ІДЕНТИФІКАЦІЙНА ЕКСПЕРТИЗА НЕПРОДОВОЛЬЧИХ ТОВАРІВ У МИТНИХ ЦІЛЯХ

IDENTIFICATION EXPERT EXAMINATION OF PLASTERBOARD

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Стаття присвячена висвітленню результатів проведення ідентифікаційної експертизи гіпсокартону. Проаналізовано класифікацію гіпсокартону згідно з УКТЗЕД. Досліджено обсяги імпорту та експорту гіпсокартону в Україні. Розроблено критерії та методи для проведення ідентифікаційної експертизи гіпсокартону. Проведено та проаналізовано результати ідентифікаційної експертизи гіпсокартону.

The article is devoted to the analysis of plasterboard's identification expert examination results. The classification of plasterboard according to UCGFEA was analysed. The volumes of imports and exports of plasterboard in Ukraine were studied. Criteria and methods for the identification expert examination of plasterboard have been developed. The results of the identification expert examination of plasterboard were conducted and analysed.

Relevance of research. The identification expert examination of plasterboard is important to ensure that imported products comply with both national and international regulations. Given the large volume of plasterboard being transported across borders, customs authorities frequently encounter challenges related to its proper classification. Conducting a thorough examination helps in accurately determining the product's classification and assigning the correct tariff codes, thereby preventing misclassification.

Due to the destruction of domestic factories at the start of the full-scale war, the volume of imported drywall has increased. Therefore, identification expert examination has become even more important in verifying that the goods correspond to the appropriate code of the Ukrainian Classification of Goods for Foreign Economic Activity (UCGFEA). This classification is crucial, as import duty rates of plasterboard vary by subcategory (10% and 5%) [1]. The purpose of this examination is to confirm the product's authenticity. Accurate code determination is key for correct tariff application and regulatory compliance.

Object of research is plasterboard imported to Ukraine.

Subject of research is criteria, methods and means of identification on the plasterboard.

Purpose of the article is to conduct an identification expert examination of plasterboard for customs purposes.

The main tasks of the article are to analyze plasterboard import and export volumes, to classify plasterboard according to the UCGFEA, to investigate samples of plasterboard.

Plasterboard is a building material used for the quick and high-quality installation of walls, cladding, and complex interior structures. It is important to note that plasterboard is considered a mineral-based material. The core of the material is environmentally friendly gypsum, a sedimentary, non-combustible, and fire-resistant material. It provides excellent thermal and sound insulation and is odorless. The cardboard layer gives the gypsum board strength and serves as a base for paint, plaster, wallpaper, or tiles. Plasterboard's cost-effectiveness and efficiency make it a popular choice for dividing spaces and remodeling projects. The material is widely used in residential buildings for aesthetic appeal and thermal insulation, while moisture-resistant variants help prevent mold in high-humidity areas. Additionally, drywall's durability and lightweight properties make it ideal for decorative and partitioning applications in commercial and educational spaces [3].

The Ukrainian Classification of Goods for Foreign Economic Activity code is essential for accurately identifying goods at customs, determining the applicable tariff rates, and effectively implementing control measures. Plasterboard is classified according to the UCGFEA under Section XIII: Products of the chemical and allied industries, specifically within Chapter 68, which covers «Articles of stone, plaster, cement, asbestos, mica or similar materials.» For a detailed breakdown of drywall classification, please refer to Table 1.

Table 1

Classification of plasterboard according to the UCGFEA [1, 2]

Code	Description of goods
6809	Articles of plaster or plaster-based mixtures
[68091]	- plates, panels, sheets, plates, tiles and similar articles, not ornamented:
11 00 00	-- covered or reinforced with paper or paperboard
6809 19 00 00	-- others
6809 90 00 00	- other products

