

SunCoat Horizon Screen Emulsion SunCoat Screen Making Products YC4001 & YC4005

1. Description

SunCoat Horizon is a dual sensitized (dual cure) screen 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 curing, solvent based & many water based inks. SunCoat Horizon is a two pack system and is available in pack sizes of 0.9kg (YC4001) and 4.5kg (YC4005).

2. Product Features*

- Dual cure emulsion
- Highest quality stencils
- Solvent, UV and water resistant
- Ideal for four colour process stencils

*Specific application performance data, where available can be provided by your Sun Chemical representative.

3. Product Suitability*

3.1 Applications

SunCoat Horizon is a dual sensitized (dual cure) screen 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 curing, solvent based & many water based inks.

4. General Handling

4.1 Storage and Shelf Life

SunCoat Horizon unsensitised emulsion should be stored in closed containers at temperatures between 5°C - 20°C and will have a minimum shelf life of 12 months but can remain usable for longer periods, depending on storage conditions. Once sensitised, SunCoat Horizon can be stored for approximately 4 to 6 weeks, if kept cool, preferably in a refrigerator.

4.2 Light Sensitivity

SunCoat Horizon emulsion is already light sensitive before the sensitiser is added and must therefore be handled in safe light conditions from opening.

For more specific handling advice refer to the Safety Data Sheet.

5. Application Conditions*

5.1 Screen Preparation

All screens must be degreased prior to emulsion coating, either manually or in an automatic system. The use of SunCoat degreasing products is recommended.



5.2 Sensitising

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

5.3 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 and 2 coats on squeegee side are recommended. When applying SunCoat Horizon wet on wet, always coat the squeegee side last, so as to push the emulsion through the mesh onto the substrate side of the screen. SunCoat Horizon Emulsion is fully suited for use with both automatic and hand coating techniques.

5.4 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 pre-exposed screens may be stored for up to 2 weeks in cool, light safe, low humidity conditions.

5.5 Exposure

SunCoat Horizon emulsion is intended for high quality work where accurate resolution is needed and therefore the use of dyed mesh is strongly recommended. Exposure time depends upon many variables such as mesh count and colour, thickness of emulsion film and intensity and distance of the light source.

The table below is a guide only and is based on a 2 + 1 emulsion coating on a 165 thread per cm, 34 micron thread diameter, dyed screen mesh.

SunCoat Horizon Exposure Time Guide		
Metal Halide Light Source Power (W)	Distance Bulb To Screen (M)	Approximate Exposure Time (s)
5000	1.0	75 to 90
	1.5	170 to 200
3000	1.0	125 to 150
	1.5	280 to 340
2000	1.0	190 to 225
	1.5	430 to 510

To achieve a more accurate exposure time, the use of an exposure calculator is strongly recommended.

5.6 Developing

After exposure, 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°C.



5.7 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 SunCoat Horizon 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.

5.8 Reclaiming

SunCoat Horizon emulsion may be easily removed. All traces of ink should be removed from the screen using a suitable screenwash before following the guidelines of the chosen stencil strip product. SunCoat stencil strip products are particularly recommended. SunCoat Horizon emulsion may be reclaimed using manual techniques and automatic cleaning / stripping equipment.

*Please refer to your local Sun Chemical representative for specific details.

6. End-use safety

6.1 Handling

SunCoat Horizon emulsion should be used in accordance with normal standards of industrial hygiene. It is strongly recommended that gloves and goggles are worn during use and that good air ventilation is provided in usage areas. SunCoat Horizon emulsion contains some irritant materials and the sensitizer is acidic, therefore contact with skin and eyes should be avoided.

Please refer to the information provided on product labels and relevant Safety Data Sheets.

7. Technical Assistance / Contacts

For further information, please contact your local Sun Chemical team.

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