

BUREAU OF INDIAN STANDARDS
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भारतीय मानक मसौदा

प्रकाशिकी और फोटोनिक्स – ऑप्टिकल कोटिंग्स
भाग 4 विशिष्ट परीक्षण विधियाँ: घर्षण, आसंजन और जल प्रतिरोध

Draft Indian Standard

Optics and photonics — Optical coatings
Part 4 Specific test methods: abrasion, adhesion and resistance to water

ICS 37.020

Optics and Photonics Sectional Committee,
PGD 39

Last date for receipt of comment is: **28**
November 2025

NATIONAL FOREWORD

This Indian Standard (Part 4) which is identical with ISO 9211-4: 2022 ‘Optics and photonics — Optical coatings Part 4: Specific test methods: abrasion, adhesion and resistance to water’ issued by the International Organization for Standardization (ISO) will be adopted by the Bureau of Indian Standards on the recommendation of the Optics and Photonics Sectional Committee and approval of the Production and General Engineering Division Council.

This standard has been published in several parts, other parts in this series are:

- Part 1 Vocabulary
- Part 2 Optical properties
- Part 3 Environmental durability
- Part 5 Minimum requirements for antireflecting coatings
- Part 6 Minimum requirements for reflecting coatings
- Part 7 Minimum requirements for neutral beam splitter coatings
- Part 8 Minimum requirements for coatings used for laser optics

In this adopted standard, reference appears to the following International Standard for which Indian Standard also exists. The corresponding Indian Standard which is to be substituted in its place is listed below along with its degree of equivalence for the edition indicated:

International Standard

Corresponding Indian Standard

*Degree of
Equivalence*

ISO 9211-1 Optics and photonics — Optical coatings — Part 1: Vocabulary	IS 16506 (Part 1):2016/ 1:2024 Optics and photonics — Optical coatings — Part 1: Vocabulary	Identical
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The technical committee has reviewed the provisions of the following International Standards referred in this adopted standard and has decided that they are acceptable for use in conjunction with this standard:

<i>International Standard</i>	<i>Title</i>
ISO 48-2	Rubber, vulcanized or thermoplastic — Determination of hardness — Part 2: Hardness between 10 IRHD and 100 IRHD
ISO 14997:2017	Optics and photonics — Test methods for surface imperfections of optical elements
ISO 29862	Self-adhesive — tapes Determination of peel adhesion properties
EN 13144: 2018	Metallic and other organic coatings — Method for quantitative measurement of adhesion

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 ‘Rules for rounding off numerical values (second revision). The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

NOTE: The technical content of draft standard is not available on website. For details please refer to ISO ISO 9211-4:2022 or contact:

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