



FOCUS TECH Process Chemicals

Technical Data Sheet

Focus Tech DV-6450

Developer Concentrate

Product Description

DV-6450 is a highly concentrated developer solution designed for use in photoresist and soldermask developing processes. Formulated using water softening agents, working solutions of DV-6450 can be made using tap water with up to 400 ppm's of dissolved solids without forming significant hardness scale. DV-6450 also contains cleaning compounds that help break up resist residues to prevent deposition and build up in process and control equipment. The Focus Tech developing system combines high quality with ease of use to provide a superior developing system.

Features

- ⊙ Highly concentrated
- ⊙ Softening agents
- ⊙ Detergent additives

Benefits

- ⊙ Minimizes handling
- ⊙ Eliminates need for purified water
- ⊙ Extends uptime by slowing scum build-up

Physical Properties

Concentration: 450 g/L as potassium carbonate
Specific gravity: 1.36
pH: >12
Appearance: clear, water white
Freezing point: <40 °F

General operation

DV-6450 is designed for use in batch or steady state developing processes. A typical start up procedure is as follows:

1. Make up an 8 g/L to 10 g/L working developer solution using DV-6450.
2. Set up control system to replenish DV-6450 at 1.78% to 2.22% by volume.
3. Place control system in standby and process parts while adjusting line speed to maintain desired breakpoint.
4. When desired line speed is reached, determine process pH and enter as pH setpoint on controller.
5. Place control system in Auto. Process will be maintained at current breakpoint.

Typical Operating Parameters

Make Up:	1.78 – 2.22% v/v DV-6450 8 – 10 g/L as potassium carbonate
Replenishment:	1.78 – 2.22% v/v DV-6450 8 – 10 g/L as potassium carbonate
Process pH:	10.4 – 10.9
Temperature:	80 °F – 90 °F

Analytical Procedure

Materials required:

1. 250 ml Erlenmeyer flask
2. 20 ml pipette
3. 0.1N hydrochloric acid
4. pH meter

Procedure:

1. Pipette 20 mls of working developer into the Erlenmeyer flask and add 100 mls of DI water.
2. Titrate with hydrochloric acid to a pH of 4.1

Calculation:

Total carbonate (g/L) = mls 0.1N HCl used X 0.346

Compatible Materials of Construction

Plastics	PVC, CPVC, PVDF, polypropylene and polyethylene
Metals and alloys	Stainless steel, Hastelloy-C and titanium
Elastomers	EPDM, Viton and Buna-N

Storage

Store in original containers above 40 °F.

Safety

CAUTION! DV-6450 concentrates and working solutions contain strong alkaline ingredients. Avoid contact with eyes, skin and clothing. Wear chemical handler's gloves, goggles and protective clothing when handling. Read and understand Material Safety Data Sheet before using this product.

Notice

The information and recommendations, contained herein, regarding this product are, to the best of our knowledge, true and accurate. We make no guarantee of results because the conditions of actual use are beyond our control. We assume no liability for damages or penalties resulting from the use of this product or following our recommendations. Our recommendations and suggestions for use of this product are not intended to grant license to operate under or infringe any patent.