

## SYNTO-SIL MA HC

### SILICONE SOFTENER

SYNTO-SIL MA HC is the amino- silicone macro emulsion. It is added in coating or spraying compound for making the shiny film more soft. It also used for softening binder films in textile pigment printing and dyeing process.

SYNTO-SIL MA HC does not contain any volatile additive and is not air- pollution at all.

### SPECIFICATIONS:

<b>Appearance</b>	Milky white emulsion
<b>Chemical nature</b>	Silicone polymer emulsified in water
<b>Ionicity</b>	Nonionic
<b>pH (10%sol)</b>	7 ± 1
<b>Solubility</b>	Can be mixed with water at any ratio
<b>Compatibility</b>	Stable to all chemicals normally used in coating, printing , dyeing.
<b>Storage</b>	Sensitive to frost. When properly stored, shelf- life is 12 months at least.

### PROPERTIES & USES:

1. Excellent softening effect for all types of binders .
2. SYNTO-SIL MA HC is suitable as a non-ionic softener for all types of textiles. It improves hand, smoothness and sew ability of treated fabrics
3. SYNTO-SIL MA HC is a chemically inert, and can be combined with all types of chemical used in pigment printing, coating and dyeing
4. SYNTO-SIL MA HC improved very much the smoothness and flexibility of the binder films or coating films, even when incorporating high amounts of inorganic pigment such as Titanium-Oxides.
5. SYNTO-SIL MA HC increases the brightness of pigment prints and pigment dyed fabrics.

*APPLICATION:*

**I. Printing :**

SYNTO-SIL MA HC is added to the printing paste after incorporation of the thickener. Use an high speed homogenizer type mixer.

Usage :

1. For regular pigment printing, to improve softening and dry rubbing fastness use 5 – 15 g/kg
2. For improving hand of fastion knits use 10 – 30 g/kg.
3. For improving hand of prints made with AVCOLOR WHITEs and AVCOLOR BLACK use 10 – 40 g/kg.
4. Excess quantities of SYNTO-SIL MA HC can improve the hand of printed fabric even more, but wet fastness should be evaluated.

**II. Pigment dyeing**

To the pigment dyeing recipe add 10 – 30 g/l of SYNTO-SIL MA HC.

**III. COATING and SPRAYING**

1. When required tint SYNTO-PRET OL /SYNTO-PRET LACK with SYNTOLOR pigment dispersions.
2. The viscosity of SYNTO-PRET OL /SYNTO-PRET LACK can be adjusted by adding SYNTO-VISCOL VPU (0.2 – 1.5%).
3. To avoid bubbles in the coating or spraying compound add a de-foaming agent such as SYNTO-ANTIFOAM NS 300 (0.2 - 0.5 g/kg).
4. It is possible to modify the final handle of the coated textile by incorporating a special plasticizer. Add up to 4% of SYNTO-SIL MA HC.
5. For improving washing fastness of the coated textile add 1% SYNTO-FIX COAT IWF on the weight of the SYNTO-PRET OL / SYNTO-PRET LACK. After adding the cross linking additive, the pot life of the mixture is app. 8 hours and should be used within this time. Full cross linking effect is achieved in 4-5 days. Elevated drying temperatures do not fasten the cross linking process.
6. Spray or coat and dry completely to evaporate any residual water. It is possible to shorten drying time by elevating the temperature.
7. Spraying and coating equipments should be washed and dried in the normal procedure. During long stoppage in the spraying process, nozzles should be wrapped with a wet rug, or should be removed from the machine for cleaning and drying before further used.
8. For producing highly bright and shiny appearance of the coated textile, it is recommended to press or calander it at elevated temperature (195 - 205 °C)
9. Residues of coloured compound (without cross linking additive) can be mixed for re-using in any desired colour recipe. When residue of SYNTO-PRET OL is stored for long time, the product should be kept in tightly closed drum.
10. Before reusing, the paste should be re-homogenized and filtered.

#### IV. Spraying recipe for application on ready made garments.

SYNTO-PRET OL /SYNTORET LACK	940 – 980 g/l
SYNTO-SIL MA HC	0 – 40 g/l
SYNTO-VISCOL VPU	2 – 10 g/l
SYNTOLOR PIGMENTS	X %
SYNTO-FIX COAT IWF	10 g/l
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1. Spray over the garments the desired amount of the spraying compound (app. 100 – 150 g/ piece).
2. Dry in the oven at 80 – 100 °C.
3. If necessary repeat the spraying process twice.
4. Hot press at 195 - 205 °C.

#### Remarks:

1. Take care to spray the compound on completely clean garments, free of any dirt or other finishing additives.
2. The garment surface should be smooth and free of any fuzz and hairiness. If necessary pre-treat the garments with a bio-polishing enzyme to improve surface smoothness.
3. Recipes and application technique for foam coating and for direct paste coating
4. should be adjusted to the available coating machines.
5. Please consult AVCO VIETNAM COMPANY for recommending the optimal
6. recipes.

#### V. Finishing:

To improve sewability and lubricity add 10 – 40 g/l of SYNTO-SIL MA HC to the finishing bath