

# FS1000 SERIES

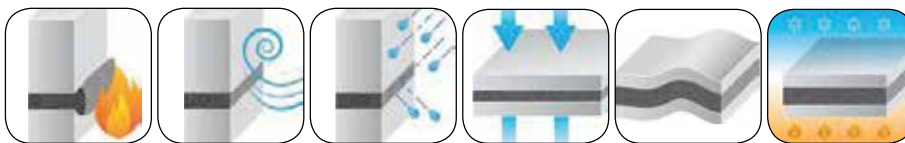
## Intumescent, Airtight, Watertight and Resilient Sealing Foam

**Saint-Gobain® Norseal® FS1000 Series** is a proprietary, high-performance foam tape designed with a unique combination of sealing properties. FS1000 is expandable and fire resistant, blocking smoke, air and water. In its natural state, FS1000 is soft, conformable, and easy to attach to complex surfaces.

- Expandable and fire resistant. When heated to more than 200°C, FS1000 will expand and form a fire resistant char, blocking fire, smoke and hot gases.
- Airtight. Compressed by 30%, FS1000 is airtight up to a pressure of 1000 Pa, depending on the surface of the application.
- Watertight. FS1000 is watertight when compressed by 30%.
- Compressible and resilient. It can be easily compressed and comes back to its original thickness after compression.
- Vibration damping. As a result of its resilience, FS1000 is able to damp vibrations and decouple two elements.
- Conformable. Soft; will conform to uneven surfaces.
- Easy installation. Produced in various thicknesses, delivered with or without adhesive on one side.
- Environmentally friendly. Contains no halogen compounds, and there are no concerns of toxic gas emissions when heated. The material does not disperse dust during installation, so it is safe for workers and other people nearby.

## APPLICATIONS

- Construction: joints in walls, floors, ceilings, windows and doors, HVAC and many other critical areas requiring fire compartmenting
- Automotive: protection of fuel tanks, (H)EV battery packs, etc.
- Aerospace: seats, freight compartments and other critical areas



Intumescent

Airtight

Watertight

Compressible  
and resilient

Conformable

Thermally  
insulating

**Norseal FS1000 Series — Properties**

Performance tests are run using standard test procedures. The values presented are typical values and should not be used for specification purposes.

Category	Property	Standard	Unit	Value	
Thickness		-	mm (in)	4.5 - 6.0 - 9.0 (.18 - .24 - .35)	
Useable width		-	mm	Max. 1360	
Density		ISO 6916-1	kg/m <sup>3</sup>	240	
Dynamic properties	Force to Compress	@30%	ASTM D1667	kPa	10-30
	Compression Force Deflection	@30%			5-15
	Tensile Strength		ISO 1798	kPa	180 - 200
	Elongation at Break				%
	Compression Set @15 days at 50% at 23°C		ASTM D1667	%	5
Combustion	UL94 V	UL94 V	Classification	VO File number: E494597	
	Limit oxygen index	ISO 4589-2		30	
	EU small flame test	ISO 11925-2	Equivalent classification	B	
	Expansion ratio (volume) @0% compression	PRT129	%	200	
	Temperature of activation	PRT130	°C	200	
	Fire Resistance	EN 45545	Classification	HL2	
	Fire Resistance	EN 1366-4/rating EN 13501-2	Classification	EI45-EI180 depending on the configuration	
Insulation properties	Thermal Conductivity	ISO 8302	W/m.K	0.039	
Tightness properties	Water tightness	30% compression	NTP 38* (U-Test 100mm)	Hours before leakage	> 72
	Air tightness	1000 Pa 30% compression	PRT128*	Air leakage in ml/m.min	0

\* NTP refers to Norton Test Procedure; PRT refers to Internal Technical Procedure

**Shelf Life**

FS1000 with adhesive: 12 months from the date of sale. FS1000 without adhesive: 18 months from the date of sale. Storage conditions should remain below 30°C without exposure to sunshine.



**IMPORTANT:** It is the user's responsibility to ensure the suitability and safety of Saint-Gobain products for all intended uses and that the materials to be used comply with all applicable regulatory requirements. Saint-Gobain assumes no responsibility for any product failures that occur due to misuse of the materials it provides arising out of the design, fabrication or application of the products into which the materials are incorporated.

**WARRANTY:** For a period of 6 months, Saint-Gobain warrants this product(s) to be free from defects in manufacturing. The only obligation under any applicable product warranty will be to replace any portion proving defective, or at our option, to refund the purchase price thereof. SAINT-GOBAIN DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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