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**STUDY OF THE INFLUENCE OF EXTERNAL AGENTS IN THE FLEXIBLE POLYURETHANE FOAM
PRODUCTION FOR SOLE**

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The technological development is continue in order to minimize possible errors and problems in the industrial processes, but nor always it is capable to hinder that external factors such as temperature, humidity, pressure between others and that can cause problems in some production processes such as the case of flexible foam polyurethane. The production of polyurethane sole is sensible to any variation in its formularization, therefore it is important the knowing the influence of external agents that can cause change in their properties. Sole is used in the footwear with the purpose to transmit comfort and durability, where its densities are high from 40 to 80 kg/m³. Difficulties are found to obtain to produce sole with a standard of linear quality in a discontinuous process (cylindrical box) where don't have climatization controle, and in this work was made an accompaniment of a production process of a company with the objective to study the correlation between the final properties with external factors. It was used a formularization standard for density 45kg/m³, and during three months was accompaniment the production of sole. Preliminary results show that correlation exists between the catalizer amount used in the formularization with the external agents evaluated during the process. It can be concluded that to the same formularization standard when submitted the different temperatures, rotations and humidity, it presents results diversives, that are observed in the final process, as closed foam, open foam or height of the block. It is essential has control of the external agents to guarantee the regularity of product in the final process, contrary case the footwear that to use a foam of it soles with the closed cell will have a lesser useful life than to use an open cell and that also will result in much more comfort.