

Develop 40 Plus

Develop 40 Plus is designed to be used for the developing needs of both fully and semi-aqueous dry film customers. It is designed to provide the customer with a consistent, concentrated product, which is easy to handle. Develop 40 Plus eliminates the need to pre-mix liquids and powders. The customer is assured that the concentration of active ingredient will always be the same.

Develop 40 Plus is economical to use and exhibits a wide operating latitude.

Features & Benefits

High purity	Consistent performance; Less down time
Hard water tolerant	Cleaner operation; Less tank maintenance

Operating Conditions

Generally, one should rely on the dry film manufacturer's developing operating conditions. Develop 40 Plus, when made up at 2.5% by volume, will give a 1% solution of potassium carbonate powder.

Concentration	Depends upon desired pH. A 2.5% by volume solution gives a pH of approximately 11.4
Temperature	85°F – 90°F (30°C – 32°C)
Capacity	Under normal operation, loading capacity can be expected to be in the range of 19 – 26 mil-ft ² /Gal of working bath.
Control	Control may be obtained by running pH or by titration

Titration Method

1. Transfer a 25 mL sample of working solution into a 250 mL Erlenmeyer flask. Add 50 mL of water.
2. Add 5 to 10 drops of Methyl Orange indicator.
3. Titrate with 0.1N Hydrochloric Acid from yellow to pink.
4. Record mL used.

Calculations

$$\text{Develop 40 Plus Concentration} = \text{mL } 0.1\text{N HCl} \times 0.049$$

$$\% \text{ by weight Potassium Carbonate} = \text{mL of } 0.1\text{N HCl} \times 0.0196$$



Waste Disposal

Develop 40 Plus is highly alkaline. Both concentrate and working baths should be slowly neutralized with dilute acid to pH 6.0 to 8.0. Allow all solids to settle. Dispose in accordance to local regulations.

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Our People. Your Problem Solvers.

For more information on this process,
please call us at 203.756.5521 or email: techservice@hubbardhall.com

Hubbard-Hall holds certifications for **ISO 9001:2015**, Responsible Distribution, as accredited by the **ACD** (Alliance for Chemical Distributors) and as a **Women-Owned Small Business**, as well as maintaining an association with **Omni-Chem**¹³⁶.