation. Where fumes cannot be controlled, use respiratory protection (Section 8).
- Do not exceed 190 °C. Bulk storage temperature 130 – 150 °C; loading temperature 150 – 170 °C. Monitor and log tank temperatures continuously.
- Ensure all tanks, lines, drums and equipment are dry and free of water before introducing hot product. Never introduce hot bitumen into a vessel containing water, and never add water or wet material to hot bitumen.
- Before opening tank hatches or entering tanker compartments, test the atmosphere for H_2S and oxygen; treat tank interiors as confined spaces under a permit-to-work system. Stand upwind and to the side when opening hatches.
- Earth/ground and bond all equipment during hot transfer. Eliminate ignition sources; do not apply naked flame directly to drums.
- When re-heating drummed product, use indirect heating (hot oil, steam, electric) and open lids progressively to vent; never heat a sealed drum.
- Do not eat, drink or smoke in handling areas. Wash hands and exposed skin thoroughly after handling and before breaks. Launder contaminated clothing before re-use.
- Do not use compressed air to blow lines containing hot bitumen.

7.2 Conditions for safe storage, including any incompatibilities

Aspect	Requirement
Bulk storage	Insulated, heated (hot oil/steam/electric) vertical or horizontal tanks designed for bitumen service (e.g. EN 12285, API 650 where applicable), fitted with high-temperature alarms, level indicators, venting to atmosphere at a safe location, and bunding to 110 % of largest tank capacity. Maintain 130 – 150 °C; avoid prolonged storage above 160 °C.
Drummed storage	Drums upright, lids closed, on firm dry ground; maximum two pallets high. Protect from direct sunlight and rain; keep away from heat sources. In hot climates, prevent drums from heating in the sun to avoid deformation. Store away from oxidising agents, strong acids and bases.
Incompatible materials	Strong oxidising agents (e.g. chlorates, nitrates, peroxides), water/moisture with hot product, strong mineral acids.
Shelf life	Drummed product: 24 months from filling date under recommended conditions. Bulk product: dependent on storage temperature history; test penetration and softening point before use after extended storage.
Storage class	Germany TRGS 510: LGK 11 (combustible solids) for drummed product; hot bulk product per site specific risk assessment.

7.3 Specific end use(s)

Road and industrial asphalt production – refer to the Technical Data Sheet ATB-TDS-BIT-80100-2026-001 for application temperatures.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters – occupational exposure limits

Substance	Jurisdiction / Body	Limit Value	Basis
Asphalt (bitumen) fume, as benzene-soluble inhalable particulate	ACGIH (USA)	TLV-TWA 0.5 mg/m³ (8 h)	Eye and respiratory irritation; A4 not classifiable
Asphalt fume	NIOSH (USA)	REL 5 mg/m³ ceiling (15 min)	Total particulate
Asphalt fume	OSHA (USA)	No PEL established	–
Bitumen fume (as inhalable particulate)	Germany (AGS/TRGS 900)	AGW 1.5 mg/m³ (vapour and aerosol, inhalable)	Occupational exposure limit

Bitumen fume	United Kingdom (HSE)	No WEL; ALARP principle applies under COSHH	–
Hydrogen sulphide	EU (Directive 2009/161/EU) / UK WEL / Türkiye	5 ppm (7 mg/m³) 8 h TWA; 10 ppm (14 mg/m³) 15 min STEL	Indicative OELV
Hydrogen sulphide	ACGIH (USA)	TLV-TWA 1 ppm; STEL 5 ppm	–
Hydrogen sulphide	OSHA (USA)	PEL ceiling 20 ppm; 50 ppm peak (10 min, once per shift)	–
Hydrogen sulphide	NIOSH (USA)	REL ceiling 10 ppm (10 min); IDLH 100 ppm	–

DNEL / PNEC (REACH): Workers – inhalation, long-term, local effects: 2.9 mg/m³ (bitumen fume, benzene-soluble fraction, reference value from EU registration dossier). No PNEC derived; substance is essentially insoluble and immobile in the environment.

