

- 15. Ear tag colour and material properties

Dyes can be present in two forms : organic or mineral. Mineral colorant is the most stable form to resist at temperature and UV light.

Expected properties with the addition of dye are the colour, color homogeneity and ageing stability.

Otherwise, they would not attempt to change mechanical properties.

Generally, dyes are used in weak proportion (between 0 à 3%). Whatever the colour, this percentage has no consequences on mechanical properties if transformer changes his transformations parameters with the same polymer. The percentage of dye depends of the colour and of the type of dye.

Of course, if quantities were more importance, properties could be heavily change.

During UV ageing, dye can chemical change and bring color modification, so contrast modification without significantly mechanical properties change.

So transformer includes generally anti UV in the formulation to protect polymer (1-2%). When all of anti UV will be disappeared, then polymer will be attacked and then properties will be modified.