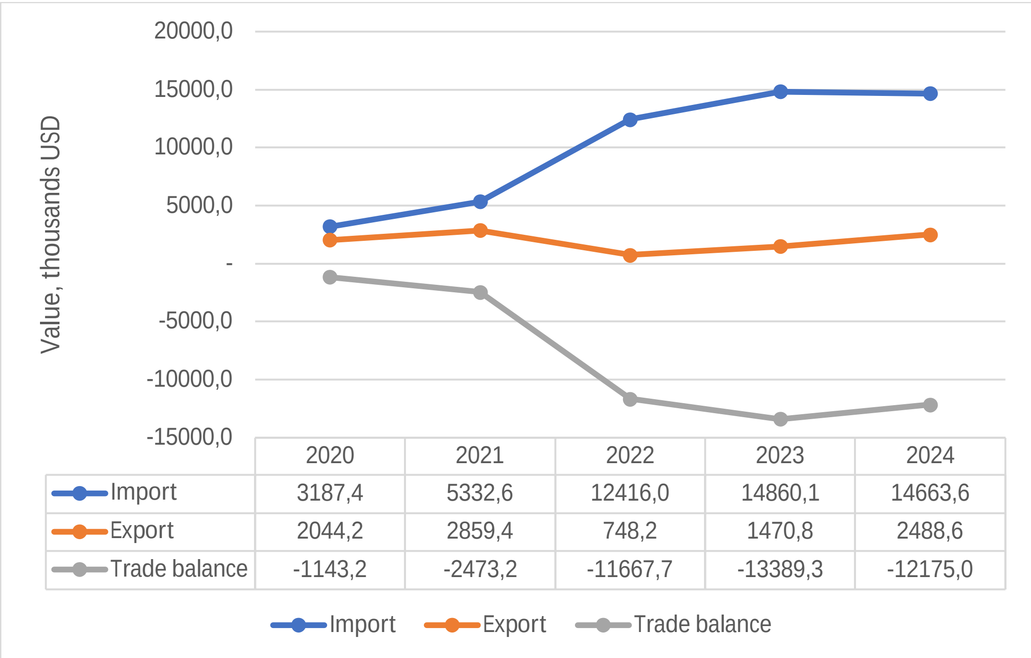
Plasterboard is further classified under group 6809, which includes articles of plaster or plaster-based mixtures. This group consists of a single subgroup, 68091, which covers plates, panels, sheets, tiles, and similar articles that are not ornamented. According to Table 1, the main classification features of drywall according to the UCGFEA are its form and coating of drywall.

Further subheadings 6809 11 00 00 and 6809 19 00 cover flat articles of all kinds that are primarily used for partitions and ceilings. The distinction between these two codes lies in whether plasterboard is covered. If it is covered or reinforced with paper or paperboard, it falls under code 6809 11 00 00. This type is the most common, as the paper layer provides structural integrity and a suitable surface for finishing, such as painting or wallpapering. Otherwise, if the plasterboard does not have a paper or paperboard covering, it is classified under code 6809 19 00 00, which includes raw or untreated plaster sheets. In addition to these categories, code 6809 90 00 00 covers other plaster-based products that do not fit the specific classification of plates, panels, sheets, slabs, or tiles. This category serves as a broader classification for plaster-based items that are not explicitly defined within the previous subgroups. For instance, any form of ornamentation such as engraved or embossed patterns, surface decoration or decoration incorporated into the material results in the classification of such plates, panels and similar articles under heading 6809 90 00 [2].

The import duty for plasterboard depends on its classification. For products covered with paper or paperboard (6809 11 00 00), the import duty is 10%. If the plasterboard is not covered (6809 19 00 00), the duty is 5%. Other products classified under group 6809, specifically under code 6809 90 00 00, are also subject to a 5% import duty [1].

The structure of the drywall market in Ukraine has changed. Previously, LLC «KNAUF GIPS DONBAS» and TDV «SINIAT» were the two main producers of drywall in Ukraine. Their factories, located in areas of active hostilities, have stopped operating and are now completely destroyed as a result of Russia's full-scale invasion. Before 2022, domestic production almost fully met the demand of the Ukrainian market, with imports making up only a small portion of the supply. In 2023, the production of drywall was partially established at the subsidiary KNAUF GIPS in Kyiv [4]. In 2025, KNAUF has begun construction of a new plant for the production of plasterboard and dry building mixes in Ukraine. The enterprise will be located in the town of Borshchiv in the Ternopil region. The design capacity of the new production is 30 million m² of plasterboard. Currently, the capacity is enough to meet the domestic demand of the Ukrainian market, but after the war, demand expected to rise sharply [5]. Given this shift, it is essential to analyze the trade dynamics of plasterboard. Please refer to Figure 1 for a detailed overview of import and export operations, as well as the overall trade balance during the period.

As illustrated in Figure 1, Ukraine's import and export values for plasterboard were relatively close in 2020, with imports at 3,187.4 thousand USD and exports at 2,044.2 thousand USD. However, starting from 2021, the gap between them started widening, with imports consistently surpassing exports. Between 2020 and 2021, imports grew by approximately 67.3%, while exports increased by about 39.9%, maintaining a positive trend for both foreign trade operations.



