

MATERIAL DATA SHEET

February, 2018 – Rev. 01

TEKCLEAN G901

ANTIBACTERIAL MODIFIED PTFE

Guarniflon TEKCLEAN G901 is a new patented antibacterial modified PTFE developed under specific request for utilization in human spaceflight environment by the “Cleanliness & Bio Resources” department of Thales Alenia Space for application in space environment.

MAIN APPLICATIONS

Sealing element; scrapers; supporting plates; guiding and transport element; films for lamination.

DRIVING FORCES

- High thermal stability up to 260°C
- High chemical resistance
- Tested according ISO 22196:2007 “Plastics – Measurements of antibacterial activity on plastics surfaces”

TYPICAL PROPERTIES	UM	TEKCLEAN MOULDED	TEKCLEAN EXTRUDED	METHOD
Colour	-	Milky white		-
Density	gr/cm ³	2.30 – 2.36		ASTM D792
Hardness – Shore D	-	≥ 58		ASTM D2240
Tensile Strength ⁽¹⁾	N/mm ²	≥ 22	≥ 22	ISO 527
Elongation at Break ⁽¹⁾	%	≥ 250	≥ 200	ISO 527
Dielectric Strength ⁽²⁾	KV/mm	≥ 30	≥ 20	ASTM D150
Volume Resistivity	Ω•cm	> 10 ¹⁶		ASTM D257
Surface Resistivity	Ω	> 10 ¹⁶		ASTM D257

⁽¹⁾ Test performed with the microtensile die (ASTM D4894) at 50 mm/min on the cross direction with an extensometer (l₀ = 10mm)

⁽²⁾ 0.5 mm thick specimen

ANTIBACTERIAL ACTIVITIES

TEKCLEAN G901 has been tested with the following microorganism:

- Klebsiella Pneumoniae (ATCC 4352)
- Staphylococcus Aureus (ATCC 6538)
- Legionella Pneumophila (ATCC 33152)
- Escherichia Coli (ATCC 25922)
- Salmonella Typhimurium (TA100)

NOTE: The data listed herein fall within the normal range of product properties for the products described, but they should not be used to establish specification limits nor used alone as the basis of design. GUARNIFLON S.p.A. assumes no obligation or liability for any advice furnished by it or for results obtained to these products.



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UNI EN ISO 9001:2008



MAIN INDUSTRIES SERVED

Food & Beverage; Pharma; Medical

APPROVALS AND HOMOLOGATIONS

- *Food contact:* FDA 177.1550

QUALITY CERTIFICATION

- Certificate of Conformity (2.1 certificate according to EN 10204)
- Material Certificate of Analysis (2.2, 3.1 certificate according to EN 10204)
- Guarniflon SpA is ISO 9001:2008 certified

STORAGE AND SHELF LIFE

indefinite shelf life when stored in original packaging at 22°C. The antibacterial activity shelf life depends on the final application and should be tested accordingly.



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