

PENETRATION GRADE BITUMEN – FULL GRADE TABLE

Table 1 – Penetration & Basic Physical Properties

Grade	Penetration (0.1 mm @25°C)	Softening Point (°C)	Ductility @25°C (cm)	Flash Point (°C)	Density @25°C (kg/m ³)
Bitumen 10/20	10 – 20	58 – 66	≥ 100	≥ 250	1010 – 1050
Bitumen 20/30	20 – 30	56 – 64	≥ 100	≥ 250	1010 – 1050
Bitumen 30/40	30 – 40	52 – 60	≥ 100	≥ 250	1010 – 1050
Bitumen 40/50	40 – 50	50 – 58	≥ 100	≥ 250	1010 – 1050
Bitumen 50/70	50 – 70	46 – 54	≥ 100	≥ 250	1010 – 1040
Bitumen 60/70	60 – 70	44 – 52	≥ 100	≥ 250	1010 – 1040
Bitumen 70/100	70 – 100	42 – 50	≥ 100	≥ 250	1005 – 1040
Bitumen 80/100	80 – 100	42 – 48	≥ 100	≥ 250	1005 – 1040
Bitumen 90/130	90 – 130	40 – 46	≥ 100	≥ 250	1000 – 1035
Bitumen 160/220	160 – 220	35 – 42	≥ 100	≥ 250	995 – 1030
Bitumen 200/300	200 – 300	32 – 38	≥ 100	≥ 250	990 – 1025

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TECHNICAL TEST METHODS (ASTM)

Property	Test Method
Penetration	ASTM D5
Softening Point	ASTM D36
Ductility	ASTM D113
Flash Point	ASTM D92
Solubility	ASTM D2042
Specific Gravity	ASTM D70
Loss on Heating	ASTM D6

FULL MSDS (MATERIAL SAFETY DATA SHEET)

Product Name: Penetration Grade Bitumen

Supplier: ATDM

Product Grades: 10/20 – 20/30 – 30/40 – 40/50 – 50/70 – 60/70 – 70/100 – 80/100 – 90/130 – 160/220 – 200/300

CAS Number: 8052-42-4

HS Code: 27132000

UN Number: Not classified as dangerous goods (solid form)

SECTION 1 – Identification

Product Type: Petroleum Asphalt / Bitumen

Recommended Use: Road construction, asphalt production, waterproofing

Manufacturer: (ATDM)

Emergency Contact: ([0097142369830](tel:0097142369830))

SECTION 2 – Hazard Identification

GHS Classification: Not classified as hazardous in solid state.

Hazards occur when heated:

- Hot material may cause severe thermal burns.
- Vapors may irritate respiratory system.

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Signal Word: WARNING (when heated)

SECTION 3 – Composition

Component	Percentage
Petroleum Bitumen	> 99%
Trace hydrocarbons	< 1%

SECTION 4 – First Aid Measures

Inhalation: Move to fresh air

Skin Contact (Cold): Wash with soap and water

Skin Contact (Hot): Do NOT remove solidified bitumen. Cool with water. Seek medical help.

Eye Contact: Flush with water for 15 minutes

Ingestion: Do not induce vomiting. Seek medical assistance

SECTION 5 – Fire Fighting Measures

Flash Point: > 250°C

Extinguishing Media:

- Foam
- Dry chemical
- CO₂

Do NOT use direct water jet.

Hazardous Combustion Products:

- CO
- CO₂
- Hydrocarbon fumes

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SECTION 6 – Accidental Release Measures

Cold Material:

- Shovel into containers

Hot Material:

- Allow to cool before handling

Avoid entering waterways.

SECTION 7 – Handling & Storage

Handling:

- Avoid overheating (> 200°C recommended max handling temperature)
- Use heat-resistant gloves

Storage:

- Store in dry area
- Keep away from strong oxidizers
- Avoid prolonged heating

SECTION 8 – Exposure Controls

Engineering Controls:

- Ventilation required in heating areas

PPE:

- Heat resistant gloves
- Face shield
- Protective clothing
- Respirator if fumes present

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SECTION 9 – Physical & Chemical Properties

Appearance: Black solid/semi-solid
Odor: Mild petroleum
Melting Range: 30–70°C (depending on grade)
Flash Point: > 250°C
Solubility in Water: Insoluble
Density: 990 – 1050 kg/m³

SECTION 10 – Stability & Reactivity

Stable under normal conditions
Avoid:

- Overheating
- Strong oxidizing agents

SECTION 11 – Toxicological Information

Not acutely toxic
Hot vapors may cause irritation
Chronic exposure to fumes may cause respiratory discomfort

SECTION 12 – Ecological Information

Not soluble in water
Low mobility in soil
Avoid environmental release

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SECTION 13 – Disposal Considerations

Dispose according to local regulations
Can be recycled in asphalt production

SECTION 14 – Transport Information

UN Number: Not regulated (solid form)
Hazard Class: Not classified
Packing Group: Not applicable
Marine Pollutant: No

SECTION 15 – Regulatory Information

Complies with:

- ASTM Standards
- EN 12591 (if applicable)
- REACH registered substances (if EU export)

SECTION 16 – Other Information

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