	2020	2021	2022	2023	2024
Import	3187,4	5332,6	12416,0	14860,1	14663,6
Export	2044,2	2859,4	748,2	1470,8	2488,6
Trade balance	-1143,2	-2473,2	-11667,7	-13389,3	-12175,0

Fig. 1. Trade dynamics of UCGFEA 680911 for 2020–2024, thousand USD

Source: structured by the author on the basis of [6]

In 2022, imports surged by 132.8%, reaching 12,416.0 thousand USD, compared to the previous year. In contrast, exports declined by 73.8%, dropping to 748.2 thousand USD. This difference is largely attributed to the destruction of domestic drywall manufacturing facilities, which created a shortage of plasterboard and forced Ukraine to rely heavily on imports.

From 2022 to 2023, the upward trend in imports continued, increasing by 19.7% to 14,860.1 thousand USD. Although this growth was slower than in the previous year, it still marked a significant expansion. Exports showed a partial recovery during the same period, rising by 96.6% to 1,470.8 thousand USD – almost double the export volume of 2022, although still far below pre-war levels.

Between 2023 and 2024, the volume of imports stabilized, declining slightly by 1.3%. This suggests a possible recovery or stabilization in domestic production, although foreign supply remained critical to meeting demand. Meanwhile, exports rose again, increasing by 69.2% to 2,488.6 thousand USD, reflecting a continued rebound in Ukraine's export capacity.

Throughout the entire period from 2020 to 2024, the trade balance remained negative, highlighting the excess of imports over exports. In 2020, the trade deficit was -1,143.2 thousand USD. It deepened by 116.3% in 2021 to -2,473.2 thousand USD. The most significant deterioration occurred in 2022, when the deficit grew by 372% to reach -11,667.7 thousand USD. In 2023, the negative balance increased by a further 14.7%, totaling -13,389.3 thousand USD. However, 2024 saw a modest recovery, as the trade deficit narrowed by 9.1%, improving slightly to -12,175.0 thousand USD. Despite this improvement, the trade balance remains heavily negative, emphasizing the long-term effects of disrupted production and continued reliance on imports.

Since the majority of plasterboard on the Ukrainian market is imported, it is important to examine the countries supplying these imports.

For a more detailed breakdown of plasterboard import operations, please refer to Figure 2.

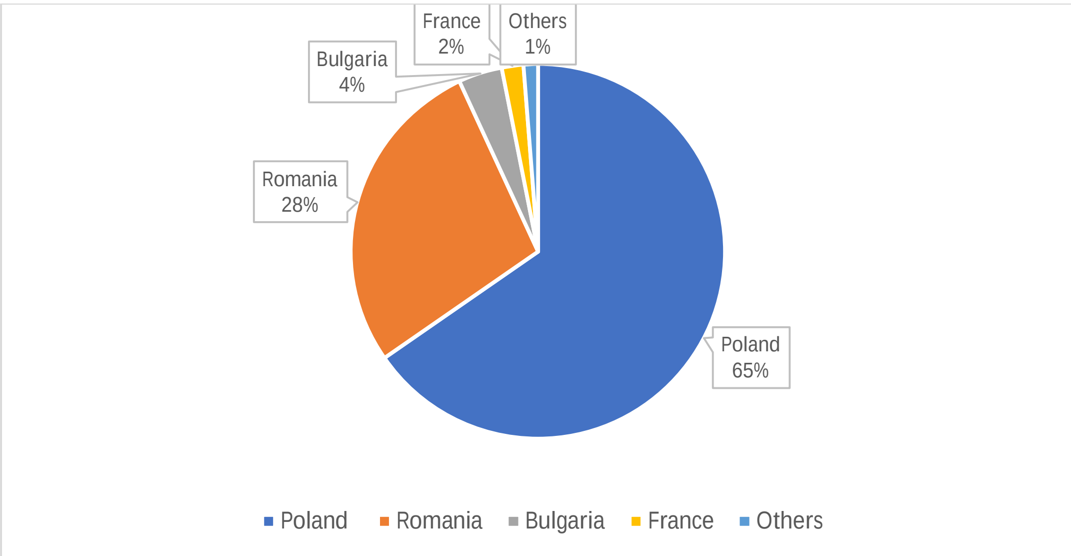


Fig. 2. Structure of Ukraine's import of the UCGFEA 680911 by country in 2024, %

Source: structured by the author on the basis of [6]

In 2024, Poland emerged as Ukraine's leading supplier of HS 6809 products, accounting for 65% of total plasterboard imports. This represents a significantly higher import value than any other country. Romania ranked second with 28%, followed by Bulgaria with 4% and France with 2%, while other countries collectively contributed just 1%. Poland's dominance stands out as a defining trend in Ukraine's import structure, highlighting a strong reliance on a single key trade partner for plasterboard supply.

