

# Supagraf® Control

Long-term sealing plus fugitive emission control

**Supagraf® Control is an innovative compression packing that provides long-term, high integrity sealing for control valves. Its very low friction enhances the control accuracy of valves.**

This is a 'best available technique' product for reducing industry's VOC fugitive emissions in line with the European Union's IPPC Directive.

It is manufactured in exfoliated graphite, reinforced in a novel way with a non-metallic structure to provide additional strength and resistance to pressure and extrusion.

An advanced lubricant system is incorporated to prevent the pick-up of graphite on valve stems.

## Prime features

- High integrity gland sealing for control valve stems: to well below 50ppm fugitive emission level.
- Long-term adjustment-free operation: over 100,000 stem strokes with emission levels below 50ppmV .
- Very low coefficient of friction for smooth and accurate valve action.
- Reduced friction requirement to save on power consumption and enable smaller actuators to be used.

## Typical applications

Designed for emission control - to better than 50ppmV leak tightness - on control valves in systems handling fluid media such as hydrocarbon liquid fuels and gases, lubricating oils and hazardous process chemicals.

It is a long-term replacement for the PTFE V-type packings that can be readily damaged by ingress of dirt and other foreign particles to the gland area.

## Specifications

- TA Luft/VDI 2440: Dresser Masoneilan control valves fitted with Supagraf® Control are certified to TA Luft requirements at

leak tightness with helium to  $<10^{-4}$  mbar.litre.s<sup>-1</sup>.m<sup>-1</sup>. The tests were undertaken with 10 MPa/100 bar (1450 psi) at 20°C (68°F), and 5.7 MPa/57 bar (827 psi) at a fluid flow temperature of 425°C (797°F) for 100,000 stem cycles.

- ISO 15848-1: Dresser Masoneilan control valves fitted with Supagraf® Control are certified to ISO 15848-1 Class BH, CC3, at temperatures from -29°C to +425°C (-20°F to +797°F). The valves showed helium leakage rates  $<10^{-4}$  mg.s<sup>-1</sup>.m<sup>-1</sup> for 100,000 stem operating cycles. This was achieved with pressure of 5.75 MPa/57 bar (834 psi) at fluid flow temperature of +425°C (+797°F) and 10.34 MPa/103 bar (1500 psi) at -29°C to +38°C (-20°F to +100°F).

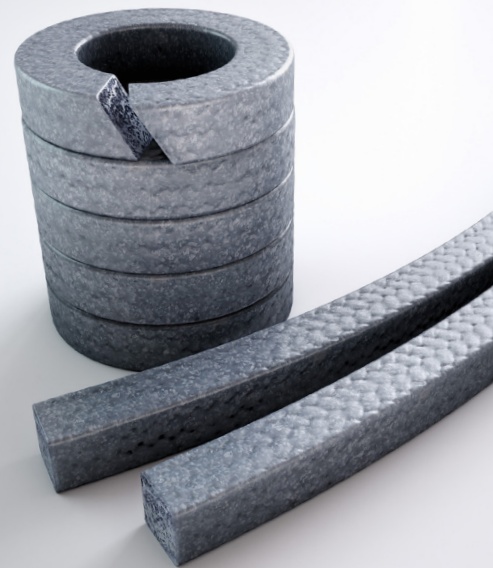
## Chemical properties

Compatible with media in the range pH 1-14, excluding strong oxidising agents. It has low volatiles content.

## How supplied

All popular square sections from 3 mm (1/8") upwards in boxes containing 8 m (26' 3"), in coil form or on spools as detailed in the table below. Also supplied as split preformed rings and sets.

Spool ordering information			
Size		Packaged ± 10%	
mm	inch	kg	lbs
3.0	1/8	0.9	2
5.0	3/16	0.9	2
6.5	1/4	0.9	2
8.0	5/16	2.3	5
10.0	-	2.3	5
11.0	7/16	2.3	5
12.5	1/2	4.5	10
14.0	9/16	4.5	10
16.0	5/8	4.5	10
20.0	13/16	4.5	10
22.0	7/8	4.5	10
25.0	1	4.5	10



## VALVE STEM DUTIES

**Maximum Operating Temperature:  
With Thermal Cycling**  
+350°C (+662°F)

**Minimum Operating Temperature:**  
-200°C (-328°F)

**Maximum System Pressure:**  
25 MPa/250 bar (3626 psi)

## APPROVALS



TA Luft/VDI 2440

ISO 15848-1 Class BH, CC3

**James Walker**

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**Health warning:** If PTFE products are heated to elevated temperatures, fumes will be produced which may give unpleasant effects, if inhaled. Whilst some fumes are emitted below 300°C (572°F) from PTFE, the effect at these temperatures is negligible. Care should be taken to avoid contaminating tobacco with particles of PTFE or PTFE dispersion, which may remain on hands or clothing. Safety Data Sheets (SDS) are available on request.

Information given in this publication is given in good faith and represents the results of specific individual tests carried out by James Walker or third parties in accordance with the methodologies described in this publication, performed in a laboratory. No representation or warranty is given in relation to such information. Values and/or operating limits given in this publication are not an indication that these values and/or operating limits can be applied simultaneously. While such results may comprise useful additional information and are industry standard tests, they are no substitute for conducting (or procuring from James Walker) your own tests and engineering analysis and satisfying yourself as to the suitability of the product you select. Please also note that a product tested in accordance with the published methodology may not perform to such values in application and/or under different test conditions or methodologies for a variety of reasons, including but not limited to the environment in which it is used/tested or which passes through it or otherwise affects the product, or due to the handling, storage or installation, or due to the effect of housing or other parts. Our personnel will be happy to discuss any historical examples we have of a product having been previously used in a particular application.

To ensure you are working with the very latest product specifications, please consult the relevant section of the James Walker website: [www.jameswalker.biz](http://www.jameswalker.biz).

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