

Item number	Standard	00525	00058	01897	01970
Technique		Spunlace	Spunlace	Needle-punch	Needle-punch
Composition		100% Preox fibres	Preox/Kynol blending	100% aramid	100% aramid
Weight (g/m <sup>2</sup> )	ISO 9073-1	140	175	150	250
Thickness (mm)	ISO 9073-2	1,3	1,5	2,7	4
Tensile strength MDxCD (N/5cm)	ISO 9073-3	76 x 37	186 x 119	250 x 350	350 x 600
Air permeability (l/dm <sup>2</sup> /min)	ISO 9237	1043	748	1055	585
Martindale (9kPa)	ISO 12947-2	2000 cycles	4000 cycles	150000 cycles	200000 cycles
Elongation at 100N MDxCD (%)	ISO 9073-3	-	-	52 x 58	47 x 46
Elongation at break MDxCD (%)	ISO 9073-3	37 x 71	41 x 67	89 x 99	90 x 85
Smoke toxicity	NF F 16101			F1	F1
MAHRE (kW/m <sup>2</sup> ) (1)	ISO 5659-2	22,9	22,2	19,4	19

<sup>(1)</sup> tested with PU FR foam glued to FBL

## For additional information, please contact:

Norafin (Americas) Inc.  
 111 School House Road  
 Mills River, NC 28759 | USA

Tel. +1 828 435 7000  
 Fax +1 828 393 0921  
 info-us@norafin.com

Norafin Industries (Germany) GmbH  
 Gewerbegebiet Nord 3  
 09456 Mildenau  
 Germany

Tel. +49 3733 5507 0  
 Fax +49 3733 5507 222  
 info@norafin.com



[www.norafin.com](http://www.norafin.com)

## Fireblockers for seats

### End-Uses

- Aircrafts
- Trains
- Public buildings (theaters, stadiums, cinemas...)

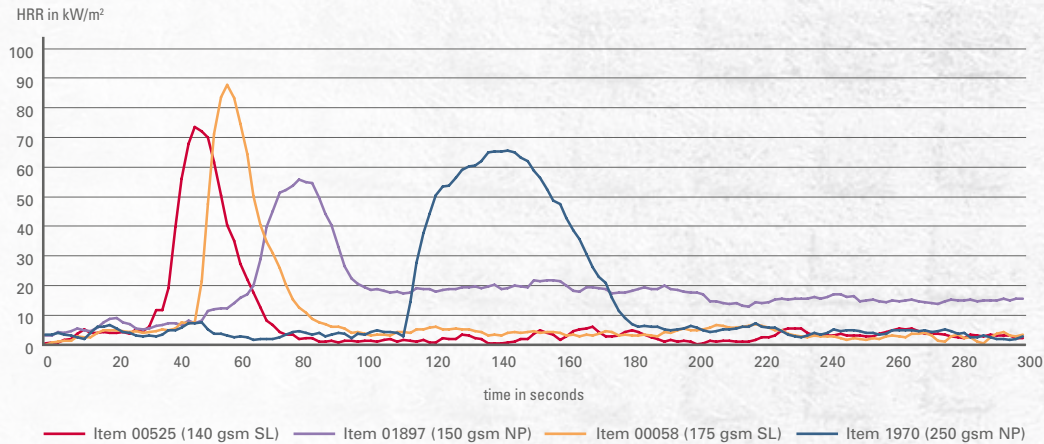
### Performance Characteristics

- Fire blocking capabilities according to norms EN 45545-2, UIC 564-2, NFPA 130, FAR/JAR 25-853(a) or 16 CFR part 1633 and others
- High fire resistance and low smoke toxicity and opacity
- Lightweight
- Weight range 30 - 450 g/m<sup>2</sup>
- Durability and comfort
- Anti vandalism solutions
- After-treatment options: antistatic, water repellent, etc.



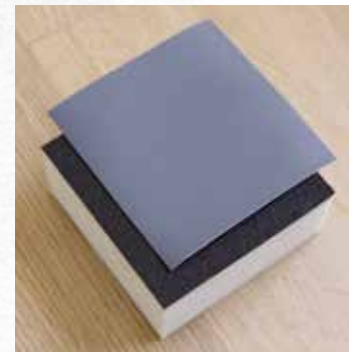
Norafin serves industrial markets offering high-quality, custom engineered spunlaced and needle-punched materials targeting a vast range of market segments including aviation, public transport or cinema seats. Norafin's technical nonwovens used as fire blockers offer important product features answering the market's requirements for durable, flame retarding and lightweight fabrics:

**According to EN 45545, the fabric's fire blocking performance is illustrated in graph Heat Release Rate (HRR) PU FR foam glued with FBL using a Norafin nonwoven.**



## Material Testing method

Norafin Guardian Spunlace 100% Preox fibre, 140g/m<sup>2</sup> on top after cone calorimeter at 25kW, carbonised but structure is standing. The material passed the testing due to the fire blocker on top.



Seat fire test at CREPIM under EN 45545

