

**James Walker®**

# Fluosele pharmaceutical grade gland packing



*Made from FDA compliant materials, and  
USP 28 Class VI certificated for use in*

- *Pharmaceutical environments*
- *Bioprocessing environments*
- *Food & beverage processing*

High Performance Sealing Technology



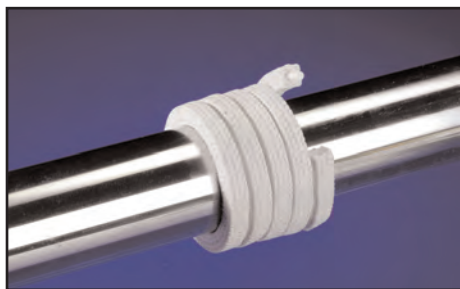
# Fluosele pharmaceutical grade gland packing

This high purity PTFE-based gland packing has been specifically developed by James Walker to meet the stringent requirements of the pharmaceutical and bioprocessing sectors.

It combines the research, development and manufacturing skills of James Walker's world-class gland packing experts, with those of its materials scientists working with advanced polymers, elastomers and lubricants.

As a result, Fluosele possesses an outstanding array of features:

- To our knowledge, this is the world's first gland packing to gain USP 28 Class VI certification, and is FDA compliant.
- Long-term high integrity fluid sealing for valve stems, pump shafts, pump rods/rams, rotary vessels, access doors, lids, etc.
- Inherently clean, non-toxic and non-tainting in contact with active ingredients, fine chemicals and foodstuffs.
- Suitable for SIP, CIP and WFI environments.
- Reduces maintenance stockholding — as this packing range will suit many different items of plant and equipment.



## Description

Fluosele is a length-form gland packing for use where simple-to-install high purity sealing products are needed in pharmaceutical, bioprocessing and food processing environments. It comprises PTFE yarns cross-plaited over a central core of white elastomer, and impregnated with a pharmaceutical grade lubricant.

The elastomeric core provides additional resilience for efficient long-term sealing under adverse mechanical conditions. It also enables the packing to withstand the repeated opening/closing cycles of lids and access doors.

## Specifications

- Fluosele is constructed of materials that comply with FDA 21 CFR 177.2600.
- Fluosele has been independently tested in accordance with, and passes, United States Pharmacopoeia (USP) 28 Class VI. Reports of the testing against various aspects of compliance can be supplied to customers on request.

## Typical applications

Gland packing for valve stems, rotary and reciprocating pumps, mixers, agitators, centrifuges, filter dryers and other vessels handling high purity or chemically aggressive fluid media.

The ability of Fluosele to seal effectively many plant items at a processing site will simplify maintenance stockholding and help minimise downtime.

## Chemical compatibilities

Fluosele is compatible with media in the range pH 0-14. It has excellent resistance to strong cleaning agents, solvents, acids, alkalis, amine solutions, and steam at elevated temperatures and pressures. Fluosele is suitable for environments involving Clean-In-Place (CIP), Steam-In-Place (SIP) sterilisation, and Water-For-Injection (WFI) processes.

## Service capabilities

### Valve stem duties

Maximum temperature:	+260°C
Minimum temperature:	-100°C
Max system pressure:	150bar

### Centrifugal pumps & rotary equipment

Operating temperatures:	As valve stem
Maximum shaft speed:	20m/s
Maximum system pressure:	25bar

### Reciprocating pumps & rams

Operating temperatures:	As valve stem
Maximum rod speed:	2m/s
Maximum system pressure:	100bar

### Static duties — lids and doors

Operating temperatures:	As valve stem
Maximum system pressure:	2bar

(For higher pressures please consult us.)

## How supplied

As standard, in all popular sections from 3mm to 25mm, boxed in 8m lengths. Also available as split preformed rings and sets. Full fitting instructions are included.

James Walker is also willing to partner with equipment manufacturers in the pharmaceutical and bioprocessing sectors to develop, prototype and evaluate fluid sealing materials and components for their custom applications.

## About James Walker

We provide *best value* in top quality fluid sealing products on a global basis. These are backed with expert technical and customer support, plus stocks of all popular items for immediate despatch.

Many of our products are designed to meet the stringent requirements of the pharmaceutical and food and processing sectors.

We also supply to virtually every other sector of industry, where the safe and efficient operation of plant and machinery are vital to success.

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**Health warning:** If PTFE or fluoroelastomer (eg, FKM, FFKM, TFE/IP) products are heated to elevated temperatures, fumes will be produced which may give unpleasant effects, if inhaled. Whilst some fumes are emitted below 250°C from fluoroelastomers or below 300°C from PTFE, the effect at these temperatures is negligible. Care should be taken to avoid contaminating tobacco with particles of PTFE or fluoroelastomer, or with PTFE dispersion, which may remain on hands or clothing. Material Safety Data Sheets (MSDS) are available on request.

Information in this publication and otherwise supplied to users is based on our general experience and is given in good faith, but because of factors which are outside our knowledge and control and affect the use of products, no warranty is given or is to be implied with respect to such information. Specifications are subject to change without notice. Statements of operating limits quoted in this publication are not an indication that these values can be applied simultaneously.



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