PennWhite Ltd

Cansoft AR60

TECHNICAL DATA SHEET

PennWhite Cansoft 60 is a non-ionic, amino–functional polysiloxane emulsion. It is a self-cross-linking one-component finish producing insoluble silicones which impart flexible, shape-stabilising characteristics to textile fabrics. The effects thus produced are unaffected by domestic laundering and dry cleaning.

APPLICATION

- Fibre fill finish
- An easy-care finish for bed, table and hospital linen, shirts and trousers.
- To give shape to knitted and woven products made of synthetic, glass and other fibres, as well as felts and nonwovens

PRODUCT DATA

Appearance	Milky White Liquid
Solids Content	64 - 68%
Active Substance	Amino-functional Polysiloxane
Ionic Character	Non-ionic

STORAGE STABILITY

At least 6 months if properly stored (i.e protected against heat, e.g. direct sun and frost).

PROCESSING

PennWhite Cansoft 60 is applied to the fabric or fillfiber by dipping and padding or spraying. The silicone finish will cure quickly if the fabric is heat dried, more slowly if it is dried at room temperature.

The air permeability may be substantially unchanged or reduced; depending on the amount of silicone that has been applied. Fabrics are given a resilient, elastic handle, improved shape retention during laundering and good anti-pilling properties, whose extent will depend on the type of fibre and weave.

The water repellency of fabrics, which have been treated with PennWhite Cansoft 60 primarily, is not so marked because of the non-ionic emulsifier in the fabric, originating from the formulation. If the fabric is washed (delicate fabric at 40°C) after application of the silicone finish, and then well rinsed, very good water repellency is achieved.

The amount of PennWhite Cansoft 60 used will depend on the type of fibre as well as the type of yarn and weave structure. Absorbent fabrics will require more silicone than those with

Penn-White Ltd.
Radnor Park Trading Estate, Back Lne, Congleton, Cheshire. CW12 4XJ.
Telephone 44 (0) 1260 279635 Fax 44 (0)1260 298920 Email info@pennwhite.co.uk
www.pennwhite.co.uk

poorer absorbency. Similar considerations apply to the comparison between fine, soft, individual fibres, thin, smooth yarns and light, smooth fabrics with coarser, stiffer individual fibres, rough, bulky yarns and heavy, profiled fabrics. Generally speaking, more impregnating agent is required for achieving a flexible finish than, for example, for achieving smoothness and softness. The task of crosslinked silicones is to act as support and absorb forces, forming web-like structures at the points of intersection of the fibres. The product should be applied at the rate of between 1 and 5%.

To impart flexibility to fabrics made of synthetic fibre and others with low water absorption, it is advisable to use PennWhite Cansoft 60 without mixing it with organic resins. The treated textiles are given an outstanding flexible handle. The concentration at which the product is used will depend on the type of article and fibre, and the desired effect.

For giving a high quality easy-care finish to bed, table and hospital linen, shirts and similar articles, we recommend a mixture of synthetic resin and the appropriate acid catalyst and PennWhite Cansoft 60. Here, too, the finish and handle can be controlled by varying impregnating bath concentration and the ratio of synthetic resin to silicone. In this type of application, the silicone not only imparts a flexible handle but also improves tear resistance and gives better resistance to laundering and scrubbing.

Decorative glass fibre fabrics are improved especially by impregnation with PennWhite Cansoft 60. They loose their flabbiness, become pleasantly supple and firmer in structure. Felt articles made of natural or synthetic fibre can be impregnated with PennWhite Cansoft 60 to make them resilient. Here it should be noted that these products must be dried for a long time to allow the water, which clings firmly to the material, to evaporate completely. The full resilience becomes apparent only when the water has disappeared completely and the felt has been heated for a few minutes to 130-150°C to crosslink the silicone.

PennWhite Cansoft 60 can be used as a binder for non-wovens if the type of fibre, amount of swelling and rate of application have been correctly balanced. PennWhite Cansoft 60 can also be used for the subsequent impregnation of non-woven fabrics to impart greater resilience and firmness. Adequate wet pick-up and packing density are the prime requirements for a good impregnating effect. The resilience and resistance to laundering that may be achieved open up interesting new possibilities for such impregnated non-woven products.

IMPREGNATING BATH PROPERTIES

Impregnating baths normally will remain unchanged for at least 8-12 hours, provided the pH-value is kept at around 4-5. Higher pH values can produce premature changes in bath stability. Small amounts of pigment dispersions can be incorporated in the impregnating baths, provided the emulsifier used in these dispersions is compatible with the PennWhite Cansoft 60 formulation (non-ionic).

IMPREGNATION, DRYING, CROSSLINKING.

Formulations based upon PennWhite Cansoft 60 are designed for impregnation in the padder. The amount of impregnating agent squeezed out of the fabric can be adjusted in the usual manner. Impregnated fabrics are dried under tension, clamped to a frame, at temperatures between 70 and 150 deg. C, depending on the thickness of the fabrics. If the fabric is dried at

Penn-White Ltd.
Radnor Park Trading Estate, Back Lne, Congleton, Cheshire. CW12 4XJ.
Telephone 44 (0) 1260 279635 Fax 44 (0)1260 298920 Email info@pennwhite.co.uk
www.pennwhite.co.uk

temperatures of 100 deg. C or under, this should be allowed for by heating for at least 0.5 - 1 minute to around 140-150°C. If this high-temperature crosslinking is practicable, the silicone will crosslink at room temperature within at least 24 hours. The state of advanced crosslinkage can be recognised by the definite, resilient handle.

INTERFERENCE WITH CROSSLINKAGE

Crosslinkage is interrupted only very rarely because the emulsion system is very stable. Such breakdowns can only occur through faulty formulation or if the impregnating bath has been kept for too long.

It is possible to determine whether or not the impregnating bath can still be safely used by applying a small amount of product to (not too absorbent) paper, using a glass rod or wire loop and then drying this in a laboratory oven at 150°C for a few minutes. On removal from the oven, the sample must no longer be tacky but show a detachable or abrasion resistant film (depending on the type of paper used).

SUBSTRATES

The textiles used for impregnations should be washed or dry cleaned before treatment. Larger amounts of processing aids can affect the flexible silicone impregnation.

RESISTANCE TO LAUNDERING AND DRY CLEANING

The handle and flexibility of fabrics impregnated with PennWhite Cansoft 60 are totally unaffected by repeated domestic laundering at 40 deg. C (using detergents for delicate fabrics) and dry cleaning.

SAFE HANDLING PROCEDURES

Safe handling procedures for this product can be found in the MSDS for this material which is supplied upon request**.**

Information given in this publication is based upon technical data gained in our own and other Laboratories and is believed to be true. However if the material is used in conditions beyond our control we can assume no liability for results obtained or damages incurred through the application of the data present herein.

Penn-White Ltd.
Radnor Park Trading Estate, Back Lne, Congleton, Cheshire. CW12 4XJ.
Telephone 44 (0) 1260 279635 Fax 44 (0)1260 298920 Email info@pennwhite.co.uk
www.pennwhite.co.uk