

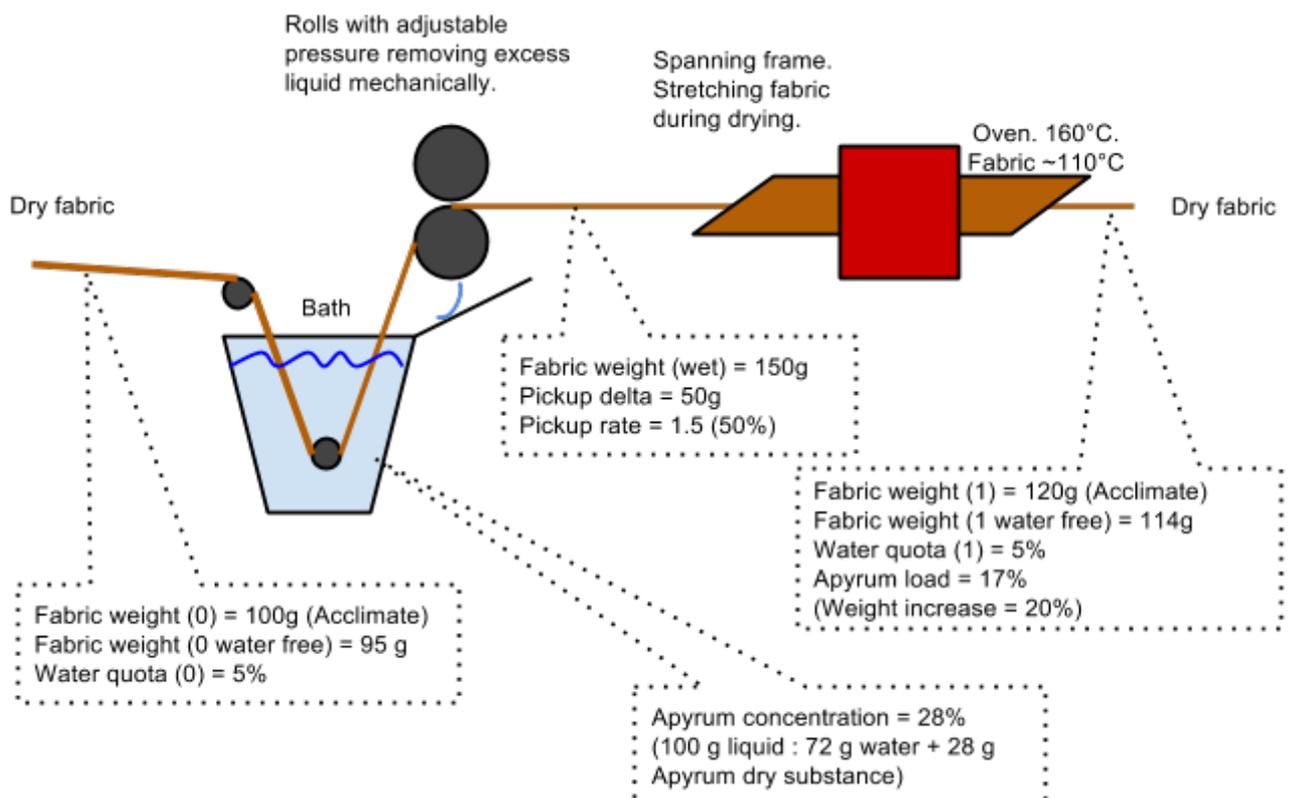
General Instructions for Industrial and Laboratory Impregnation

Version 2018.1

This document is a schematic description of the immersion or impregnation process called Foulard. All companies use different equipment and terminology, but the basic principle usually remains the same. This description can also be used as a model for other impregnation processes such as paper, wood, etc.

The document is written for the intended use by polymer engineers, laboratory engineers, and production engineers as a resource for the preparation, testing, and evaluation of the use of Apyrum Flame Retardant. Please consult your service engineer or contact person at Deflamo for further advice.

A schematic immersion or impregnation process



The objective is to be able to measure and control the “Apyrum load” by adjusting either the Apyrum concentration and /or the pick-up rate. By adjusting the Apyrum concentration a controlled amount of the dry substance Apyrum is transported into the fabric.

It is important that the weight is measured in a correct way. We assume the fabric is acclimatized before weighing (Fabric weight (0) and Fabric weight (1)). If the final weight of the fabric is measured after drying, when it is water free, this could be compensated by having knowledge of the untreated fabric’s water-free weight and calculated accordingly. (If the acclimatized materials moisture content “balance” is, let’s say 8 percent, and final weight after drying contains no moisture, the relations and load will be not calculated correctly.

Water quota (0) and Water quota (1) could give an indication of the hygroscopic properties. To measure this, the acclimatization is required.

There is a great advantage in knowing the moisture in the untreated material: you can calculate exactly the load of flame retardant and you can after acclimatization, calculate if moisture balance has changed with the flame retardant. It is not uncommon that moisture rate increases slightly in a fiber after adding a salt.