



DV-215 Developer Replenisher

DESCRIPTION

DV-215 contains 40% by weight (560 g/L) potassium carbonate and a strong pH booster designed to provide extended development for fully aqueous photo-resist. **DV-215** should be used as a replenisher for DV-200 or DV-205 developer solutions. Do not use **DV-215** for make-up. **DV-215** is a liquid of consistent purity and concentration that is well suited for bleed and feed systems. In addition, **DV-215** has a cleaner that minimizes scale in the horizontal developer and reduces machine downtime due to cleaning.

The strong pH booster in **DV-215** is to used to regenerate unusable bicarbonate ions into active carbonate ions. This extends the developer bath life, and reduces usage of developer concentrate. Use of **DV-215** can generate a chemistry savings of up to 60%, over developers without pH boosters. For example, if the process normally consumes 55 gallons of DV200 concentrate, the consumption of **DV-215** could be as low as 20 gallons.

OPERATING PARAMETERS

Make-Up	Use only as a replenisher for DV-200 or DV-205
Temperature	80 to 90°F (27 to 32°C)
Immersion Time	Not Applicable
Process	Horizontal
Agitation	Not Applicable
Ventilation	Advised
Tanks	Polypropylene, CPVC, Stainless Steel
Racks/Baskets	Not Applicable
Heaters	Stainless Steel or quartz heater. Stainless steel cooling coil recommended.



PHYSICAL PROPERTIES

Specific gravity	1.41 - 1.43
Appearance	Clear liquid
pH	>12
Odor	None
Flash Point	NA

CONTROL PROCEDURES

Aqueous photo-resists can be developed by horizontal spray methods. Maximum process latitude is obtained by adjusting the conveyor speed to permit clean development of the un-polymerized resist at approximately 50% of the distance through the development chamber. A thorough warm water rinse should follow development.

Addition of a suitable de-foamer, such as BB200 or BB300, may be necessary to control foam. Add ~5 ml of de-foamer for each gallon of developer solution.

Replenishment should be done by pH control. Maintain the pH of the working strength developer between 10.60 - 10.80. When the pH is controlled in the working range, the potassium carbonate concentration will be maintained between 0.9 – 1.1 % by wt, through the use of **DV215** replenisher.

An addition of 0.2% by volume of **DV215** will increase the potassium carbonate concentration by 0.1% by wt. As an added benefit, the pH booster in **DV215** will regenerate spent bicarbonate into active carbonate, effectively extending the usable life of the developer solution.

ANALYSIS

Use the analysis procedure in the DV200 or DV205 technical bulletins for total potassium carbonate concentration.

SAFETY AND STORAGE

DV-215 is a corrosive, alkaline concentrate and should be handled with care. Please refer to MSDS sheet for details. Do not store in direct sunlight, high temperature or below freezing.

WASTE TREATMENT

DV-215 solutions are basic and should be pH with sulfuric acid and disposed in accordance with local, state and federal regulations. Please ask a Florida CirTech technical sales rep. for more information regarding waste treatment of this chemistry and our complete line of waste treatment line if additional help or information is desired.

MISCELLANEOUS

Available in 5-gallon pails and 55 gallon drums. Consult MSDS sheet for additional information.