8.2 Exposure controls

Control	Specification
Engineering controls	Closed systems, local exhaust ventilation at tank hatches, drum-filling and mixing points; fume extraction on pavers. Provide eyewash stations and safety showers with cool (not cold) water at hot-handling locations. Fixed or portable H_2S gas detection at tank tops and in loading/unloading areas. Confined-space entry procedures.
Eye / face protection	Hot product: full face shield (EN 166 / ANSI Z87.1) worn over safety goggles. Cold product: safety glasses with side shields.
Skin / hand protection	Hot product: heat-resistant gauntlet gloves (EN 407, contact heat level ≥ 3 / EN 388) with long cuffs worn outside sleeves; heat-resistant coveralls (EN ISO 11612) with sleeves and trouser legs closed, no turn-ups, worn outside boots; safety boots with heat-resistant soles (EN ISO 20345, HRO) and no laces where possible. Cold product: nitrile gloves (EN 374) and standard work clothing.
Respiratory protection	Not normally required in well-ventilated open areas. Where fumes are visible or limits may be exceeded: half or full-face respirator with A2P3 (organic vapour/particulate) filter (EN 14387 / EN 143). Where H_2S may be present or in confined spaces: positive-pressure SCBA or supplied-air respirator (EN 137 / EN 14593); filters do NOT provide adequate protection against H_2S at high concentrations.
Thermal hazards	Helmet with neck protection, face shield and full heat-resistant clothing when handling hot product, opening hatches, sampling or taking temperatures.
Hygiene measures	Wash hands before eating, drinking or smoking. Do not take contaminated clothing home; launder separately. Provide barrier cream for exposed skin. Do not use solvents to clean skin.
Environmental exposure controls	Bunded storage; spill kits; no discharge to drains. Vent fumes at a safe location away from air intakes.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Property	Value	Method / Remarks
Physical state	Semi-solid (viscous) at 20 °C; liquid above approx. 100 °C	–
Colour	Black to dark brown	Visual
Odour	Characteristic hydrocarbon / tar-like; H_2S (rotten egg) odour may be present when hot	–
Odour threshold	Not determined	–

pH	Not applicable (not water-soluble)	–
Melting point / softening point	No sharp melting point; Softening Point (R&B) 45 – 52 °C	ASTM D36 / EN 1427
Boiling point / range	> 470 °C (initial boiling point, at 101.3 kPa)	Decomposes before boiling
Flash point	> 225 °C (Cleveland Open Cup)	ASTM D92 / EN ISO 2592
Evaporation rate	Negligible	–
Flammability	Combustible when heated above flash point; not flammable at ambient temperature	–
Upper / lower flammability limits	Not determined; H_2S in vapour space: LEL 4.3 % v/v, UEL 45.5 % v/v	–
Vapour pressure	< 0.001 kPa at 20 °C; negligible	–
Vapour density (air = 1)	> 1 (fumes heavier than air)	–
Relative density / specific gravity	1.01 – 1.05 at 25 °C	ASTM D70
Solubility in water	Insoluble (< 1 mg/L)	–
Solubility in organic solvents	Soluble in trichloroethylene, carbon disulphide, toluene, xylene (≥ 99 %)	ASTM D2042
Partition coefficient n-octanol/water (log Kow)	> 6 (calculated; UVCB, not measurable)	–
Auto-ignition temperature	Approx. 400 – 485 °C	Literature
Decomposition temperature	> 300 °C (progressive cracking)	–
Kinematic viscosity	min. 250 mm²/s at 135 °C (typical 260 – 330); approx. 150 – 250 mm²/s at 150 °C	ASTM D2170
Explosive properties	Not explosive	–
Oxidising properties	Not oxidising	–
Penetration at 25 °C	80 – 100 dmm	ASTM D5 / EN 1426
Ductility at 25 °C	min. 100 cm	ASTM D113

9.2 Other information

Particle characteristics: not applicable (not a solid powder). Product is thermoplastic; consistency varies with temperature. Handling/loading temperature 150 – 170 °C; maximum 190 °C.

