

I, SYLWIA WILMAŃSKA, sworn translator and commercial interpreter of this town of TOMASZÓW MAZOWIECKI, do hereby testify and attest to all whom it may concern that a document presented to me to be translated from Polish into English is of the following contents:

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[logo and inscription]

SYCHTA
LABORATORIUM

[2 logos: ilac-MRA and PCA]

SYCHTA LABORATORIUM Sp. J. [General Partnership]
Ignitability of Materials Research Laboratory
[address] ul. Ofiar Stutthofu 90
72-010 Police

TEST REPORT

Your ref.: 02.06.2016

Our ref. SL/Z-096/PN1021/122/2016

Police, date 09 June 2016.

Test Methods:

1. PN-EN 1021-1:2014 Furniture - Assessment of the ignitability of upholstered furniture - Ignition source: smouldering cigarette.
2. PN-EN 1021-2:2014 Furniture - Assessment of the ignitability of upholstered furniture - Ignition source: Match Flame Equivalent.
3. PN-B-02855:1988. Fire protection in civil engineering. Test method of toxic products of thermal decomposition and combustion of materials.

Aim of test: Meet the requirements for ignitability and toxicity of combustion products under the Regulation of the Minister of Infrastructure of 12 April 2002 on the technical conditions to be met by buildings and their location (Journal of Laws No. 75, Item. 690, as amended).

Ordering Party: KAROŃ ZAKŁAD PRODUKCYJNY Wojciech Karoń
Łazisko 116
97-200 Tomaszów Mazowiecki



Material: Plywood folding chair "straponten" in TPS1 automatic and TPS1 manual version on a metal supporting substructure attachable to the wall and in a version for floor mounting on frames: L2TPS1, L3TPS1, L2TPS1-U, L3TPS1-U.

Description/ composition: Seat and backrest:

Beech plywood laminated with Egger Flex 0.4, 0.6 or 0.8 mm laminate

Frame substructure with cover:

Frame is made of steel covered with powder coating.

Cover made of steel with powder coating.

Manufacturer/ supplier: KAROŃ ZAKŁAD PRODUKCYJNY Wojciech Karoń
Łazisko 116
97-200 Tomaszów Mazowiecki

Meeting the requirements: Material - **flame retardant**; products of decomposition and combustion **toxic** – meeting the requirements of the Regulation of the Minister of Infrastructure of 12 April 2002 on the technical conditions to be met by buildings and their location (Journal of Laws No. 75, Item. 690, as amended) for ignitability and toxicity of combustion products.

Reprinting and copying: only with the consent of KAROŃ Zakład Produkcyjny Wojciech Karoń.

Without the written consent of the Ignitability of Materials Research Laboratory SYCHTA LABORATORIUM Sp. J., the Test Report may be copied **only in its entirety**.

The conditions of validity of the document: This document refers only to the tested samples.



The volume of the report: This Report contains seven pages.

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Our ref. SL/Z-096/PN1021/122/2016

1. Assessment of the ignitability according to PN-EN 1021-1 and PN-EN 1021-2

1.1. Ignition source: smouldering cigarette.

Criteria for smoldering	1	2	3	Comments
Dangerously spreading combustion (3.1 a)	NO	NO	-	
Damage of the tested sampling (3.1 b)	NO	NO	-	
Smoldering to the limits of the sample (3.1 c)	NO	NO	-	
Smoldering throughout the thickness (3.1 c)	NO	NO	-	
Smoldering for over 1 h (3.1 d)	NO	NO	-	
In the final test, the presence of active smoldering (3.1 e)	NO	NO	-	
Criteria for burning flame				
The occurrence of flames (3.2)	NO	NO	-	
Enter "YES" if the criteria are exceeded or "NO" if the criteria are not exceeded.				

1.2. Ignition source: Match flame equivalent.

Criteria for smoldering	1	2	3	Comments
Dangerously spreading combustion (3.1 a)	NO	NO	NO	
Damage of the tested sampling (3.1 b)	NO	NO	NO	
Smoldering to the limits of the sample (3.1 c)	NO	NO	NO	
Smoldering throughout the thickness (3.1 c)	NO	NO	NO	



Smoldering for over 1 h (3.1 d)	NO	NO	NO	
In the final test, the presence of active smoldering (3 l e)	NO	NO	NO	
Criteria for burning flame				
Dangerously spreading combustion (3.2 a)	NO	NO	NO	
Damage of the tested sampling (3.2 b)	NO	NO	NO	
Burning to the limits of the sample (3.2 c)	NO	NO	NO	
Burning throughout the thickness (3.2 c)	NO	NO	NO	
Burning for over 1 h (3.1 d)	NO	NO	NO	
Enter "YES" if the criteria are exceeded or "NO" if the criteria are not exceeded.				

Other observations: None

Fig. 1. View of the seat after test

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2. Test of emissions of toxic products of decomposition and combustion of the material according to PN-B-02855.

