# Develop 40

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

## Operating Conditions

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

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|---|---|
| Temperature | Depends upon desired pH. A 2.5% by volume solution gives a pH of approximately 11.4 |
| Concentration | 85 - 90 F. (30 - 32 C.) |

## Capacity

Loading capacity can be expected to be in the range of 19-26 mil-ft2/gallon of working bath.

## Control

Control may be obtained by running pH or by titration.

` Titration Procedure (percent by volume)

1. Transfer a 25 ml sample of working solution into a 250 ml Erlenmeyer flask. Add 50 mls of water.
2. Add 5 - 10 drops of methyl orange indicator.
3. Titrate with 0.1N HCl from yellow to pink.
4. Calculations:

(mls of 0.1N HCl)(0.049) = % by volume developing solution
(mls of 0.1N HCl)(0.0196) = % by weight potassium carbonate

## Waste Disposal

Develop 40 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.

**WARRANTY:** THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.

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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].