Mixing Instruction

8681 Textile Coating HNSFT
“Hybrid Nano Silica Fusion Technology”
for creating 1.000L of ready to use coating

Mix process

1. Fill a plastic container with 950 liter of water (Ideally demineralised water as in some parts of the world the water used is sub optimal. For large scale production "local" water may be used if it meets baseline standards)

2. Add the contents of the sample pack into the water whilst stirring gently:

   C 1 – 10 liter
   C 2 – 30 liter
   C 3 – 10 liter
   C 4 – 8 liter

3. After 2 minutes of stirring the liquid will be ready to use.

Application

The target is to establish a full coating of the fabric.

This can be managed by any suitable method. (The most common method is dipping and rolling but for lab testing and small scale evaluation any methodology can be used. It should be noted that the moistened fabric should have excess coating liquid expelled by either rolling, spinning or squeezing)

General drying

In most industrial settings fabrics are dried "in-line" as they pass through the fabric finishing process. With reference to this sample pack procedure, drying of the fabric as part of the finishing process can be managed in a variety of ways, but the outcome must be that the fabric is dry before the final heat curing process, as noted this can be managed in-line). For lab testing any drying procedure can be used eg. hair dryer, sunlight, IR lamp etc.

Heat Curing

The optimum heat curing value is 160°C for 90 seconds. This timing may be lengthened or shortened depending on the characteristics of the fabric being coated (All timing and heat ratings are at the discretion of the end user). Heavy fabrics eg. for soft furnishings may require a slightly longer curing time (120 seconds+/-) than shirt fabric.

Having noted that 160°C for 90 seconds is an optimum value, it is apparent that some fabrics will not tolerate being exposed to 160°C and so it is possible to establish curing at a lower temperature. The coating will start to cross link at 145°C, however, as one can imagine this temperature is sub optimal, but in some instances it may be possible to establish bonding at this temperature. Following on from this guidance one can experiment with curing temperatures. It may be that one finds that a curing temperature of 155°C matches the heat tolerance of the fabric and the desired performance characteristic. Having noted the above 160°C at 90 seconds remains the target datum from which to work.

Shelf life of the ready-to-use liquid: 3 days

Shelf life of the concentrate components C1-C4: 12 months

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