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SANS 4001-BT2:2012

Edition 1

SOUTH AFRICAN NATIONAL STANDARD

Civil engineering test methods

Part BT2: Cutback bitumen

SANS 4001-BT2:2012

Edition 1

Table of changes

Change No.	Date	Scope

Acknowledgement

The SABS Standards Division wishes to acknowledge the valuable assistance of the Committee of Transport Officials (COTO), the South African National Roads Agency Limited (SANRAL) and the Southern African Bitumen Association (SABITA).

Foreword

This South African standard was approved by National Committee SABS SC 59E, *Construction standards – Pavement materials testing*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in January 2012.

This document supersedes SANS 308:2009 (edition 2.2).

Reference is made in 4.1 to the “relevant national legislation”. In South Africa this means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Environmental Conservation Act, 1989 (Act No. 73 of 1989).

SANS 4001 consists of various parts under the general title *Civil engineering test methods*. Parts BT of the SANS 4001 series contain methods for the testing of bituminous products and spraying equipment.

Annex A forms an integral part of this document. Annex B is for information only.

Introduction

This standard was revised in 1971 and has now been revised under a new title in order to eliminate certain shortcomings and to bring it into line with current practice.

Major modifications in the standard, apart from the substitution of metric units for non-metric values, include the introduction of MC-10 as a new grade and the removal of rapid cure cutback bitumen and two grades of medium-cure cutback bitumen as they are no longer produced or used. In the interests of safety a lower limit for flash point has been introduced. The viscosity-temperature relationships in the original standard have been omitted and guidelines for spraying, storage and pumping temperatures are given explicitly. The dynamic viscosity (Brookfield) has been included as an option to enable wider participation of field and third party laboratories. Kinematic viscosity remains as the reference method for quality control and as the primary requirement for certification. Viscosity at 60 °C on residue replaces the penetration test on residue.

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Civil engineering test methods

Part BT2:

Cutback bitumen

1 Scope

This part of SANS 4001 applies to bituminous materials and covers the requirements for three types of cutback bitumen suitable for road construction and similar purposes.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. Information on currently valid national and international standards can be obtained from the SABS Standards Division.

ASTM D93, *Standard test methods for flash-point by Pensky-Martens closed cup tester.*

ASTM D95, *Standard test method for water in petroleum products and bituminous materials by distillation.*

ASTM D140, *Standard practice for sampling bituminous materials.*

ASTM D402, *Standard test method for distillation of cutback asphaltic (bituminous) products.*

ASTM D2170, *Standard test method for kinematic viscosity of asphalts (bitumens).*

ASTM D4402, *Standard test method for viscosity determination of asphalt at elevated temperatures using a rotational viscometer.*

SANS 4001-BT1, *Civil engineering test method – Part BT1: Penetration grade bitumen.*