

Slow-Curing Cutback Asphalt (SC)

SC-70 · SC-250 · SC-800 · SC-3000

In accordance with ASTM D2026 — Standard Specification for Cutback Asphalt (Slow-Curing Type), road oil

1. Description

Cutback asphalts — also called liquid asphalts — result from diluting asphalt cement with petroleum distillates. They are hydrocarbon binders obtained by incorporating more or less volatile liquid fractions from crude distillation into asphalt cement. The diluents act as a vehicle and produce a lower-viscosity binder, applicable at temperatures considerably lower than hot asphalt. After application the solvent evaporates and the asphalt cement recovers its original properties.

According to curing rate, determined by the nature of the diluent used, cutback asphalts fall into three families: RC (rapid curing), cut back with naphtha or gasoline, fast-evaporating; MC (medium curing), cut back with kerosene, medium-evaporating; and SC (slow curing), cut back with low-volatility oils, slow-evaporating. The abbreviation is followed by a number indicating the kinematic viscosity grade at 60 °C: 30, 70, 250, 800 or 3000.

Slow-curing asphalts — known commercially as road oils — are cut back with low-volatility oils and cure by slow absorption and oxidation rather than by evaporation. They are used where the binder must remain flexible and active over long periods: soil stabilisation, dust control on unbound surfacings and maintenance of unpaved roads.

2. Applications

- Stabilisation of soils and granular bases on rural and mining roads.
- Dust control and consolidation of unbound surfacings and unpaved roads.
- Maintenance of access roads, industrial yards and stockpile platforms.
- Pre-wetting and curing of bases prior to placing asphalt layers.

3. Specifications

Property	Method	SC-70	SC-250	SC-800	SC-3000
Kinematic viscosity at 60 °C (mm ² /s)	D2170	70–140	250–500	800–1,600	3,000–6,000
Flash point, Cleveland open cup (°C), min.	D92	66	79	93	107
Total distillate to 360 °C, % by volume	D402	10–30	4–20	2–12	1–5
Asphalt residue of 100 penetration (%), min.	D243	50	60	70	80
Ductility of 100-penetration residue at 25 °C (cm), min.	D113	100	100	100	100
Solubility in trichloroethylene (%), min.	D2042	99.0	99.0	99.0	99.0
Water (%), max.	D95	0.5	0.5	0.5	0.5

TRACEABILITY WARNING — READ BEFORE CONTRACTING. Standard ASTM D2026/D2026M is not available in the public domain and it has not been possible to check its complete table against a purchased copy. Of the values published here, only those for grades SC-800 and SC-3000 are verified against an independent source: flash point 93 °C and 107 °C, total distillate 2–12 % and 1–5 %, and residue of 100 penetration of 70 % and 80 % minimum. The values for grades SC-70 and SC-250 are consistent with the progression of the standard but are NOT verified. The residue viscosity row has been removed from the table because the available sources differ from one another by two orders of magnitude. Accordingly, PRO-ROAD® does not offer this table as a sales specification: the SC grade is supplied against the buyer's specification, whose guaranteed values must be agreed in writing before contracting. Additional warning: data sheets circulating on the internet give materially different values — 95 % solubility, 50 cm ductility, method "ASTM D2024" — citing the European standard EN 15322 rather than ASTM D2026; they should not be used.

4. Storage and transport

Liquid asphalt shall be stored in tanks suitable for the purpose, fitted with vent openings that prevent them from operating under pressure, and with the necessary measuring and safety devices located at easily accessible points. They must also have a suitable valve for taking samples.

Where storage tanks have no loading means of their own, the tankers used for transport must be equipped with pneumatic or mechanical means appropriate for the rapid transfer of their contents. Where transfer pumps are used, rotary pumps are preferred

to centrifugal pumps, and transfer from the tank truck to the tank must always be by direct piping. **FLAMMABILITY WARNING:** cutback asphalts are flammable liquids. Keep all ignition sources away, earth transfer equipment and do not carry out hot work on tanks that have contained the product. Consult the Safety Data Sheet before any operation.

5. Packaging and logistics

In bulk in tank trucks from 9 to 35 t · 200 kg steel drums · 1,000 L IBCs. All packages are labelled in accordance with GHS bearing the flammability pictogram. HS code: 2715.00.

6. Quality control

Every batch shipped is accompanied by a laboratory-issued quality certificate reporting the tests required by the applicable standard, with traceable batch identification. Additional testing or independent third-party inspection (SGS, Bureau Veritas, Intertek, Cotecna) at origin or destination can be arranged at the customer's request.

Consult the product Safety Data Sheet (SDS) before handling.

The information in this data sheet is offered in good faith, based on PRO-ROAD®'s technical knowledge of its products and on the requirements of the standards cited. It does not constitute a sales specification or a warranty of results. The customer is responsible for verifying the suitability of the product for its intended use, for its correct handling and for its application in accordance with project specifications. Values guaranteed per batch are certified in the corresponding quality certificate.

