

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MPL BRANDS NV, INC.,
Petitioner

v.

BUZZBALLZ, LLC,
Patent Owner

PGR2024-00035
U.S. Patent 11,932,441

**DECLARATION OF FOLKERS EDUARDO ROJAS, PH.D. IN SUPPORT
OF PATENT OWNER'S RESPONSE TO PETITIONER'S OBJECTIONS
TO EVIDENCE**

I, Folkers Eduardo Rojas, do hereby declare as follows:

1. I am making this declaration at the request of patent owner BuzzBallz, LLC in the *Inter Partes* Review of U.S. Patent No. 11,932,441 (“the ’441 Patent”).

2. I am being compensated for my work in this matter at my standard hourly rate. I am also being reimbursed for reasonable and customary expenses associated with my work and testimony in this investigation. My compensation is not contingent on the outcome of this matter or the specifics of my testimony.

3. I understand that the authenticity of several publications I cited in my declaration in support of the Patent Owner Response filed March 12, 2025 in the above captioned case were objected to. Accordingly, I have been asked to provide an explanation of the origin of Exhibits 2022, 2023, 2024, and 2025. I have also been asked to provide an opinion as to the authenticity of Exhibits 2018, 2026, and 2027, documents obtained by Patent Owner's counsel.

I. EXHIBIT 2022

4. Exhibit 2022 includes scanned excerpts of a book titled “Manufacturing Engineering and Technology,” Fifth Edition, by Serope Kalpakjian and Steven R. Schmid. It was published by Pearson Education, Inc. in 2006. I personally purchased this book in March 2009, and it has been a part of my

personal collection ever since. I have located and provided a receipt showing the purchase of the book from Amazon.com on March 6, 2009. *See* Appendix A.

5. As a part of my review of the Petitioner's grounds challenging U.S. Patent No. 11,932,441, I located the description of the glass transition temperature of materials in "Manufacturing Engineering and Technology" to support my explanation of what happens to plastics when they are heated past their glass transition temperature. This description is found on pages 200-203 of "Manufacturing Engineering and Technology." I personally scanned these pages, as well as the covers and copyright pages of the book. These scans were included as Exhibit 2022.

6. It is my opinion that a POSITA and/or experts in the field, familiar with the art of container design and material properties, would have looked to "Manufacturing Engineering and Technology," the excerpts of which were filed as Exhibit 2022, as an accurate and authentic source of relevant information.

II. EXHIBIT 2023

7. Exhibit 2023 is a pdf copy of the Materials Data Book published by the Cambridge University Engineering Department in 2003. The Materials Data Book is a well-known resource from the University of Cambridge and the Massachusetts Institute of Technology (MIT). It is one of many resources

compiled as part of the Multidisciplinary Design Project intended to provide free resources for engineers and engineering professors and students. The Multidisciplinary Design Project began as a collaborative effort in 2003.

8. I first encountered this online resource as part of an undergraduate materials testing course, and later as I worked in the Precision Engineering Research Group when working on my Masters and Ph.D. at MIT.

9. The URL for accessing the Multidisciplinary Design Project, including the Materials Data Book, is found here: <http://www-mdp.eng.cam.ac.uk/web/index.html>. The contact information for the Multidisciplinary Design Project lists two "Primary Investigators," who are responsible for compiling resources and verifying the accuracy of the information provided. This contact information is found at the following URL: <http://www-mdp.eng.cam.ac.uk/web/about/contact.html>. The first Primary Investigator is Dr. Alex Slocum of MIT. I know Dr. Slocum personally and worked with him extensively as part of my Masters and Ph.D. work at MIT.

10. I shared the pdf version of the Materials Data Book with BuzzBallz counsel by placing it in a shared Box folder on March 11, 2025.

11. A POSITA and/or experts in the field, familiar with the art of container design and material properties, would have looked to the Materials Data Book as an accurate and authentic source of relevant information.

III. EXHIBIT 2024

12. Exhibit 2024 is a pdf copy of the Materials Data Book published by the Cambridge University Engineering Department in 2011. Exhibit 2024 is simply a later published version of Exhibit 2023 and a POSITA and/or experts in the field would have recognized it as an accurate and authentic source of relevant information for the same reasons provided above with regards to Exhibit 2023.

IV. EXHIBIT 2025

13. Exhibit 2025 is a pdf version of the “Overview of materials for Polyethylene Terephthalate (PET), Unreinforced.” This pdf comes from MatWeb, which is a free resource providing material properties for common materials. The properties are provided by manufacturers, suppliers, and compounders of the materials, as explained in the Frequently Asked Questions section of the website (<https://www.matweb.com/reference/faq.aspx>), a screenshot of which is shown below:

Where does the information in MatWeb originate?

