AR 300-25 & AR 300-35 Buffered Developer for AR resists

For the development of photoresists and novolac-based e-beam resist films

Buffered developer 產品說明

含緩衝的鹼性水溶液，適合電子束及UV微影顯影用途。
系列產品有:
AR 300-25 (硼酸鈉及氫氧化鈉)
AR 300-35 (矽酸鈉及磷酸鹽類)

產品包裝:

- ✅ 2.5 L /瓶
- ✅ 5. L /瓶

其它包裝可依客戶需求增加.

產品出貨:

- ✅ 2 - 4 週. 德國運出
- ❎ 1 週. 國內庫存 (目前暫無庫存)

✏️ 價格詢問 ✏️ 其它諮詢 📤 AR 300-26 GHS標識 📤 AR 300-35 GHS標識

Characterization 產品特性

- buffered, colorless aqueous-alkaline solutions for photoresist development with low dark erosion
  無色,含緩衝劑的鹼性水溶液. 對未顯影區域有較低的蝕刻.
- AR 300-26 high contrast, steep edges, fast development, particularly suited for thick films
  AR 300-26 具高對比, 垂直結構,顯影快速等特性, 適合高膜厚光阻顯影.
- AR 300-35 universal, wide process range for layers up to 6 µm
  AR 300-35為通用型, 在膜厚6um以下有較寬的製程參數條件.

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Properties 產品物性

	AR 300-26	AR 300-35
main component 主要成分	sodium borate and NaOH 硼酸鈉及氫氧化鈉	sodium metasilicate /-phosphate 矽酸鈉 /磷酸鹽
application 適合製程	immersion, puddle and spray	immersion, puddle development
process parameter 製程參數	21 – 23 ± 0.5 ℃ / 40 – 60 sec (max 120 sec)	21 – 23 ± 0.5 ℃ / 40 – 60 sec (max 120 sec)
normality (n) 當量濃度	1.10 n	0.33 n
density@20°C (g/cm^3) 密度	1.06	1.02
filtration (um) 過濾規格	0.2	0.2
storge temperature ℃ 儲存溫度	10 - 12	10 -22

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development recommendations
不同阻劑的顯影建議

optimal Suited

AR resist 阻劑	AR 300-26 sodium borate and NaOH	AR 300-35 sodium metasilicate /-phosphate
application / conditions 製程 / 參數	immersion, puddle and spray development 21-23 °C ± 0.5 °C, approx. 40-60 s (max. 120 s)	immersion, puddle and spray development 21-23 °C ± 0.5 °C, approx. 40-60 s (max. 120 s)
AR-P 3210	1 : 3	undilute to 10 um
AR-P 3220	2 : 1 / 2 : 1 to 3 : 2	- / -
AR-P 3510, 3540 / 3510 T, 3540 T	1 : 5 / 1 : 2	1 : 1 / undilute
AR-P 3740	1 : 3	4 : 1
AR-P 5320 / 5350	2 : 1 to 3: 2 / 1 : 7	- / 1 : 2
AR-BR 5460, 5480	1 : 4	1 : 1
AR-N 4340	1 : 1	- / undilute
AR-N 7500.18 / 7500.08	1 : 4 / 1 : 7	4 : 1 / 1 : 2
AR-N 7520.17 / 7520.11, .07 new	3 : 1 / 1 : 1	-
AR-N 7520.18 / 7520.073	2 : 3 / 1 : 3	2 : 1 / pure
AR-N 7700.18 / 7700.08	2 : 1 / 1 : 3	undilute to 3 : 1
AR-N 7720.30 / 7720.13	1 : 2 / 1 : 3	-

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Information on developer processing (applies to buffered developer and TMAH developers)

Higher developer concentrations result in a formally higher light-sensitivity of the resist-developer system, thus minimizing the required exposure intensity, reducing the development times and allowing for a high throughput in production. It must however be taken into account that an increased dark erosion is associated with stronger developers which successively attacks unexposed structures. More diluted developers provide, depending on the kind of resist, higher contrast and reduce the thickness loss in unexposed or only partly exposed interface areas even with longer development times. This particularly selective working method ensures a high degree of detail reproduction, while the intensity required for exposure is inevitably increased at the same time. To obtain a high contrast, more diluted developer and longer development times are recommended. Substrates have to be rinsed in deionised water immediately after development until complete removal of all residual developer, and are subsequently dried.

高濃度顯影液在高曝光敏感度的阻劑-顯影黃光系統可降低曝光強度,減少顯影時間以提高產能.
但需要留意的是,較強的顯影劑對不顯影的光阻具有較高的蝕刻率(dark erosion). 對正型光阻而言,即強顯影劑會攻擊未曝光部份.
使用稀釋過的顯影液可得到較高的對比, 在曝光的介面,或較長時間的顯影都可減少膜厚損失.
特別是在製程參數調整, 如果高強度曝光無可避免, 稀釋過的顯影液及拉長顯影時間可獲得較高的對比.
顯影後,基板需立即以DI water水洗以去除殘留的顯影液, 並緊接著乾燥製程.

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normality (n) 當量濃度	1.10 n
density@20℃ (g/cm^3) 密度	1.06
filtration (um) 過濾規格	0.2
storge temperature ℃ 儲存溫度	10 - 12

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Properties 產品物性

	AR 300-35
main component 主要成分	sodium metasilicate /-phosphate 矽酸鈉 /磷酸鹽
application 適合製程	immersion, puddle development
process parameter 製程參數	21 – 23 ± 0.5 °C / 40 – 60 sec (max 120 sec)
normality (n) 當量濃度	0.33 n
density@20°C (g/cm³) 密度	1.02
filtration (um) 過濾規格	0.2
storge temperature °C 儲存溫度	10 -22

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development recommendations 不同阻劑的顯影建議	optimal / Suited AR 300-35 sodium metasilicate /-phosphate
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AR-P 3740	4 : 1
AR-P 5320 / 5350	- / 1 : 2
AR-BR 5460, 5480	1 : 1
AR-N 4340	- / undilute
AR-N 7500.18 / 7500.08	4 : 1 / 1 : 2
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