Translation from Ukrainian into English:

"SCIENTIFIC TESTING CENTER "EUROSTANDART"

International Laboratory Accreditation Cooperation	National Accreditation Agency of Ukraine	"Approved" SCIENTIFIC TESTING CENTER "EUROSTANDART" 15-Dec-2020
/logo/ International Laboratory Accreditation Cooperation (ILAC)	*/logo/* No. 201069 (DSTU[1] ISO/IEC 17025:2017)	*/signature/* Head O.Ye. Ilnytskyi
		*Seal: UKRAINE, LVIV region * LIMITED LIABILITY COMPANY SCIENTIFIC TESTING CENTER "EUROSTANDART" * No. 36686759*

PROTOCOL No. 8/Г3-20
of testing-determination of flammability group
pursuant to
DSTU Б.В.1.1-2-97 (GOST[2] 30402-96)
Material: high-pressure polyethylene IDPE
(applied for producing the artificial Christmas trees and decorations)
B2 (moderately flammable)

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Document No. 2020 Protocol *8/Г3-20*
Sheet *1* Number of sheets *3*
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Customer: "Kvazar" LLC, Horodok city, 18 Shukhevycha St., Lviv region, 81500.
Testing Center:
"SCIENTIFIC TESTING CENTER "EUROSTANDART" LLC
Legal and business address: Lviv region, Cherliany village, 99A Polova St.;
http://lab-eurostandart.com
The license of the State Department of Fire Safety of the Ministry of Emergency Situations of Ukraine No. 518682 dated 4-Mar-2010.
Accreditation certificate No. 201069 issued by the National Accreditation Agency of Ukraine dated 19-Dec-2019, valid till 18-Dec-2024.
The testing has been conducted as per:

1. Application letter.

Testing object: material: high-pressure polyethylene IDPE (applied for producing the artificial Christmas trees and decorations)
Test methods:
As per DSTU Б.В.1.1-2-97 (GOST 30402-96) "Construction materials. Flammability test method", the method includes the determination of the parameters of the material flammability considering the levels of influence on the surface of the sample of radiant heat flux and flame of fire source stipulated by the standard. The heat flux surface density shall be within 10 kW/m2 till 50 kW/m2.
In order to classify the materials by the flammability groups, the following parameters are determined: critical heat flux surface density and the time period from the start of the testing till the sample ignition.
Critical heat flux surface density – minimum value of the heat flux surface density with which the ignition occurs and lasts till the next influence on the sample of the flame from the fire source.
As based on test findings, the flammable construction materials are divided into three groups of flammability: B1, B2, B3 (Table 2) depending on critical heat flux surface density value.

Table 1

Classification of construction materials pursuant to DSTU B.1.1-2-97 (GOST 30402-96)

Group of material flammability	Critical heat flux surface density, kW/m2
B1	35≤ critical heat flux surface density
B2	20≤ critical heat flux surface density≤35
B3	critical heat flux surface density ≤20

Samples for testing: material: high-pressure polyethylene IDPE (applied for producing the artificial Christmas trees and decorations)

Conditions for test performance:

- date: 14-Dec-2020;
- air temperature: 17°C;
- relative air humidity: 62 %;
- atmospheric pressure: 102.3 kPa;

Test instruments: the flammability tester for construction materials was applied for the test. Calibration certificate UA/24/190821/3522, date of issue 21-Aug-2019, and metering equipment provided in Table 2.

Metering equipment

Table 2

Ranking No.	Name of equipment or device	Serial number	Measurement range	Calibration findings
1	Flammability tester for construction materials	01	0-900 ±5°C	U = ±3.32°C
2	Mechanical stopwatch SOS pr-2b-2-000, 4295B	0779	0-60 s 60-3600 s	U = ±0.16 s U = ±0.34 s
3	Sliding caliper ShTs 1	00913574	0-125 mm	U = ±0.069 mm
4	Aspiration psychrometer MB-4M	4507	temperature -25 - 50°C, relative humidity 10-100%	U = ±0.14°C

Test findings: test findings are provided in Table 3.

Test findings

Table 3

Sample No.	Heat flux surface density value influencing the sample, kW/m2	Time period till the sample ignition, s	Critical heat flux surface density kW/m2
1	35	23	20
2	30	162	
3	25	244	
4	20	870	
5	15	No ignition	

Conclusion:

Pursuant to item 5.1 of DSTU Б.В.1.1-2-97 (GOST 30402-96), the material - high-pressure polyethylene IDPE (applied for producing the artificial Christmas trees and decorations) – falls into flammability group **B2** (moderately flammable).

Note:

1. Protocol **No. 8/ГЗ-20** is related only to the samples which were tested.
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Testing engineer /signature/ M.M. Karpiak

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Translator's note:
[1] – State Standard of Ukraine
[2] – National Standard

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АГЕНТСТВО ПЕРЕКЛАДІВ «ЛІНГВА»
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Translation is true and corresponds to original
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