SECTION 10 – STABILITY AND REACTIVITY

Item	Information
10.1 Reactivity	Not reactive under normal conditions of storage and handling. Reacts violently with water when hot (physical reaction – steam eruption).
10.2 Chemical stability	Stable at recommended storage temperatures. Prolonged heating above 160 °C causes oxidative hardening (increase in softening point, loss of penetration); above 190 °C, thermal cracking and increased fume/H_2S generation.
10.3 Possibility of hazardous reactions	Contact with strong oxidising agents may cause fire. Formation of flammable/toxic H_2S–air mixtures in confined head-spaces. Frothing on contact with water.
10.4 Conditions to avoid	Temperatures above 190 °C; contact with water or moist materials when hot; naked flames applied directly to containers; ignition sources near tank vents; entry into tanks without atmosphere testing.
10.5 Incompatible materials	Strong oxidising agents, strong acids, water (hot product).

10.6 Hazardous decomposition products	On heating/burning: carbon monoxide, carbon dioxide, sulphur oxides, hydrogen sulphide, nitrogen oxides, aldehydes, polycyclic aromatic hydrocarbons, hydrocarbon fumes and smoke.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Endpoint	Result	Remarks / Reference
Acute toxicity – oral	LD50 > 5,000 mg/kg bw (rat)	Not classified
Acute toxicity – dermal	LD50 > 2,000 mg/kg bw (rabbit)	Not classified
Acute toxicity – inhalation	LC50 > 94.4 mg/m³ (rat, 4 h, fume condensate) – no mortality at highest tested concentration	Not classified
Skin corrosion / irritation	Not irritating (rabbit, OECD 404) at ambient temperature. Hot product causes severe thermal burns (physical effect).	Not classified
Serious eye damage / irritation	Not irritating (rabbit, OECD 405). Hot product causes thermal burns.	Not classified
Respiratory or skin sensitisation	Not sensitising (guinea pig maximisation test)	Not classified
Germ cell mutagenicity	Negative in Ames test and in vivo mammalian assays (bitumen). Fume condensates from paving-grade bitumen: weak/equivocal activity in vitro only.	Not classified
Carcinogenicity	Bitumen itself: not classified. Bitumen fumes during road paving: IARC Group 2B (possibly carcinogenic to humans, Monograph 103, 2013). Hard bitumen fumes during mastic asphalt work: IARC Group 2B; oxidised bitumen fumes during roofing: IARC Group 2A. Dermal carcinogenicity studies in mice with straight-run bitumen negative; positive results attributed to cracked/oxidised products.	Not classified under CLP
Reproductive toxicity	No adverse effects on fertility or development in rat inhalation studies of bitumen fume (NOAEC ≥ 100 mg/m³).	Not classified
STOT – single exposure	Fumes may cause transient eye, nose and throat irritation; H_2S in head-space may cause CNS depression.	Not classified
STOT – repeated exposure	Sub-chronic rat inhalation (fume, 13 weeks): NOAEC 30 mg/m³; mild nasal/respiratory irritation at higher doses.	Not classified
Aspiration hazard	Not applicable (viscosity far exceeds 20.5 mm²/s at 40 °C).	Not classified

11.2 Information on other hazards

Endocrine-disrupting properties: none known. Routes of exposure: inhalation of fumes; skin and eye contact. Repeated or prolonged skin contact with cold bitumen may cause defatting, dermatitis, folliculitis and, rarely, photosensitisation. Chronic inhalation of fumes at high concentration may cause bronchitis. Hydrogen sulphide: acutely toxic by inhalation (see Section 4).

SECTION 12 – ECOLOGICAL INFORMATION

Endpoint	Information
12.1 Toxicity	Fish (Oncorhynchus mykiss) 96 h LL50 > 1,000 mg/L (WAF); Daphnia magna 48 h EL50 > 1,000 mg/L; Algae 72 h EL50 > 1,000 mg/L. Not classified as hazardous to the aquatic environment; essentially non-toxic owing to negligible water solubility and bioavailability.
12.2 Persistence and degradability	Not readily biodegradable (< 10 % in 28 days, OECD 301). Inherently persistent in the environment as an inert solid mass; however, it is immobile and does not leach.
12.3 Bioaccumulative potential	Low potential for bioaccumulation; high molecular weight and negligible solubility limit uptake. Log Kow > 6 (calculated) but not bioavailable.
12.4 Mobility in soil	Negligible; solidifies and adheres to soil particles. Does not migrate to groundwater. Floats or sinks on water depending on temperature and density (approx. 1.01 – 1.05).
12.5 Results of PBT and vPvB assessment	Not PBT, not vPvB (REACH Annex XIII).
12.6 Endocrine-disrupting properties	None identified.
12.7 Other adverse effects	Hot spillages may cause physical damage (smothering, thermal effects) to flora and fauna. Physical fouling of birds and aquatic organisms possible in the event of a spill to water.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