Given the variety of imported plasterboard types, customs authorities may assign identification expert examination to confirm the proper classification of the goods and to verify the accuracy of all data provided in the customs declaration.

During the customs clearance process under Customs Declaration № 25UA10010002709U0, submitted between the Ukrainian company «Epicentr K» and the German exporter «Knauf Gips KG», a consignment of plasterboard was declared. The shipment consisted of 150 sheets (450 m²) of three types of plasterboard: wall-type, ceiling-type, and moisture-resistant. The total net weight of the shipment was 3546 kg.

The risk analysis system was triggered due to the absence of a clear indication in the product description as to whether the plasterboard was covered with paper or not. Since this characteristic directly affects the product's classification under the UCGFEA, clarification was necessary. The code 6809 11 00 00 had been assigned in the customs declaration, however, verification was required to ensure it accurately reflected the physical properties of the declared goods. In accordance with Article 356 of the Customs Code of Ukraine [7], which allows customs authorities to assign an expert examination if there are grounds to believe the information in the declaration may be inaccurate, the customs authority appointed an expert examination.

The expert examination was initiated in accordance with the Order No. 1058 of the Ministry of Finance of Ukraine dated December 2, 2016, which governs the interaction between customs units and the Specialized Laboratory for Research and Expertise during sample collection and expert analysis. In accordance with this procedure, samples were taken from the shipment to carry out laboratory tests [8].

The purpose of the expert examination was to confirm whether the declared plasterboard was covered with paper or not, as this affects both its classification and customs valuation. The tasks included verifying the physical characteristics of the goods, and compliance with the declaration. This was needed to make sure the product was classified correctly and that customs duties were calculated based on accurate information.

The selected criteria, methods, and tools used for the expert identification examination of plasterboard are presented in the table below.

Table 2

Criteria, means and methods for plasterboard identification expert examination

Criteria/indicators	Means of identification	Methods of identification
General		
Product Name	Accompanying documents, goods	Analytical
Trademark	Marking, sample	Analytical
Color	Accompanying documents, goods	Organoleptic
Marking completeness	Accompanying documents, goods	Organoleptic
Surface texture	Goods	Organoleptic
Specific		
Bending strength (MPa)	DSTU 520:2018, Section 5.7 [9]	Measuring
Paper facing mass (g/m²)	DSTU EN 520:2018, Section 5.14 [9]	Measuring
Moisture absorption (%)	DSTU 520:2018, Section 5.8 [9]	Measuring
Sound insulation (dB)	DSTU EN 520:2018, Section 4.6 [9]	Measuring
Thermal resistance (m²·K/W)	DSTU 16703:2019 [10]	Measuring
Dimensions (mm)	DSTU EN 520:2018,Section 5.2–5.4 [9]	Measuring
Weight (kg/m²)	DSTU EN 520:2018 [9]	Measuring

The indicators presented in Table 2 were selected due to their importance in accurately identifying plasterboard under the UCGFEA code and distinguishing it from construction materials with similar appearance or function. General indicators such as product name, trademark, color, marking completeness, and surface texture are essential for confirming the declared goods and verifying their consistency with accompanying documentation.

Specific indicators were chosen for their relevance in assessing the physical and functional characteristics of the plasterboard. Bending strength was used to evaluate the structural integrity of the material, while paper facing mass was important for determining whether the board is covered with paper – an essential feature of products classified under UCGFEA code 680911. Moisture absorption was included to differentiate between standard and moisture-resistant types of plasterboard, with the latter expected to show lower absorption values suitable for use in humid environments.

It is necessary to distinguish plasterboard from visually similar materials such as heat-resistant wall panels, fireproof boards, and other thermally resistant construction elements. To address this, thermal resistance was included as a key criterion, helping to differentiate ordinary gypsum plasterboards from specialized panels designed for high-temperature performance. Sound insulation is a key criterion because it determines the plasterboard's ability to reduce noise transmission, which is essential for acoustic comfort in building interiors. Additionally, dimensions, weight per square meter is assessed to ensure the goods matched the declared specifications.

