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To
The Director and Head
Kolkata Branch Office- 2
BIS
Kolkata.

Date : 11th August, 2023

Sub: **Revision of polyurethane footwear specifications for Sandal & Slippers (IS 6721 : 2023)**

Kind Attn. **Mr. A.K. Purohit**

Dear Sir,

Thank you for the courtesy extended to us during our recent meeting of AIRIA on 19th July 2023 held at Astor Hotel, Kolkata.

In PU slippers & sandals, main measuring parameters are flexing and hydrolysis. We have observed that, in the proposed specification of flexing and hydrolysis, were derived from safety shoe specification (**as per IS 15298 Part -2 : 2011**).

Please find the specification details...

-	Flexing	Hydrolysis	Our Observation
Safety Shoe	30,000 cycle in Bannewart flexing with a max cut growth of 4 mm	Ross flex 150,000 cycles with max cut growth 6 mm	**Belt flex is more stringent than Bannewart flex. It is quite strange & ironic that safety shoe with a density of around 0.50 gm/cc is following Bannewart flex compare to fashionable sandal & slipper with a density of 0.35 – 0.40 gm/cc has to follow more stringent Belt flex. It is difficult for PU sandal & slipper to achieve belt flex spec.** **Maintaining stringent belt flex for sandal & slipper is not realistic. Even Bannewart & Ross flex study are more specific & accurate. Nobody follows belt flex Internationally.**
PU slippers & sandals	30,000 cycle in belt flex with 90 mm dia and no spontaneous crack	Ross flex 150,000 cycles with max cut growth 6 mm	

We, on behalf of polyurethane raw material suppliers, are requesting to review the spec once again and revise as per below..

Our Recommendation:
Flexing: Since t is very much dependent on the article design & density, so it should be Bannewart flexing with 20,000 cycles.

Hydrolysis: 7 days hydrolysis study followed by Ross flex test with max cut growth 8mm after 60,000 cycles in room temp.

Looking forward for your valuable intervention in this regard.

Requesting you to forward this to the concerned department/committee for their necessary intervention and action.

Thanking you.

Yours Truly
Excel Polymer Industries

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