# TEST REQUIREMENT CONCERNS

# IS 15844 (PART 2) 2023

# TENSILE STRENGTH FOR MIDSOLE/OUTSOLE

## IS 15844 (Part 2)

To make the sports footwear light in weight we used cellular material in bottom components, Some time EVA midsole is also touching the ground and Labs are considering (EVA) it as outsole and they are applying outsole standard for testing of EVA.

**Concerns-** Cellular material cannot achieve Tear strength of 5 N as required in Part 2 testing. therefore, standard for cellular and solid material must be different as we did in case of abrasion resistance. Pls consider this request. Thanks

**Table 7 Outsole – All Materials**

(*Clause* 7.6)

| Sl No. | Properties | Requirement | Method of Test, Ref to |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| i) | Abrasion resistance (volume loss), $mm^3$, *Max*[1] | | |
| | a) Cellular sole (Load 5 N) | < 400 | IS 3400 (Part 3)/ISO 4649 : 2016 |
| | b) Solid sole (Load 10 N) | ≥ 250 | |
| ii) | Flexing resistance (belt method) | No crack at 50 000 flexes | IS 8085 (Part 4)/ISO 16177 : 2012 |
| iii) | Hydrolysis resistance, cut growth after 1 50 000 flexes, in mm, *Max* (*for PU sole only*) | 4.0 | IS 15298 (Part 1) |
| iv) | Tear strength, N/mm, *Min* | 5.0 | IS 15298 (Part1) |
| v) | Tensile strength $N/mm^2$, *Min* | 2.5 | IS 3400 (Part 1)/ISO 37 : 2017 |
| vi) | Elongation at break %, *Min* | 180 | IS 3400 (Part 1)/ISO 37 : 2017 |
| vii) | Compression set %, *Max* | 55 | Annex G of IS 15844 (Part 1) |

# COMPRESSION SET OF MIDSOLE FOR LOW DENSITY MATERIALS

| | | | |
|---|---|---|---|
| i) | Compression set, percent, *Max* | | Annex G of IS 15844 (Part 1) |
| | *For EVA* | 50 | |
| | *For all other material* | 40 | |

IS 15844 ( Part2) 2023,

Concerns- For keeping the sports footwear lighter in weight with high rebound value, Puma used some light-density materials in the midsole. And those products are our top-running shoes across the market globally, including India.

Nitro foam substance, which Puma used in midsole (light density: 0.15±0.02 g/cm3), is not considered as an EVA material by some labs. However, Nitro has a lower density than EVA, which is majorly used in sports footwear as bottom components. In addition, a material having an open cell structure and a lighter density cannot reach Max 50 requirement of compression test; hence, it needs a different value of compression set as a test requirement. Kindly consider our request and create test requirement for such type of materials.

# UPPER MATERIAL COLOUR FASTNESS IN CASE OF LEATHER

| | | | |
|---|---|---|---|
| vi) | Colour fastness to light grey scale rate, Rating: (Marring) | 4 or more | IS/ISO 105-B02 |

IS 15844 (Part 2)

**Concerns** : According to IS 15844 (Part 2) 2023 requirements, leather does not seem to be able to achieve 4 or more grey scale readings; the standard needs to be re-examined for leather as upper material.

# THANK YOU