

BRITISH STANDARD

Properties of fluorosilicone rubber sheet, mouldings and extrusions –

Specification

ICS 49.025.40



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Foreword

Publishing information

This British Standard was published by BSI Standards Limited, under licence from The British Standards Institution and came into effect on 31 October 2006. It was prepared by ACE/65/-/25, *Rubbers, elastomers and sealants*, under the authority of Technical Committee ACE/65, *Inspection and testing requirements for non-metallic materials*. A list of organizations represented on this committee can be obtained on request to its secretary.

Information about this document

This document supersedes DTD 5583A with Amendment No. 1 June 1979 and Amendment No. 2 August 1981, which was declared obsolescent by the Ministry of Defence from 1 April 1999.

Hazard warnings

WARNING. This British Standard calls for the use of substances and/or procedures that can be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

Use of this document

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard specifies requirements for fluorosilicone rubber material possessing excellent ozone resistance properties intended for the production of items such as sheet, mouldings and certain extrusions for use in sealing applications in contact with petroleum based fuels, hydraulic fluids and lubricants and with silicone and certain ester based fluids over the temperature range -60°C to $150^{\circ}\text{C}^{1)}$.

For applications in air the material is suitable over the temperature range -60°C to 180°C .

This material standard is to be used in conjunction with BS EN 3207.

NOTE 1 Material and products manufactured from this specification, when used in air, may be used up to 200°C for short intermittent periods.

NOTE 2 Material and products manufactured from this specification are not intended for use in contact with phosphate esters.

NOTE 3 Further information on the suitability of fluorosilicone rubber for design applications can be found in SBAC Technical Specification No. 97 [1].

NOTE 4 Marking BS F 154:2006 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is solely the claimant's responsibility. Such a declaration is not to be confused with third party certification of conformity.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the reference cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 903-A1 (ISO 2781), *Physical testing of rubber – Part A1: Determination of density*

BS 903-A6 (ISO 815), *Physical testing of rubber – Part A6: Method for determination of compression set at ambient, elevated or low temperatures*

BS 903-A13 (ISO 1432), *Physical testing of rubber – Part A13: Method for determination of stiffness at low temperature (Gehman tests)*

BS 903-A26 (ISO 48), *Physical testing of rubber – Part A26: Method for determination of hardness (hardness between 10 IRHD and 100 IRHD)*

BS 3734-1 (ISO 3302-1), *Rubber – Tolerances for products – Part 1: Dimensional tolerances*

¹⁾ Fluorosilicone rubber products, when properly stored at room temperature and in the absence of hostile environments, deteriorate very slowly and, for most practical purposes, the storage life may be considered indefinite. However, the rate of deterioration increases markedly with increase in temperature and the service life of the rubber therefore depends upon the operational temperature. Conversely, the maximum temperature at which the rubber may be used depends upon the useful life required.