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**SANS 2813:1994**

Edition 2, ISO tech corr. 1 and nat. amdt 1

**ISO 2813:1994**

Edition 3 and tech corr. 1

Any reference to SABS ISO 2813 is deemed  
to be a reference to this standard  
(Government Notice No. 1373 of 8 November 2002)

## **SOUTH AFRICAN NATIONAL STANDARD**

# **Paints and varnishes — Determination of specular gloss of non-metallic paint films at 20°, 60° and 85°**

This national standard is the identical implementation of ISO 2813:1994 and technical corrigendum 1, and is adopted with the permission of the International Organization for Standardization.

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**Table of changes**

<b>Change No.</b>	<b>Date</b>	<b>Scope</b>
ISO tech corr. 1	1997	Changed to reduce the source image aperture tolerances and to introduce the quartz wedge as primary standard.
Nat. amdt 1	2007	Amended to change the designation from SABS to SANS, with no technical changes.

**National foreword**

This South African standard was approved by National Committee SABS/TC 035/SC 09, *Paints and varnishes – Test methods*, in accordance with procedures of SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in July 2007. This SANS document supersedes SABS ISO 2813:1994 (edition 2 as modified by ISO tech corr. 1:1997).

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This document will be reviewed every five years  
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INTERNATIONAL STANDARD ISO 2813:1994  
TECHNICAL CORRIGENDUM 1

Published 1997-02-15

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

# Paints and varnishes — Determination of specular gloss of non-metallic paint films at 20°, 60° and 85°

## TECHNICAL CORRIGENDUM 1

*Peintures et vernis — Détermination de la réflexion spéculaire de feuillets de peinture non métallisée à 20°, 60° et 85°*

*RECTIFICATIF TECHNIQUE 1*

Technical Corrigendum 1 to International Standard ISO 2813:1994 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

To improve the repeatability and reproducibility of specular-gloss measurements, ISO 2813 should be corrected by reducing the source image aperture tolerances (table 1) and introducing the quartz wedge as primary reference standard (subclause 5.4.1). The changes are underlined.

**Table 1 — Angles and relative dimensions of source image and receptor aperture**

Parameter	In plane of measurement <sup>1)</sup>			Perpendicular to plane of measurement		
	angle $\sigma^2)$	$2 \tan \sigma/2$	relative dimension	angle $\sigma^2)$	$2 \tan \sigma/2$	relative dimension
Source image aperture	$0,75^\circ \pm \underline{0,1^\circ}$	$0,013\ 1 \pm \underline{0,001\ 8}$	$0,171 \pm \underline{0,023}$	$2,5^\circ \pm \underline{0,1^\circ}$	$0,043\ 6 \pm \underline{0,001\ 8}$	$0,568 \pm \underline{0,023}$

ICS 87.040.00

Ref. No. ISO 2813:1994/Cor.1:1997(E)

**Descriptors:** paints, paint coats, films, tests, optical tests, measurement, gloss, specular reflection.

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## 5.4 Reference standards

### 5.4.1 Primary reference standard

The primary reference standard shall be highly polished quartz glass or black glass, the top surface being plane to within two fringes per centimetre, as measured by optical-interference methods.

NOTE 8 It is not intended that the primary reference standards be used for daily calibration of glossmeters.

Glass with a refractive index, measured at a wavelength of 587,6 nm, of 1,567 shall be assigned the specular-gloss value of 100. If glass of this refractive index is not available, a correction is needed. Values of specular gloss for polished quartz glass and black glass of various refractive indices at the three angles of incidence are given in table 2.

The primary standard shall be checked at least every two years because of the possibility of ageing. This is especially applicable for black glass. In the event of degradation, the original gloss can be restored by optical polishing with cerium oxide.

#### NOTES

9 The most readily available glass of the required planarity is now manufactured by the "float" process. This glass is unsuitable for use as a primary reference standard because the refractive index of the bulk of the glass differs from that of the surface. It is preferable to use an optically plane glass made by some other process, or to remove the surface of the float glass and repolish to optical planarity.

10 The refractive index should preferably be determined by means of an Abbe refractometer.

11 If the absolute reflectance of the primary reference standard is required, the Fresnel equation may be used, inserting the refractive index of the standard in the equation.

# INTERNATIONAL STANDARD

# ISO 2813

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*Peintures et vernis — Détermination de la réflexion spéculaire de feuillets  
de peinture non métallisée à 20°, 60° et 85°*



Reference number  
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