

FST/OSU COMPLIANT PANEL CONFIGURATIONS WITH LAST-A-FOAM® FR-3800 FST

LAST-A-FOAM® FR-3800 FST foam offers aerospace designers and manufacturers a lightweight, cost-effective option for a wide variety of sandwich core panels that require the additional fire safety properties for heat release, fire, smoke density, and toxicity (FST). The FST and Ohio State University (OSU) heat release designation refers to a series of performance requirements for materials used in aircraft interiors. In most cases, these requirements apply to large ceiling and wall panels or structures that cover large surface areas within the aircraft.

The panel configurations described in the table below all meet FST-OSU requirements that are defined as a material testing below specified limits for peak heat release, total heat release, smoke density, and toxicity. The table below shows average values obtained for heat release and smoke density for each respective configuration along with the specified limits shown in the top row.

CONFIGURATION	FR-3800 FST DENSITY (LBS/FT ³)	HR PEAK (KW/M ²)	HR TOTAL (KW*MIN/M ²)	SMOKE DENSITY
FST-OSU Requirements		<65	<65	<200
Tedlar/CYCOM 2265/CYCOM 2265/AX2150/3804	4	52	56	177
Tedlar/CYCOM 2265/CYCOM 2265/AX2150/3808	8	39	40	181
Tedlar/CYCOM 2265/CYCOM 2265/AX2150/3820	20	41	34	150
CYCOM 2265/.005" Aluminum Foil/CYCOM 2265/AX2150/3804	4	51	59	112
CYCOM 2265/.005" Aluminum Foil/CYCOM 2265/AX2150/3808	8	43	51	110
CYCOM 2265/.005" Aluminum Foil/CYCOM 2265/AX2150/3820	20	49	48	132

Table 1: Configurations are shown as layers upon its respective 3800 core material which is ½" thick. The opposing side of the core can either be the same as that shown (symmetrical), or consist of 38XX/CYCOM 2265/CYCOM 2265. CYCOM 2265 is a 7781 glass phenolic resin prepreg meeting BMS8-226, and AX-2150 is a low heat release modified phenolic adhesive film.