

Fire Test Laboratory
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Report No. : 09-1304

Test Report

Designation: Polyetherimid PEI Ultem 9085

Manufacturer of specimen: Stükerjürgen Aerospace Composites GmbH & Co. KG, D - Rietberg-Varensell

Manufacturer designation: Ultem 9085 75x75x3 mm

Batch no.: 80327509

Customer: Stükerjürgen Aerospace Composites, A. Schwabe

Order No.: 09 - 005/ 09 - 007

Certified with/ Customer's statement of conformity: see Test Request from Stükerjürgen Aerospace Composites, Order-No.: 09 - 005/ 09 - 007


Material / Structure of Specimen *Testside* ↓
 Polyetherimid PEI Ultem 9085, thickness 3mm

Test Standard	Requirement	Results:	Passed	Failed
CS/JAR/FAR ,part 25 App.F, Part IV -	CS/JAR/FAR Part 25 §25.853(d) Change 15/Amdt.25-91	→	XXX	
CS/JAR/FAR ,part 25 App.F, Part V	CS/JAR/FAR Part 25 §25.853(d) Change 15/Amdt.25-91	→	XXX	
AITM 2.0006	ABD0031	→	XXX	
AITM 2.0007	ABD0031	→	XXX	
AITM 3.0005	ABD0031	→	XXX	

For detailed results see page 2 pp.

The fire test laboratory is part of the design organization Airbus Deutschland GmbH. The Organisation is approved by the European Airworthiness Authority (EASA) with DOA Approval No. EASA.21J.031 "The above mentioned material/part have been tested in accordance with the terms of the order applicable thereto"

The test results shall not be used for certification of aircraft component parts.

Signed : 
 Menken (Department EDSWI)

26/10/09
 Date



Type of test: Determination of the Heat Release Rate and the Heat Release

Test standard: CS/JAR/FAR 25 , App. F, part IV & AITM 2.0006

Material/Part Designation: Polyetherimid PEI Ultem 9085

Manufacturer Designation: Ultem 9085 75x75x3 mm

Thickness (mm): 3,1

Test results:

Sample No.	Weight [g]	HRRmax*		HR**
		[kW/m ²]	at [s]	[kW*min/m ²]
1	94,7	39	293	8
2	95,4	26	158	1
3	95,0	32	271	11
4				
Mean		32	-	7
Rel. standard deviation		16,0%	-	64,1%
Airworthiness Limit :		65	-	65
Customer Limit :		65	-	65

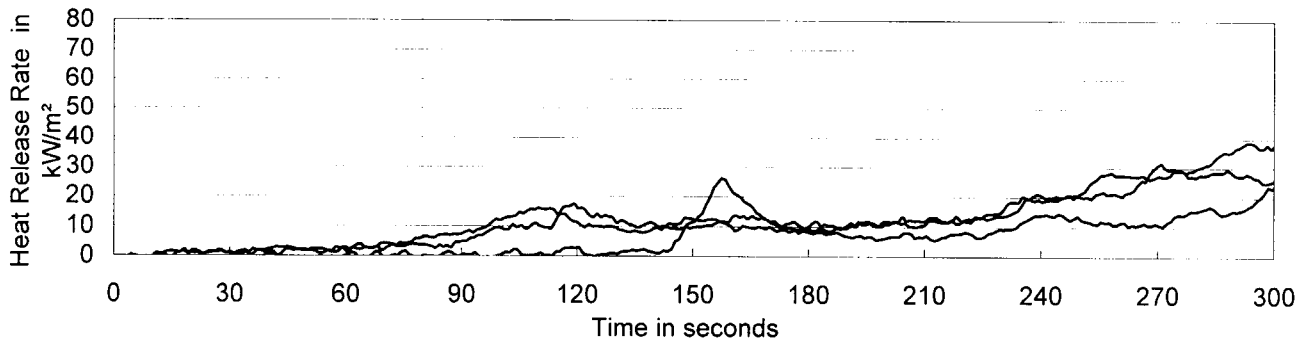
* HRRmax = maximum heat release rate within 5 minutes

** HR = total heat release at 2 minutes

Kh-value [kW/mv]: 0,247

Heatflux [W/cm²]: 3,516

Remarks:



The material/part has been tested in accordance with the above mentioned test standard