2.1. Emissions of decomposition and combustion products for 450°C.

Substance measured	Sample No.			Average value	Standard Deviation
	1	2	3		
	Specific emission				
	g/g	g/g	g/g	g/g	g/g
Carbon dioxide	0,338	0,336	-	0,337	0,001
Carbon monoxide	0,061	0,059	-	0,060	0,001
Hydrogen cyanide	0,007	0,008	-	0,007	0,001
Nitrogen dioxide	0,000	0,000	-	0,000	0,000
Nitric oxide	0,000	0,000	-	0,000	0,000



Hydrogen chloride	0,000	0,000	-	0,000	0,000
Sulphur dioxide	0,000	0,000	-	0,000	0,000
Toxicometric indicator $W_{LC50M\ 450, \text{ g/m}^3}$	16,3	15,1	-	15,683	0,843

2.2. Emissions of decomposition and combustion products for 550°C.

Substance measured	Sample No.			Average value	Standard Deviation
	1	2	3		
	Specific emission				
	g/g	g/g	g/g		
Carbon dioxide	0,630	0,644	-	0,637	0,010
Carbon monoxide	0,186	0,180	-	0,183	0,004
Hydrogen cyanide	0,007	0,005	-	0,006	0,001
Nitrogen dioxide	0,000	0,000	-	0,000	0,000
Nitric oxide	0,000	0,000	-	0,000	0,000
Hydrogen chloride	0,000	0,000	-	0,000	0,000
Sulphur dioxide	0,000	0,000	-	0,000	0,000
Toxicometric indicator $W_{LC50M\ 550, \text{ g/m}^3}$	10,3	11,9	-	11,098	1,175

2.3. Emissions of decomposition and combustion products for 750°C.

Substance measured	Sample No.			Average value	Standard Deviation
	1	2	3		
	Specific emission				
	g/g	g/g	g/g		
Carbon dioxide	1,292	1,095	-	1,194	0,139
Carbon monoxide	0,040	0,073	-	0,056	0,023
Hydrogen cyanide	0,004	0,002	-	0,003	0,002
Nitrogen dioxide	0,002	0,002	-	0,002	0,000
Nitric oxide	0,000	0,000	-	0,000	0,000
Hydrogen chloride	0,000	0,000	-	0,000	0,000
Sulphur dioxide	0,000	0,000	-	0,000	0,000
Toxicometric indicator	19,4	21,5	-	20,5	1,5
W _{LC50M 750} , g/m3					



2.4. Toxicometric indicators values

Toxicometric indicators	Sample No.			Toxicometric indicator W _{LC50SM} , g/m ³
	1	2	3	
Toxicometric indicator W _{LC50M 450} , g/m ³	16,3	15,1	-	15,8 ± 0,6
Toxicometric indicator W _{LC50M 550} , g/m ³	10,3	11,9	-	
Toxicometric indicator W _{LC50M 750} , g/m ³	19,4	21,5	-	

The method for determining measurement uncertainty: The relative standard uncertainty does not exceed the normative values of 30%

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3. Other information

Method of sampling: Samples were taken and delivered by the Ordering Party.

Description of samples: Two complete "straponten" folding chairs delivered.

Date of receiving of the samples: 02 June 2016.

Sample acclimation: Material sample acclimation for 24 h at 23 ± 2°C
and humidity of 50 ± 5%.

The procedure of soaking water by upholstery materials applied: YES / NO



4. Fulfilling the test aim

Test metod	Parameter	Result	Criterion	Material classification
PN-EN 1021-1	Progressive smoldering	NO	NO	flame retardant
	Burning in flames	NO	NO	
PN-EN 1021-2	Progressive smoldering	NO	NO	
	Burning in flames	NO	NO	
PN-B-02855	Toxicometric indicator WLC _{50M}	15.8	15≤WLC≤40	products of decomposition and combustion – toxic

According to the Regulation of the Minister of Infrastructure of 12 April 2002 on the technical conditions to be met by buildings and their location (Journal of Laws No. 75, item. 690, as amended), the **flame retardant** material, whose products of decomposition and combustion are **toxic**, meet the requirements of the said Regulation, for the ignitability and toxicity of combustion products.

Determination of the classes of reaction-to-fire and the level of toxicity of the products of decomposition and combustion is performed in order to assess the fulfillment of the test.

Statement: "The test results refer to the response of the samples for the product test in the specific test conditions; they can not be the sole criterion for assessing the potential fire hazard of the product used."

Tests performed by:
(-) signature illegible
Zygmunt Sychta, PhD

(-) signature illegible
Andrzej Sychta, MSc, Eng.

Approved by:
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TECHNICAL MANAGER
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Krzysztof Sychta, PhD, Eng.

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Date and place of testing: 06 August 2016, Police

In testimony whereof I, the sworn public translator, sign this under my hand and Seal of Office, at TOMASZÓW MAZOWIECKI, POLAND, 13 August 2016.



mgr SYLWIA WILMAŃSKA
Sworn Translator
of the English Language 7
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Tomaszów Maz., ul. Wiejska 30/32 m.15