

## Product Data Sheet

### SUNCOAT HORIZON

#### YC4001/YC4005

Suncoat Horizon is a dual sensitized emulsion capable of producing photo-stencils of an extremely high quality. It should be used where high definition and resolution are required and is recommended for four colour process printing. Suncoat Horizon may be used with UV, solvent based & most water based inks. It is essential to use dyed meshes such as Sefar PET 1000 yellow to achieve the highest quality. Suncoat Horizon is a two pack system and is available in pack sizes of 0.9kg and 4.5kg.

#### **TECHNICAL DATA AND WORKING ADVICE:**

**HANDLING:** As Suncoat Horizon is already light sensitive before the second sensitizer is added, it must be handled in light safe conditions.

**SENSITIZING:** Half fill the sensitizer container with warm water to dissolve the sensitizer powder, reseal and shake the bottle for a few moments to dissolve the diazo powder. Add the entire contents of the bottle to the emulsion and mix thoroughly with a non-metallic spatula. Allow 2-3 hours, or preferably overnight, for air bubbles in the mixture to disperse.

**SCREEN PREPARATION:** All screens must be degreased with Suncoat Mesh Prep Liquid or Mesh Cleanser before the emulsion is applied. Using a brush or sponge apply thoroughly to both sides of the screen, allow to stand for two minutes, rinse off with cold water and remove all traces of Suncoat Mesh Prep. The screen must be allowed to dry before applying the emulsion. Use Degreaser Liquid Concentrate YC34 in automatic screen cleaning machines.

**COATING:** Suncoat Horizon Emulsion may be used with all mesh grades.

2 coats on substrate side, 1 coat on squeegee side, OR  
2 coats on substrate side, 2 coats on squeegee side

When coating wet-on-wet, always coat the squeegee side last, so as to push the emulsion through the mesh on to the substrate side. Suncoat Horizon is suitable for both automatic and hand coating techniques.

**DRYING:** After coating, the screen should be dried in a horizontal position, squeegee side up in light safe and dust free conditions. Drying can be assisted with a fan heater but the temperature should not rise above 40°C. Once dried the screens may be stored for up to 2 weeks in cool, light safe, low humidity conditions.

**EXPOSURE:** As Suncoat Horizon is intended for high quality work where accurate resolution is needed, the use of undyed mesh is not recommended. Exposure time depends upon many variables such as mesh count and colour, thickness of emulsion film and intensity and distance of light source. The table shown at the end of this leaflet is a guide only and is based on a 2 + 1 coating on a 165:34 dyed mesh exposed to a 5000w Metal Halide light source at a distance of 1 metre. (this distance is from the UV bulb to the screen, not from the UV bulb protective glass to the screen).

To achieve a more accurate exposure time, the use of the Coates One Shot Exposure Calculator is recommended.

**DEVELOPING:** The squeegee side should be wetted with cold water, then the stencil completely washed out from the print side using a high pressure jet at a distance of approximately half a metre. Complete the process by gently rinsing the squeegee side to remove any emulsion residue. Dry The screen at a temperature not exceeding 45<sup>o</sup>C. When completely dry, spot out and fill using Suncoat Horizon.

**POST EXPOSURE:** The durability of the stencil may be enhanced by exposing the whole dried stencil to the UV light source for at least the original exposure time. It is essential that the emulsion be thoroughly dry before proceeding to exposure. Post exposure is particularly recommended where water based and water based UV curing inks are to be printed.

**RECLAIMING:** Suncoat Horizon Emulsion may be easily removed. All traces of ink should be removed from the screen using Universal Screen-wash 11-00. Apply Suncoat Strip Liquid to both sides of the screen and allow it to react for approximately 3 minutes. The stencil can now be removed by spraying with water. Any ink residue can be removed by the use of Emulsifiable Screenwash YC26-04, either by itself or in conjunction with Suncoat Alkaline Paste. High pressure guns will enable quicker removal. Suncoat Horizon may be reclaimed by automatic cleaning machinery.

**HEALTH & SAFETY:** The emulsion contains some irritant materials and the sensitizer is acidic. Contact with skin and eyes should therefore be avoided.

Detailed Health and Safety Data is available on request from your local Sun Chemical Screen branch.

**STORAGE:** The unsensitized emulsion can be stored for 10 to 12 months in cool surroundings. Sensitized it can be stored for approximately 4 to 6 weeks, if kept cool, preferably in a refrigerator.

#### EXPOSURE

Light Source (Metal Halide)	Distance (Metres)	Exposure Times (Seconds)
5000w	1	75 90
	1.5	170-200
3000w	1	125-150
	1.5	280-340
2000w	1	190-225
	1.5	430-510