Developer for AR resists

AR 300-40 metal ion-free developer

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

Characterisation

- metal ion-free aqueous-alkaline solutions for the processing of photo/ e-beam resists
- reduce the risk of metal ion contamination at the substrate surface
- residue-free development
- metal ion content < 0.1 ppm
- main component TMAH

Properties

Parameter / AR	300-44	300-46	300-47	300-475
Normality (n)	0.26	0.24	0.20	0.17
Density at 20 °C (g/cm3)	0.99			
Surface tension (mN/m)	32 max.			
Filtration (µm)	0.2			
Storage 6 month (°C)	10-22			

Development recommendations

🟩 optimally suited ▨ suited

AR-resists		AR 300-44	AR 300-46	AR 300-47	AR 300-475
Applications / conditions	photoresists	immersion, puddle and spray development 21-23 °C ± 0.5 °C, approx. 40 - 60 s (max. 120 s)			
AR-P 1200, AR-N 2200		2 : 1 to 3 : 1	-	-	-
AR-P 3110, 3120, 3170		-	-	6 : 1 to 3 : 1	-
AR-P 3510, 3540 ; 3510 T, 3540 T		- ; undil.	-	1 : 1 ; -	-
AR-P 3740, 3840		-	undil.	pure	-
AR-U 4030, 4040, 4060		-	-	1 : 2 $^{+}$, 2 : 3 $^{-}$	-
AR-P 5320; AR-P 5350		-	undil. ; -	- ; 2 : 3	-
AR-BR 5460, 5480		-	-	1 : 1	-
AR-P 5910 new (formerly X AR-P 3100/10)		-	-	-	-
AR-N 4340		-	-	-	undil.
AR-N 4400-10, 4450-10		-	-	3 : 2 to undil.	-
AR-N 4400-25		1 : 1	5 : 1 to undil.	undil.	-
AR-N 4400-50		8 : 1 to undil.	undil.	-	-
AR-P 7400. 23	e-beam resists	-	-	1 : 3	-
AR-N 7500.18 ; 7500.08		-	-	4 : 1	-
AR-N 7520.17 ; 7520.11, .07 new		-	undil.: .17., .11	undil.: .07	-
AR-N 7520.18 ; 7520.073			-	4 : 1	
AR-N 7700.18 ; 7700.08		-	undil. ; 4 : 1	- ; undil.	-
AR-N 7720.30 ; 7720.13		-	-	undil. ; 4 : 1	-

Information on developer processing (→ see also information on developers AR 300-26 and 300-35)

If metal ion-free developers are diluted, it is recommended to adjust the desired normality immediately prior to use by very careful dilution (with scales) of the stronger developer with DI water. Even small differences in normality may cause larger differences in the development rate. Developers should be used as fast as possible, since otherwise developer efficacy may be reduced.