



ISO/TC 172/SC 7/WG 2
Spectacle frames

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Convenorship: BSI (United Kingdom)

Fading of logos

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For discussion in the forthcoming WG2 meetings

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Fading of logos – 12870 perspiration test.

I have had two recent queries on the fading of logos during the perspiration test. **The first query related to fading of logos in the 8 hour test:**

4.7 Resistance to perspiration

When the spectacle frame is tested in accordance with 8.3, there shall be
a) no spotting or colour change (except for loss of gloss on surface) anywhere on the frame, excluding joints and screws, after testing for 8 h

:



Another photo:



I am not sure how important it is for such printing not to fade. When writing the first edition of ISO 12870, we certainly did not want frames to change colour, e.g. a blue frame to end up green!

The second query related to the 24 hr test:

"I would like to seek your advice on the interpretation of Cl. 4.7 of ISO 12870:2014:

Under clause (b), "no corrosion, surface degradation or separation of any coating layer on the parts liable to come into prolonged contact with skin during wear, i.e. the insides of the sides, bottom and lower parts of the rim and the inside of the bridge, after testing for a total of 24 h.",

could you kindly advise color fading of a logo printing be considered as "surface degradation" in the above clause? Can you provide the definition of the term "surface degradation" of the above?"

My initial reply was as follows:

"We do not have a definition of surface degradation. If we have time, it could be discussed during forthcoming meetings of the ISO working group responsible for spectacle frames and ISO 12870.

"Fading of logo: I was asked a similar question by a British test house recently. I think that if the logo was applied to a plastics frame or component, then there is unlikely to be a harmful effect on the wearer, and hence there is no problem.

"If applied to a metal frame, and it is purely fading, then there may be no problem. The problem arises if the coating surface is etched in any way, either before adding the logo in order to try to provide adhesion, or by a chemical effect of the logo's material on the coating. In this case, there is a risk that the coating may no longer protect the wearer from for example, nickel release. The second part of the resistance to perspiration test is more severe at 55 ° C rather than 50 ° of EN 12472 simulated wear and corrosion and is 24 h not 2. The nickel release test (migration) may be a week, but this is at 30 °. Hence the nickel release test might not identify this problem of poor logo quality.

"Hence if the logo is simply faced on a metal item, I would probably pass, but if there is a change in specular reflectance where the logo had been, I would probably fail the item.

"If the working group gets time to discuss this, I will let you know. The CEN working group on nickel release is meeting at the end of October, so I can raise the question there.

Regards

Ronald Rabbetts
Convenor, ISO/TC172/SC7/WG2 and CEN/TC170/WG8."

Are logos likely to be printed on the insides of the sides/temples or the outsides to show other people what brand frame one is wearing? If on the outside, any fading is irrelevant since it is not included in 4.7.b). Loss of gloss on the surface is allowed in 4.7.a), so my reply about specular reflection may not be relevant.

Surface degradation – is this redundant? Could we suggest it was pitting or etching of the surface, but this would probably be regarded as being corrosion.