Date of test: 24. Nov. 09

Performed by: *[Signature]*
 Pehling/Menken

Checked : Menken (Department EDSWI)



Type of test : Determination of the Specific Optical Density of Smoke

Test standard: CS/JAR/FAR 25 , App. F, part V & AITM 2.0007

Material/Part Designation: Polyetherimid PEI Ultem 9085

Manufacturer Designation: Ultem 9085 75x75x3 mm

Thickness (mm): 3,1

Test results:

Flaming Mode

Sample No.	Weight [g]	Dm*	
		within 4 min	at [s]
1	20,9	12	240
2	20,9	12	240
3	21,0	21	240
4			

Mean	15
Rel. standard deviation	26,8%
Airworthiness Limit:	200
Customer Limit:	200

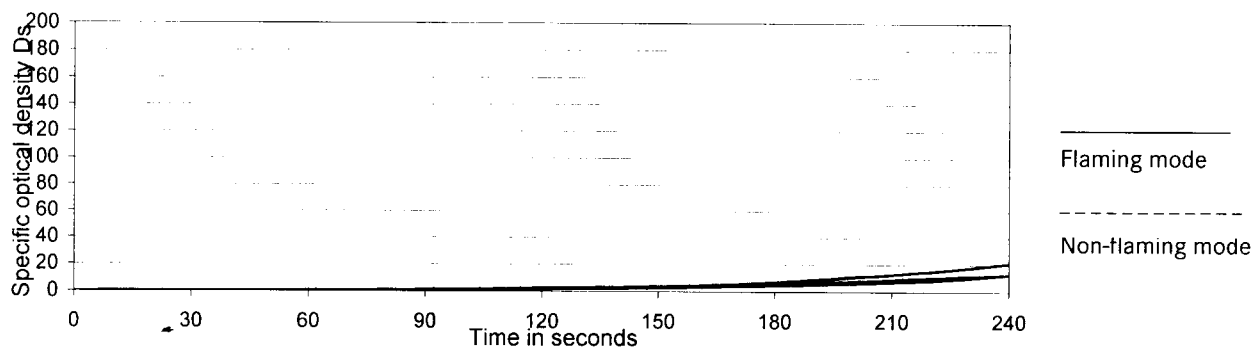
Non-Flaming Mode

Sample No.	Weight [g]	Dm*	
		within 4 min	at [s]
5			
6			
7			
8			

Mean	
Rel. standard deviation	
Airworthiness Limit:	—
Customer Limit:	—

*Dm = Ds max = maximum specific optical density
 Heatflux [W/cm²]: 2,525

Remarks:



The material/part has been tested in accordance with the above mentioned test standard

Date of test: 20. Nov. 09

Performed by: *[Signature]*
 Nordmann

Checked : Menken (Department EDSWI)



Type of test: Determination of the Toxic Components on Combustion Products

Test standard: AITM 3.0005

Material/Part Designation: Polyetherimid PEI Ultem 9085

Manufacturer Designation: Ultem 9085 75x75x3 mm

Test results: **Flaming Mode***

Sample No.	HCN Hydrogen Cyanide	CO Carbon Monoxide	NOx Nitrous Gases	SO2 Sulfur Dioxide	HF Hydrogen Fluoride	HCl Hydrogen Chloride
1	1	153	4	5	0	0
2	1	133	4	4	0	0
3						
4						
Mean	1	143	4	5	0	0
Airbus Limit	150	1000	100	100	100	150
Customer Limit	150	1000	100	100	100	150

Non - Flaming Mode*

Sample No.	HCN Hydrogen Cyanide	CO Carbon Monoxide	NOx Nitrous Gases	SO2 Sulfur Dioxide	HF Hydrogen Fluoride	HCl Hydrogen Chloride
5						
6						
7						
8						
Mean						
Airbus Limit	150	1000	100	100	100	150
Customer Limit	150	1000	100	100	100	150

* All values in ppm.

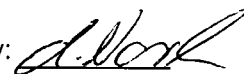
3 samples only necessary if the concentration exceeds 50% of the maximum permitted value

	HCN	CO	NOx	SO2	HF	HCl
Analysis method	Dräger	FGA5	FGA5	FGA5	Dräger	Dräger

Remarks :

The material/part has been tested in accordance with the above mentioned test standard

Date of test: 20. Nov. 09

Performed by: 
 Nordmann

Checked : Menken (Department EDSWI)