

**Customer:** PT DSSA I  
**Material:** WovenCD.10456 15OT  $\frac{3}{1} \frac{2}{1}$  (color: black), DSSA I material, ready for finish  
**Subject:** Flame retardant finish  
**Evaluation:** - Burning behaviour acc. to **DIN 470-1/ISO 11612**  
 - Tearing strength acc. to **EN ISO 13937-2** (Fmed)

**Method and Recipe:**

	I	UNIT
<b>#Flame Retardant Finish</b>		
<b>RUCO-FLAM PCE-ID</b>	500	g/L
<b>RUCON DPO CONC-ID</b>	40	g/L
<b>RUCO-LUB KSAB-ID</b>	10	g/L
<b>PHOSPORIC ACID 85%</b>	22	g/L
<b>RUCOWET FRW</b>	2	g/L
<b>#Stage 1 - Flame Retardant Finish</b>		
Padding		
Wet pick-up	74	%
Pressure	1.5	bar
Drying	120	°C
Duration	2	min
Curing	170	°C
Duration	2	min
<b>#Stage 2 - Neutralize</b>		
<b>1<sup>st</sup> Box</b>		
Rinse	50	°C
Duration	15	sec
<b>2<sup>nd</sup> Box (+15 g/L SODA ASH)</b>		
Rinse	50	°C
Duration	15	sec
<b>3<sup>th</sup> Box (+15 g/L SODA ASH)</b>		
Rinse	60	°C
Duration	15	sec
<b>4<sup>th</sup> Box (+15 g/L SODA ASH)</b>		
Rinse	60	°C
Duration	15	sec
<b>5<sup>th</sup> Box</b>		
Rinse	60	°C
Duration	15	sec
<b>6<sup>th</sup> Box (+2 g/L H<sub>2</sub>O<sub>2</sub> 50%)</b>		
Rinse	60	°C
Duration	15	sec
Drain		
Drying	120	°C
Duration	3	min

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Result:

**Burning Behaviour Acc. to DIN 470-1/ISO 11612**

Edge ignition (Procedure B acc. to ISO 15025)	U		I		UNIT
	Warp	Weft	Warp	Weft	
Flame application time	10	10	10	10	sec
Average of after flame time ( $\leq 2$ s)	-	-	0	0	sec
Average of afterglow time ( $\leq 2$ s)	-	-	0	0	sec
Flaming debris	No	No	No	No	Yes/No
Molten debris	No	No	No	No	Yes/No
Flame reaches the top or side edges of specimen	Yes	Yes	No	No	Yes/No
Destroyed length	Burn out	Burn out	75/110	115/110	mm
Tearing strength acc. to <b>EN ISO 13937-2 (Fmed)</b>	18	11.50	11	9.59	N

**Disclaimer:**

However, this lab trial is only suggestions and cannot be used as an argument for public needs. Customers are strongly suggested to carry out tests independently in their own factory then the results are tested in independent lab/3<sup>rd</sup> party.

Approved by,

**Reni Sariningsih**  
R&D Manager

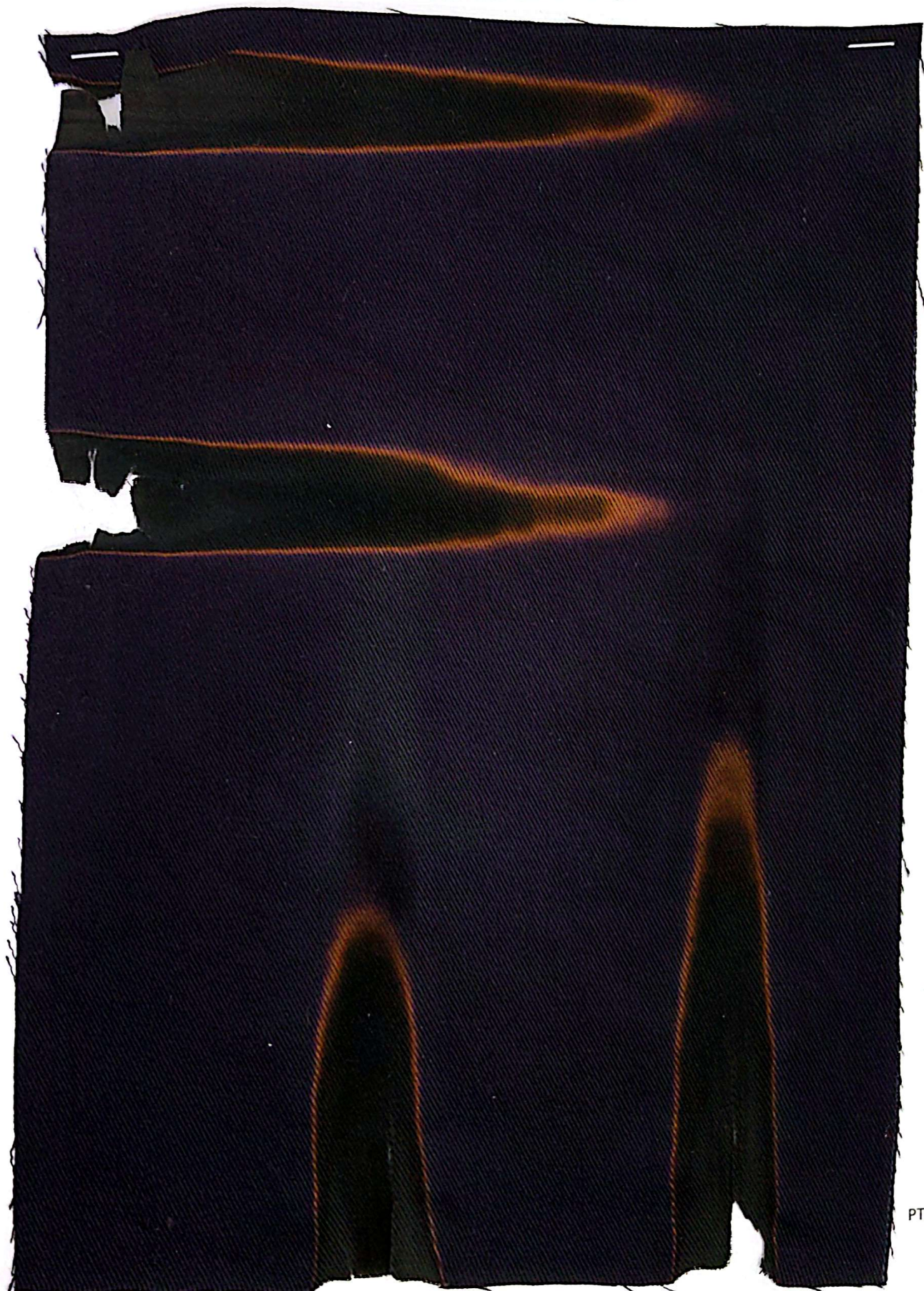


Prepared by,

**Sunandar**  
Application Lab





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**TEST REPORT**

NO. REPORT: EC/IDN-02-0090

Flame Retardant Finish



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