For the identification expert examination, three plasterboard samples imported into Ukraine were selected. The samples varied by type:

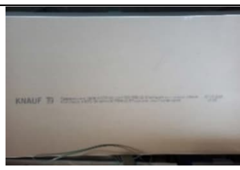
1. Plasterboard, ceiling-type, trademark «Knauf Gips KG», size 1200×2500×9.5 mm, quantity – 50 sheets. Country of origin – Germany. Packed on pallet.
2. Plasterboard, wall-type, trademark «Knauf Gips KG», size 1200×2500×12.5 mm, quantity – 50 sheets. Country of origin – Germany. Packed on pallet.
3. Plasterboard, moisture-resistant, trademark «Knauf Gips KG», size 1200×2000×12.5 mm, quantity – 50 sheets. Country of origin – Germany. Packed on pallet.

During the identification of plasterboard samples, a combination of organoleptic methods, measuring instruments, and an analysis of accompanying documents were used. The evaluation followed the requirements and procedures defined in DSTU EN 520:2018 «Gypsum plasterboards – Definitions, requirements and test methods» and DSTU 16703:2019.

Table 3 provides detailed results of the expert examination of plasterboard.

Table 3

The results of identification expert examination of plasterboard

Criteria	Sample		
	1	2	3
Image			
Product Name	Plasterboard – ceiling type	Plasterboard – wall type	Plasterboard – moisture-resistant
Trademark	Knauf Gips KG	Knauf Gips KG	Knauf Gips KG
Color	Beige	Beige	Blue
Marking	Knauf A 9.5mm EN 520 Type A	Knauf A 12.5mm EN 520 Type A	Knauf H2 12.5mm EN 520 Type H2
Surface texture	Smooth matte	Smooth matte	Slightly waxed
Bending strength (MPa)	5.8	4.1	6.0
Paper facing mass (g/m²)	180	180	200
Moisture absorption (%)	8.5	9.1	3.5
Sound insulation (dB)	29	26	32
Thermal resistance (m²·K/W)	0.042	0.039	0.044
Dimensions (mm)	1200×2500×9.5	1200×2500×12.5	1200×2000×12.5
Weight (kg/m²)	8.6	7.2	9.8

According to table 3, samples 1 and 2 were identified as standard Type A gypsum plasterboards. They exhibited a uniform beige color, a smooth matte surface, and clear labeling that read «Knauf A 12.5mm EN 520 Type A,» confirming the type (A), thickness (12.5 mm), and compliance with the EN 520 standard. Sample 3 was identified as a moisture-resistant plasterboard of Type H2. It had a distinctive blue color, a slightly waxed surface typical of such plasterboard, and the marking «Knauf H2 12.5mm EN 520 Type H2,» which confirmed its type, moisture resistance, thickness, and standard compliance.

The geometric dimensions of all three boards were measured using a metal tape in accordance with Sections 5.2 to 5.4 of DSTU EN 520:2018. Sample 1 measured 1200×2500×9.5 mm, Sample 2 – 1200×2500×12.5 mm, and Sample 3 – 1200×2000×12.5. The measured values matched the specifications stated in the product documentation.

Visual examination confirmed that all samples were paper-faced, as evidenced by the characteristic surface texture. Further confirmation was obtained by measuring the paper facing mass, as described in Section 5.14 of the standard. Standard boards demonstrated values of approximately 180 g/m², while the moisture-resistant board had a higher value of around 200 g/m², consistent with its additional treatment.

Mechanical and physical properties of the plasterboards were assessed using standardized testing protocols described in DSTU EN 520:2018. Bending strength was measured to evaluate mechanical integrity under load. Sample 1 demonstrated a bending strength of 5.8 MPa, Sample 2 – 4.1 MPa, and Sample 3 – 6.0 MPa. The highest result of Sample 3 correlates with its increased density and intended moisture-resistant function.

Special attention was paid to the moisture absorption index, as it is a critical differentiating factor between standard and moisture-resistant plasterboards. Samples 1 and 2, representing standard Type A boards, had moisture absorption levels of 8.5% and 9.1% respectively, which fall within acceptable limits for non-hydrophobic gypsum boards. In contrast, Sample 3 demonstrated significantly lower moisture absorption at 3.5%, supporting its classification as a Type H2 board suitable for use in environments with occasional exposure to moisture.