- Product waste: Recover and recycle wherever possible (e.g. reclaimed asphalt pavement, re-melting into road works). Otherwise dispose of via a licensed waste contractor by incineration with energy recovery or approved landfill in accordance with local regulations. Do not discharge to drains or watercourses.
- European Waste Catalogue (EWC) codes (indicative, to be assigned by the waste holder): 17 03 02 – bituminous mixtures other than those mentioned in 17 03 01; 05 01 17 – bitumen; 15 01 04 – metallic packaging (empty drums); 15 02 03 – absorbents and wipes other than those mentioned in 15 02 02.
- Packaging: Empty drums retain product residues and may contain flammable/toxic vapour if heated. Do not cut, weld, drill or apply heat to empty drums. Return to a licensed drum reconditioner or dispose of as scrap steel after residue removal in accordance with local law.
- Türkiye: Atık Yönetimi Yönetmeliği (Official Gazette 29314) – disposal via licensed facilities; EU: Directive 2008/98/EC; USA: RCRA – product is not a listed hazardous waste but generators must characterise waste at the point of disposal.

SECTION 14 – TRANSPORT INFORMATION

Two transport conditions apply and must be distinguished by the shipper on all transport documents:

(A) Hot bulk product – liquid at or above 100 °C (road/rail tankers, bitutainers, bitumen tanker vessels): REGULATED as an elevated-temperature substance.

(B) Drummed / packaged product at ambient temperature (solid, below its flash point and below 100 °C): NOT REGULATED as dangerous goods under ADR, RID, IMDG, IATA/ICAO or US DOT 49 CFR.

Item	ADR / RID (Road / Rail – Europe)	IMDG (Sea)	IATA / ICAO (Air)	US DOT 49 CFR
14.1 UN number	UN 3257	UN 3257	Forbidden for carriage by air (elevated-temperature liquid)	UN 3257

14.2 UN proper shipping name	ELEVATED TEMPERATURE LIQUID, N.O.S. (Bitumen), at or above 100 °C and below its flash point	ELEVATED TEMPERATURE LIQUID, N.O.S. (Bitumen)	Not applicable	Elevated temperature liquid, n.o.s. (Bitumen)
14.3 Transport hazard class(es)	Class 9	Class 9	–	Class 9
14.4 Packing group	III	III	–	III
14.5 Environmental hazards	Not environmentally hazardous	Not a marine pollutant	–	Not a marine pollutant
Classification code / Label	M9; Label 9; Hot-material mark (triangle, 250 mm) on tank vehicle	Label 9; elevated-temperature mark	–	Class 9 placard; “HOT” mark on bulk packaging
Tunnel restriction code (ADR)	D	–	–	–
Hazard identification number (Kemler)	99	–	–	–
EmS (IMDG)	–	F-A, S-P	–	–
Stowage / Segregation (IMDG)	–	Category A; SW17: on deck or under deck, away from living quarters	–	–
Special provisions	SP 274, SP 643; LQ 0; Transport category 3	SP 232, SP 274, SP 643	–	SP IB1, T3, TP3, TP29
Packaging instructions	Bulk in tank vehicles/containers only – tank code LGAV; ATTs: not permitted in packagings when hot	Tank instructions T3; TP3, TP29	–	–

