Harry F Bader

How to stop pin holes in exam gloves?

Mr. Harry F Bader, Vice-President, Latex Services, Akron Rubber Development Laboratory in Akron, USA and a world authority on latex, answers the questions and doubts of readers on latex and latex products.

A COMPETENT medical doctor always makes a thorough examination of his patient. The results of that examination compared to normal conditions of the human body are a major factor in the doctor reaching a proper diagnosis and establishing a proper treatment for his patient.

The same applies to a problem in latex product manufacturing. How well you define the problem and how well you observe the conditions which surround the problem will be a major influence on your problem solving success. You become familiar with normal operating conditions so that anomalies are immediately apparent. Observation of abnormal conditions can often enable you to correct a problem before it becomes a major quality disaster.

The questions this month reflect the major quality and economic concerns of the latex glove industry.

- **What is the best temperature to leach medical gloves?**

▲ *It has generally been thought that the higher the leach temperature the better. To remove residual accelerators that continues to be the case. However, there are some data which indicate that for protein reduction cold water is sometimes better. Gloves which are chlorinated frequently show lower protein content. Chlorination is a cold water process. My experience has produced mixed results. Results will vary dependent upon where in your process you do your leaching, how well you leach, and also the nature of your compound. Until your personal experience proves otherwise I suggest 70 ± 5°C.*

Keep in mind that the turbulence of the water, and the freshness of the water are at least as important as temperature and time of leaching. Also the water flow must always run counter to the direction of the dipping line, so the last water in contact with the product is the freshest and cleanest.

- **How can I stop holes in my exam gloves?**

▲ *This problem has been with us from the beginning of the industry. There are dozens of reasons for holes and most of them are related to poor process control or poor housekeeping. Here are some of the major causes.*

1. *Air bubbles are put into the latex by foamy dispersions, too fast mixing or too fast additions to the latex.*
2. *Dip tanks have fill lines which are above the latex level; agitation is too fast; level controls are operating improperly.*
3. *Forms are too hot going into the latex or the latex is too hot.*
4. *Speed of the forms is too fast going into and coming out from the latex. Air is trapped going in and finger webs "snap" coming out.*
5. *Latex has too little "bubble breecher" or "dewebber".*
6. *Forms are dirty. Flaking buildup traps air.*
7. *Poor housekeeping produces dirt particles in latex which "pop" out during stripping.*
8. *Too wet coagulant is very reactive and fast surface coagulation will trap air.*

Send your questions to:

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