

Specification for

Fibrous gland packings

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Piping Systems Components Standards Policy Committee (PSE/-) to Technical Committee PSE/2, upon which the following bodies were represented:

- Asbestos Information Centre Ltd
- British Adhesives and Sealants Association
- British Compressed Gases Association
- British Gas plc
- British Pump Manufacturers' Association
- British Railways Board
- Energy Industries Council
- Engineering Equipment and Materials Users' Association
- Institution of Gas Engineers
- Institution of Water and Environmental Management
- Liquefied Petroleum Gas Industry Technical Association (UK)
- Water Services Association of England and Wales

This British Standard, having been prepared under the direction of the Piping Systems Components Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 28 June 1991

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Foreword

This British Standard has been prepared under the direction of the Piping Systems Components Standards Policy Committee and supersedes BS 4371:1968 which is withdrawn. Three types of packing (types D, F and G) that were in the original specification are now obsolete and, therefore, are omitted from this standard. (To avoid confusion, these three designations have not been reallocated in this standard.) Five additional types have been included to cover developments since the initial publication.

Certain of the packings contain polytetrafluoroethylene (PTFE) which, when heated to elevated temperatures, may produce fumes which give unpleasant effects if inhaled. Care should be taken to avoid contaminating tobacco with PTFE.

The method of designating density of yarns in this specification is in accordance with BS 947.

Fibrous gland packing may contain asbestos. The manufacture of all asbestos based products is covered by the requirements of the Control of Asbestos at Work Regulations 1987, introduced on 1 March 1988. These set out comprehensive provisions covering work activities involving exposure to asbestos. Advice on how to comply with these regulations can be obtained from the manufacturers of the material, from the Asbestos Information Centre Ltd., Derby Road, Widnes, Cheshire WH8 9ND from the local area office of the Health and Safety Executive or from the Environmental Health Department of the Local Authority.

Particular note has to be taken of the Asbestos Products (Safety) Regulations 1985, made under the Consumer Safety Act 1978 and the Health and Safety at Work etc. Act 1974, which sets out requirements for the labelling of all products containing asbestos.

All the above legislation implements European Directives.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations. In particular attention is drawn to the Control of Asbestos at Work Regulations 1987, and the Asbestos Products (Safety Regulations) 1985 and the Health and Safety at Work etc. Act 1974.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard specifies the description, materials, lubricants, size, mass, packaging and marking of nine types of fibrous gland packings. Tests are specified for the determination of lubricant content, size, mass and ignition loss (see Appendix A).

NOTE 1 This standard does not specify electrical cable gland packings.

NOTE 2 Table 1 gives guidance on the normal usage of the nine types of fibrous gland packings specified in this standard. The purchaser should state in his enquiry or order the type of packing (see Appendix B).

NOTE 3 The titles of the publications referred to in this standard are listed on the inside back cover.

NOTE 4 The information to be supplied by the purchaser at the time of enquiry and/or order is given in Appendix B.

Table 1 — Types of fibrous gland packing

Designation	General description	Further description and application
Type A	Lubricated, plaited or braided cotton packing.	Cotton packing with a mineral hydrocarbon lubricant. Temperature limit 85 °C. Typical duties: Centrifugal pumps, sludge pumps, water pumps.
Type B	Lubricated, plaited or braided bast fibre packing.	Bast fibre packing with a percentage of tallow. Temperature limit 85 °C. Typical duties: Reciprocating pumps, hydraulic equipment.
Type C	Lubricated, plaited or braided asbestos packing.	Asbestos packing with a mineral oil content. Temperature limit 300 °C. Typical duties: Rotary and reciprocating shafts, steam, boiler feed pumps, process liquor pumps, caustic pumps, mild chemical duties, gas valves, condensate pumps, evaporators, compressed air valves.
Type E	Plaited or braided asbestos packing, metallic wire reinforced.	Wire reinforced asbestos packing treated with a binder and, if required, further lubricated with mica or graphite. Temperature limit 510 °C. Typical duties: Dry heat applications, boiler stop valves, (not suitable for acid or alkali service).
Type H	Lubricated, PTFE dispersion impregnated plaited or braided asbestos yarn packing.	An asbestos packing impregnated with PTFE and a mineral oil lubricant. Temperature limit 260 °C. Typical duties: Rotary pumps. For general chemical service including alkalis and certain acids.
Type J	Lubricated, PTFE dispersion impregnated plaited or braided aramid yarn packing.	An aramid yarn packing impregnated with PTFE and silicone oil lubricant. Temperature limit 260 °C. Typical duties: Rotary and reciprocating pumps, and valves, and suitable for service with many chemicals including weak acids and alkalis, solvents and abrasives.
Type K	Lubricated, PTFE dispersion impregnated plaited or braided PTFE yarn packing.	A PTFE yarn packing impregnated with PTFE dispersion and silicone oil lubricant. Temperature limit 260 °C. Typical duties: Service with highly corrosive chemicals on rotary pumps, reciprocating pumps and valves (except strong oxidizing agents and molten alkali metals).
Type L	Lubricated, plaited or braided packing of blended graphite and PTFE yarn.	A blended PTFE and graphite yarn packing with additional PTFE and silicone oil lubricant. Temperature limit 260 °C. Typical duties: Valves and rotary pumps handling a wide range of media (except strong oxidizing agents and molten alkali metals).
Type M	Loose fibre packing (non-asbestos).	A loose (non-asbestos) fibre packing for caulking of stuffing boxes. Temperature limit 450 °C. Typical duties: Cocks and valves.

NOTE Types D, F and G are obsolete.

WARNING NOTE. Materials containing asbestos are subject to legislation that requires precautions to be taken when handling them to ensure that they do not constitute a hazard to health (see foreword).