14.6 Special precautions for user

- Hot bulk shipments: Dangerous Goods Declaration/Multimodal DG Form required; consignor must state loading temperature; tank vehicles marked with orange plates 99/3257 (ADR) and the elevated-temperature (hot) mark. Drivers require ADR training certificate (Class 9) and the vehicle must carry written instructions per ADR 5.4.3.
- Bulk carriage by sea of hot bitumen in dedicated bitumen tankers: subject to SOLAS, MARPOL Annex I (bitumen is a petroleum oil for MARPOL purposes) and the vessel’s Certificate of Fitness; cargo heating logs and inert/venting arrangements per vessel procedures. Bitutainers loaded hot in containerships must be declared under IMDG UN 3257 with the container placarded.
- Drummed product at ambient temperature: no DG documentation required. Drums must be sound, sealed and stowed upright, secured against movement (lashing/dunnage) in 20 ft containers; typical stow 110 – 130 drums per TEU. Protect from direct sun in transit to prevent softening/deformation in hot climates (product softening point 45 – 52 °C). Do not stack more than two drum tiers. Container weight verification (VGM, SOLAS Reg. VI/2) required.
- Rail (RID) and inland waterway (ADN) carriage of hot product follows the same UN 3257 classification.
- Empty uncleaned tanks and bitutainers which have contained hot product: transported under the same UN number (“EMPTY, UNCLEANED”) where residues remain hot; ambient residues are not regulated.

14.7 Maritime transport in bulk according to IMO instruments

Bulk carriage of hot bitumen is undertaken in oil tankers/bitumen carriers under MARPOL Annex I; the product is not carried under the IBC Code (Annex II) or IMSBC Code. Pollution category: Annex I oil. Ship type: bitumen tanker with cargo heating capability.

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations / legislation specific for the substance

Jurisdiction	Regulatory status
European Union	REACH (EC) 1907/2006: substance registered under EC 232-490-9 by EU manufacturers/importers; not on the Candidate List (SVHC), Annex XIV (Authorisation) or Annex XVII (Restriction). CLP (EC) 1272/2008: not classified. Seveso III Directive 2012/18/EU: not covered. Directive 2004/37/EC (carcinogens): not listed. Water Framework Directive: not a priority substance. WGK (Germany, AwSV): 1 – slightly hazardous to water.
Republic of Türkiye	KKDİK Regulation (Official Gazette 30105, 23 June 2017): substance subject to registration by Turkish manufacturers/importers. SEA Regulation (Official Gazette 28848, 11 December 2013): not classified. Güvenlik Bilgi Formları Yönetmeliği (Official Gazette 29204): this SDS complies in structure. İSGÜM occupational exposure regulations apply to H_2S.
United States	TSCA: listed (active) on the TSCA Inventory. OSHA HCS 2012 (29 CFR 1910.1200): not classified at ambient temperature; hot material hazards must be communicated. CERCLA: no reportable quantity for bitumen; H_2S RQ 100 lb. SARA 311/312: not applicable at ambient temperature (delayed/chronic – no). California Proposition 65: contains no listed substances at reportable levels; bitumen fume is not a Prop 65 listing (note polycyclic aromatic compounds may be listed).
Canada	DSL: listed. WHMIS 2015: not classified (physical hazard of hot material to be communicated).
Other inventories	AICS/AIIC (Australia): listed. IECSC (China): listed. ENCS/ISHL (Japan): listed. KECI (Korea): listed (KE-02669). PICCS (Philippines): listed. NZIoC (New Zealand): listed. TCSI (Taiwan): listed. NECI (Vietnam): listed.
Middle East / Africa	GCC Standardization Organization GSO 1770 (SDS); Egypt, Iraq, Saudi Arabia (SASO) and other national implementations of GHS: not classified. Kenya KEBS / Nigeria SON: GHS aligned – not classified.
IARC	Monograph Vol. 103 (2013): occupational exposures to straight-run bitumen fumes during road paving – Group 2B.

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance by the lead registrant within the EU REACH registration; exposure scenarios are held by the registrants. ATABAŞ GLOBAL has not itself carried out a CSA.

