

CERAMIC HHW1

APPLICATIONS

Direct ceramic tile printing with high stencil build-up for specialized applications.

GENERAL CHARACTERISTICS

- Dual-cure emulsion with 50% solids content for thick stencil production
- High solids content and viscosity can produce 300 micron stencil thickness, applying a number of coating as reported in table nr.1
- Fast exposing with wide latitude
- Resistant to weak solvent-based and water-based ink.

DIRECTIONS FOR USE

Handle under yellow safelight or low wattage tungsten lights. Avoid exposure to daylight, quartz/halogen lamps, cool white fluorescent lamps or discharge lamps.

Sensitizing and mixing

Prepare Diazo as per instructions on the bottle. Add the entire contents to the emulsion and mix thoroughly until a smooth consistency is obtained. Write the date of sensitizing on the label and then cover the sensitized emulsion and let stand for a few hours to enable air bubbles to escape. Store sensitized emulsion in cool conditions and use within one month for best results.

Mesh preparation and degreasing

Degrease and abrade new mesh with Direct Prep 1 (abrasive gel) in order to optimize stencil adhesion; dry and store the screen in a dust free, dry environment prior to coating. For further applications, thoroughly degrease the mesh prior to use with Direct Prep 2 (degreaser).

Coating

Using a high quality scoop coater or coating through, apply one or two coats to the substrate side of the screen, followed by one or two coats on the squeegee side. For a thicker stencil, apply additional coats to the squeegee side prior to drying. See table nr. 1 for coating thickness guidelines.

Drying and storage

Thoroughly dry the coated screen at a maximum temperature of 104°F (40°C) in a dust free, dark or yellow light area, with the substrate side facing down to optimize stencil quality. Coated screens should be stored in a dust free, dry, safelight environment and used within one week for best results.

Exposing

Ensure that all surfaces (emulsion, film and glass), are free of dust to minimize pinholes. Contact the emulsion side of the positive with the substrate side of the screen and secure in position before placing the screen in a suitable vacuum frame. Many variables, such as lamp type and age, distance from lamp to screen, mesh type and coating thickness, can affect exposure time. Perform an exposure test with one of two calculators now available (Exposure Calculator and 21 Step Sensitivity Guide) to determinate correct exposure time for a complete cure.

Developing

Wet both sides of the screen with a strong, finely divided spray of water and continue washing out until all image areas are fully open, working on print-side only. Rinse both sides of the screen and dry thoroughly before use. A properly exposed and developed screen will not leave residues on the squeegee side.

Reclaiming

If the emulsion is not catalyzed, remove all ink residues immediately after printing with an appropriate solvent. Remove stencil with Remove ER series and a pressure washer. For stains and ghost images, use Remove HR series followed by a pressure washer.

HEALTH AND SAFETY

Before using, refer to appropriate material safety data sheets.

PROBLEM SOLVING

Poor coating quality

- Properly clean, degrease and rinse the screen to remove all residues and traces of chemicals
- Properly and evenly tension the fabric
- Clean and ensure the scoop coater does not present any defect edge.

Poor detail or difficulty washing out image

- Ensure emulsion and coated screens are handled in safelight conditions only
- Ensure a minimum vacuum of 0.66 bar (500 mmHg or 20 in Hg) on vacuum gauge for optimum contact of the positive
- Optimize exposure time and use only high quality film positives

- Do not store sensitized emulsion or coated screen at high temperatures.

Emulsion falls off, extreme pinholes or severe stencil breakdown during printing

- Ensure that damp screens are not being exposed
- Only expose screens with an even and consistent coating thickness
- Ensure that stencil has not been severely underexposed
- Ensure mixed emulsion is not too old, has been correctly sensitized and has not been stored at high temperature.

Difficulty reclaiming screens

Optimize exposure time and properly rinse the squeegee side of the screen during developing to remove all residual traces, especially when using higher mesh count dyed fabric.

STORAGE

When sealed in the original container and stored in cool conditions, CERAMIC HHW1 will maintain original properties for 12 months from the date of production.

PACKAGING

Available in 1, 5 and 200 kilogram containers. In North America, available in one, five and fifty US gallon containers. Packaged with associated Diazo 21

Table 1. Emulsion over mesh build-up (microns) with various coating methods.

Mesh (threads/cm)	Mesh (threads/in)	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+10	2+12
43.80 pw	110.80 pw	30	55	80	105	130	155	180	230	275
34.100 pw	86.100 pw	30	60	90	120	150	180	210	270	330
32.70 pw	81.70 pw	60	130	200	270	340				
24.120 pw	61.120 pw	40	80	120	160	200	240	280	360	

WARRANTY AND LIMITED REMEDY

The directions, recommendations and specifications contained in this Technical Data Sheet are meant as a guide to the use of the product and shall not bind the company. Product specifications are subject to change without notice.

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The remedies are exclusive. In no case shall Saatichem be liable for any other direct or indirect damage or loss, including without limitation any incidental, special or consequential damages, or any material costs or labor charges incident to the removal or replacement of any mesh, screen, ink, substrate, finished graphic or any other item.