

# INTUMET™ Materials: A Solution for Every OEM Need

Zero offers a variety of INTUMET products tested for specialized applications. We can also customize formulations for specific OEM requirements.

NO.	TYPE	COLOR	SUGGESTED APPLICATIONS	EXPANSION PRESSURE AT 600°F	STABILITY AFTER EXPANSION
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FS1001	Hard Puff	White	Glazing, 45 min. metal lite	27 PSI (0.0187 N/mm <sup>2</sup> )	Excellent
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Begins to expand at 450°F (232°C), forming a very hard char that binds to glass and metal. Very little expansion (2-3 times its volume). Listed as 45-minute glazing intumescent for metal lite kits.

FS2002	Hard Puff	Rust, Brown	Glazing, 20 min. wood lite	27 PSI (0.0187 N/mm <sup>2</sup> )	Very Good
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Begins to expand at 350°F (176°C), forming a hard char. Relatively little expansion (6-8 times its volume). Listed as 20-minute glazing intumescent for wood and metal lite kits.

FS3003	Soft Puff	Black	Doors, all types, all ratings	27 PSI (0.0187 N/mm <sup>2</sup> )	Very Good
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Begins to expand at 250°F (121°C), forming a hard char. High expansion (20 times its volume). Listed for 20, 45, 60, 90 minutes for wood and metal doors and frames, and also 180 min. (neg. pres.) for metal doors and frames.

FS4004	Hard Puff	Silver, Gray	Combustible core metal doors	131 PSI (0.9 N/mm <sup>2</sup> )	Poor
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Graphite-based. Begins to expand at 550°F (288°C), forming a very soft and fluffy char. Very high expansion (80 times its volume). 90-minute foam-core metal door and frame.

## SPECIFICATIONS

Stock Sizes:

Thickness: 1/16" (.062), 1/8" (.125), 1/4" (.250)

Width: 3/8" (.375), 1/2" (.500), 3/4" (.750),

1" (1.00), 1 1/2" (1.50), 2" (2.00)

All INTUMET™ intumescent material is available in any thickness (millimeters or inches) and in any custom color as special order.

All material is available in red for European specification.

## MATERIAL DEFINITIONS

**SOFT PUFF™** Begins intumescenting at relatively low temperatures. Expands gradually with low force and forms a firm char. It has a reservoir for continued expansion.

**HARD PUFF** Begins intumescenting at higher temperatures. Expands with strong force. It has a high intumescent capacity, dissipating char, but no reservoir for additional expansion.

INTUMET	Very low temperature activation	Controlled high-volume expansion	Multi or controlled directional	Any size Any color	Does not sustain flame	Moisture resistant	Paintable and chemically inert	Non-carcinogenic	Long life (no deterioration)	No odor	Hard char
FS3003	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS4004			✓	✓	✓	✓	✓	✓	✓	✓	



INTUMET is made in the U.S.A. and is a trademark of Zero International, Inc.

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