SECTION 16 – OTHER INFORMATION

16.1 Abbreviations and acronyms

ACGIH – American Conference of Governmental Industrial Hygienists; ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road; AGW – Arbeitsplatzgrenzwert; ASTM – ASTM International; CAS – Chemical Abstracts Service; CLP – Classification, Labelling and Packaging Regulation; COC – Cleveland Open Cup; CoQ – Certificate of Quality; DNEL – Derived No-Effect Level; EC50/EL50 – Effective Concentration/Loading 50 %; EWC – European Waste Catalogue; GHS – Globally Harmonized System; H_2S – Hydrogen sulphide; IARC – International Agency for Research on Cancer; IATA – International Air Transport Association; IDLH – Immediately Dangerous to Life or Health; IMDG – International Maritime Dangerous Goods Code; KKDİK – Kimyasalların Kaydı, Değerlendirilmesi, İzni ve Kısıtlanması Hakkında Yönetmelik; LC50/LD50 – Lethal Concentration/Dose 50 %; LEL/UEL – Lower/Upper Explosive Limit; MARPOL – International Convention for the Prevention of Pollution from Ships; NIOSH – National Institute for Occupational Safety and Health; NOAEC – No Observed Adverse Effect Concentration; OECD – Organisation for Economic Co-operation and Development; OEL – Occupational Exposure Limit; OSHA – Occupational Safety and Health Administration; PBT – Persistent, Bioaccumulative, Toxic; PEL – Permissible Exposure Limit; PNEC – Predicted No-Effect Concentration; R&B – Ring and Ball; REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals; REL – Recommended Exposure Limit; RID – Regulations concerning the International Carriage of Dangerous Goods by Rail; SCBA – Self-Contained Breathing Apparatus; SEA – Maddelerin ve Karışımların Sınıflandırılması, Etiketlenmesi ve Ambalajlanması Hakkında Yönetmelik; STEL – Short-Term Exposure Limit; STOT – Specific Target Organ Toxicity; TFOT – Thin Film Oven Test; TLV – Threshold Limit Value; TWA – Time-Weighted Average; UVCB – Substance of Unknown or Variable composition, Complex reaction products or Biological materials; vPvB – very Persistent, very Bioaccumulative; WAF – Water Accommodated Fraction; WEL – Workplace Exposure Limit; WGK – Wassergefährdungsklasse.

16.2 Key literature references and sources of data

- Concawe Report 2013 and Concawe Bitumen Sector Group Dossier – Hazard classification and toxicology of bitumen.
- IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Vol. 103 (2013): Bitumens and Bitumen Emissions.
- Eurobitume – “Safe Handling of Bitumen” guidance (Burns Card; Hydrogen Sulphide Guidance).
- ECHA registered substance dossier, EC 232-490-9 (Asphalt).
- ASTM D946/D946M; AASHTO M20; EN 12591; EN 12594 (preparation of test samples).
- ADR 2025, IMDG Code Amendment 42-24, IATA DGR 66th Edition, 49 CFR Parts 171–180.

16.3 Classification procedure

Classification according to CLP Article 9 and GHS on the basis of test data, read-across from bitumen category data (Concawe) and expert judgement. Not classified for any hazard class.

16.4 Full text of hazard statements referred to in Section 3

H220 – Extremely flammable gas. H330 – Fatal if inhaled. H400 – Very toxic to aquatic life. (Applicable to hydrogen sulphide only, which may be present in the vapour space of hot product; not applicable to the bitumen as supplied.)

16.5 Training advice

Personnel handling hot bitumen must be trained in thermal burn prevention and first aid, H_2S awareness (including use of personal gas detectors), confined-space entry, and the frothing hazard of water contact. Drivers and loading staff must hold ADR/DG training appropriate to Class 9 elevated-temperature substances.

16.6 Revision history

Revision	Date	Changes
Rev. 01	27 August 2026	First issue – Bitumen Penetration Grade 80/100

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.

16.7 Disclaimer

The information provided in this Safety Data Sheet is correct to the best of ATABAŞ GLOBAL’s knowledge, information and belief at the date of its publication and is based on data supplied by the producing refinery, industry associations and the published literature. It is given for guidance on safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. It is the responsibility of the user to determine the applicability of this information and the suitability of the material for the user’s own particular purpose and to comply with all applicable laws and regulations. This document supersedes all previous issues. This document is the property of ATABAŞ GLOBAL DIŞ TİCARET ANONİM ŞİRKETİ.

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

— END OF SAFETY DATA SHEET —