About 90% of the data sheets in MatWeb originate from testing by the manufacturers. Other data has been taken from handbooks, professional societies, and compilations/relationships by the MatWeb staff. Details of non-manufacturer references are available via a link to the reference(s) on the bottom left of the data sheet.

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14. Engineers frequently use MatWeb to find material properties information. A quick search of PET material properties at MatWeb.com populates 1222 results. MatWeb provides a quick overview of the Polyethylene terephthalate (PET), unreinforced along with an array of reinforced components with glass and vendor specific data sheets. While publications typically provide a single value for glass transition temperatures (e.g., 73.6 Celsius by Huang, EX2018), that value may differ slightly between publications. MatWeb provides an effective resource for viewing the entire range of these values for a particular material. In this case, MatWeb provides a range of values for the glass transition temperature of PET from a variety of vendors.

15. A POSITA and/or experts in the field, familiar with the art of container design and material properties, would have looked to the “Overview of materials for Polyethylene Terephthalate (PET), Unreinforced” provided by MatWeb as an accurate and authentic source of relevant information.

V. EXHIBIT 2018

16. Exhibit 2018 is an article titled “Conformational changes and molecular motion of poly(ethylene terephthalate) annealed above glass transition temperature,” by J.-M. Huang, P.P. Chu, and F.-C. Chang. Exhibit 2018 was published by Elsevier Science Ltd. in 1999. Elsevier is a well-known and reputable publishing establishment that publishes, among other things, the International Journal for Science and Technology of Polymers, commonly known as simply, “Polymer.” Polymer is a journal that publishes advances in polymer physics, chemistry, and technology. A POSITA and/or experts in the field, familiar with the art of container design and material properties, would have looked to the Exhibit 2018 as an accurate and authentic source of relevant information.

VI. EXHIBIT 2026

17. Exhibit 2026 is an article titled “Application of structure optimization technique to aluminum beverage bottle design,” by J. Han, R. Itoh, S. Nishiyama, and K. Yamazaki. Exhibit 2026 was published by Springer, known at the time of publishing as “Springer-Verlag.” Springer is a well-known and reputable publishing establishment that publishes, among other things, the “Structural and Multidisciplinary Optimization” journal. The Structural and Multidisciplinary Optimization journal publishes information particularly relevant to design

optimization in a variety of disciplines including solid, structural, fluid, and thermal fields. A POSITA and/or experts in the field, familiar with the art of container design and material properties, would have looked to the Exhibit 2026 as an accurate and authentic source of relevant information.

VII. EXHIBIT 2027

18. Exhibit 2027 is an article titled “Heat transfer analysis of canned food sterilization in a still retort,” by A. Kannan and P.Ch. Gourisankar Sandaka. Exhibit 2027 was published by Elsevier Science Ltd. in 2008. As explained above, Elsevier is a well-known and reputable publishing establishment. It also publishes the Journal of Food Engineering. A POSITA and/or experts in the field, familiar with the art of container design and material properties, would have looked to the Exhibit 2027 as an accurate and authentic source of relevant information.

VIII. CONCLUSION

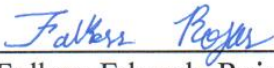
19. This declaration is provided to the best of my knowledge and understanding, and based on my personal knowledge and recollection at the time of signing this declaration. I declare that all statements made herein on my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine

Dr. Rojas Declaration

In Support of Patent Owner's Response to
Petitioner's Objections to Evidence
Case No. PGR2024-00035 / US Patent No. 11,932,441

or imprisonment, or both, under Section 1001 or Title 18 of the United States
Code.

Date: April 1, 2025


Folkers Eduardo Rojas

APPENDIX A

Final Details for Order #103-8196919-3329813
[Print this page for your records.](#)

Order Placed: March 6, 2009
Amazon.com order number: 103-8196919-3329813
Order Total: \$59.99

Shipped on March 6, 2009

Items Ordered	Price
1 of: <i>Manufacturing, Engineering & Technology (5th Edition)</i> , Serope Kalpakjian	\$56.00
Sold by: hick4801 (seller profile)	
Supplied by: Other	

Shipping Address:

Folkers Rojas
ADDRESS REDACTED
United States

Shipping Speed:

Standard Shipping

Payment information

Payment Method:	Item(s) Subtotal:	\$56.00
• No current charges	Shipping & Handling:	\$3.99

Billing address	Total before tax:	\$59.99
Folkers Rojas	Estimated tax to be collected:	\$0.00
ADDRESS REDACTED		----
United States	Grand Total:	\$59.99

To view the status of your order, return to [Order Summary](#).

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