

**Review Form 1.7**

Journal Name:	<b>Journal of Materials Science Research and Reviews</b>
Manuscript Number:	<b>Ms_JMSRR_112967</b>
Title of the Manuscript:	<b>Exploring Formulation Variables: A Comprehensive Analysis of the Impact on 32 kg/m3 Flexible Polyurethane Foam</b>
Type of the Article	<b>Research Article</b>

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**PART 1: Review Comments**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b>Compulsory</b> REVISION comments</p> <ol style="list-style-type: none"> <li>1. <b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</li> <li>2. <b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</li> <li>3. <b>Is the abstract of the article comprehensive?</b></li> <li>4. <b>Are subsections and structure of the manuscript appropriate?</b></li> <li>5. <b>Do you think the manuscript is scientifically correct?</b></li> <li>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></li> </ol> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. Yes</li> <li>3. Yes</li> <li>4. No.</li> <li>5. Yes</li> <li>6. Yes</li> </ol> <p>In this work, authors investigate the effect of various formulation variables (such as TDI, water, surfactant, stannous octoate, and amine) on flexible polyurethane foam (FPU) of a density of 32 kg/m<sup>3</sup>. Overall, the work is novel, interesting. In addition to some scientific, writing and language error are in the manuscript. Therefore, I suggest it requires major revision for reconsideration. The detailed comments are as follows:</p> <ol style="list-style-type: none"> <li>1) The units of each variable throughout the manuscript should be written properly. E.g. In abstract section 32 kg/m<sup>3</sup>.</li> <li>2) Author wrote very long and complex 3. RESULTS AND INTERPRETATION section. To enhance interest and readability I would suggest to either divide each components(TDI, water, surfactant, stannous octoate, and amine) impact on unfilled 32-density FPU foam in various subheading to section 3 or Make a table and perform comprehensive analysis of each components results.</li> <li>3) Include a table for proper discussion of the results from each study series. TDI-series, water-series, etc. Write effect of each component variation, and the reason behind it, Benefits, Disadvantages, etc.</li> <li>4) A careful review is recommended to rectify spelling errors throughout the manuscript. Remove unnecessary spaces, capital letters in the middle of sentences throughout the manuscript, Use of commas. E.g. In <i>D= Required Density of the foam, Momentive , Polyethyleneoxidemethylsiloxane, the influence</i>, and many more. Carefully check throughout the manuscript.</li> <li>5) In section 3. Results and discussion, author should directly write strictly related points mainly from obtained results despite of other nonrelated sentences such as "PU foam is one of the most comfortable, easily accessible, and affordable mattress materials." Please remove unnecessary sentences.</li> <li>6) Conclusion is too long. Write only major outcomes from each series of experiments such as TDI-series, water-series, etc.</li> </ol>	

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<b>Minor</b> REVISION comments		
1. Is language/English quality of the article suitable for scholarly communications?	Some correction is needed.	
<b>Optional/General</b> comments	NA	

### **PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

### **Reviewer Details:**

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