Thermal resistance was also evaluated as part of the expert examination. Sample 1 showed thermal resistance of 0.042 m²·K/W, Sample 2 – 0.039 m²·K/W, and Sample 3 – 0.044 m²·K/W. The values confirm that all samples function primarily as gypsum-based cladding materials and are not thermal-insulating panels or fireproof boards. No markings or physical features indicative of fire-resistant classification (Type F) were found on any of the samples. In addition, sound insulation performance was tested using the methodology outlined in DSTU 16703:2019. Sample 3 provided the highest sound insulation performance at 32 dB, followed by Sample 1 at 29 dB and Sample 2 at 26 dB.

In conclusion, based on the expert examination results, it was established that all three samples -wall-type, ceiling-type, and moisture-resistant are paper-faced gypsum plasterboards. It was confirmed by visual inspection and comparison with the technical requirements set out in DSTU EN 520:2018. The declared goods match the description in Customs Declaration № 25UA10010002709U0 and are consistent with the accompanying product documentation. Therefore, they should be classified under UCGFEA code 6809 11 00 00, which covers gypsum plasterboards faced with paper. This classification ensures that customs duties are calculated and applied in accordance with Ukrainian customs legislation.

References

1. Про Митний тариф України : Закон України від 19.10.2022 № 2697-IX. URL: https://zakon.rada.gov.ua/laws/show/2697-20#Text (дата звернення: 07.05.2025).

2. Про затвердження Пояснень до Української класифікації товарів зовнішньоекономічної діяльності: Наказ Державної митної служби України від 14.12.2022 № 543. URL: https://customs.gov.ua/documents/pro-zatverdzhennia-poiasnen-do-ukrayinskoyi-klasifikatsiyi-tovariv-zovnishnoekonomichnoyi-diialnosti-321 (дата звернення: 07.05.2025).
3. Hegger, Manfred. *Construction materials manual* l. Basel: Birdhouse, 2006. Print. p. 60.
4. Аналіз ринку гіпсокартону в Україні. Інвестиції в Україну – InVenture. URL: https://inventure.com.ua/uk/analytics/investments/analiz-rinku-gipsokartonu-v-ukrayini (дата звернення: 19.05.2025).
5. Економічна правда. Німецький виробник будівельних матеріалів Knauf будує новий завод в Україні. URL: https://epravda.com.ua/biznes/nimeckiy-virobnik-budmaterialiv-knauf-buduye-noviy-zavod-v-ukrajini-801764/ (дата звернення: 19.05.2025).
6. Державна служба статистики України. URL: https://www.ukrstat.gov.ua (дата звернення: 07.05.2025).
7. Митний кодекс України: Закон України від 13.03.2012 № 4495-VI (зі змінами). URL: http://zakon2.rada.gov.ua/laws/show/4495-17 (дата звернення: 19.05.2025).
8. Про затвердження Порядку взаємодії структурних підрозділів та територіальних органів Державної митної служби України із Спеціалізованою лабораторією з питань експертизи та досліджень Держмитслужби під час проведення досліджень (аналізів, експертиз), Нормативів взяття проб (зразків) товарів для проведення дослідження (експертизи), форм акта про взяття проб (зразків) товарів та висновку: Наказ Міністерства фінансів України від 02.12.2016 № 1058 (зі змінами). URL: https://zakon.rada.gov.ua/laws/show/z1693-16#Text (дата звернення: 19.05.2025).
9. ДСТУ EN 520:2018 Гіпсокартонні листи. Визначення, вимоги та методи випробувань (EN 520:2004 + A1:2009, IDT) [Чинний з 2019-03-01]. Київ: ДП «УкрНДНЦ», 2018. 43 с.
10. ДСТУ EN 16703:2019 Акустика. Метод випробувань на шум для систем перегородок із гіпсокартону зі сталевими шпильками. Повітряна звукоізоляція (EN 16703:2015, IDT) [Чинний з 2020-01-01]. Київ: ДП «УкрНДНЦ», 2019. 29 с.

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IDENTIFICATION EXPERT EXAMINATION OF TECHNICAL RUBBER PRODUCTS FOR CUSTOMS PURPOSES

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The article analyzes the volumes of import operations with technical rubber products in Ukraine. The classification of technical rubber products according to UCGFEA is considered. The expediency of using identification expertise during customs control of technical rubber products is substantiated. The criteria, methods and means on the basis of which the identification examination of technical rubber products for customs purposes was carried out are developed and its results are analyzed.