

Megaposit™ MF™-20A Developers

Improved Process Latitude for Both Conventional and Advanced Resists

Description

MEGAPOSIT MF-20A series Developers are surfactant containing developers, designed to provide improved process latitude for both conventional and advanced resists over a wide range of developer normalities.

Features Include

- Low-foaming formulation
- Developer normalities include: 0.21, 0.24, 0.26 and 0.27N
- Improved contrast for optimal lithographic performance
- Uniform resist development with minimal bubble and residue related defects
- Effective across various resist technologies (g-, g/h-, i-Line and DUV)

Lot-to-lot Consistency

- Tightly controlled product specifications
- Total systems functional testing
- Statistical process control

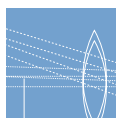
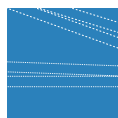
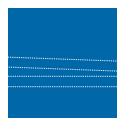
Manufacturing Process Control

Multiple Step In-process Testing

First In-process Test	TMAH Normality
	Carbonate
Second In-process Test	TMAH Normality
	Carbonate
	Surface Tension
Packaging Approval*	TMAH Normality
	Carbonate
	Particles
C of A**	Metals
	Chloride
	Color/Turbidity
	TMAH Normality

*Normality controlled $\pm 0.0002N$

**Control to ± 0.0018 TMAH



imagine
the possibilities™

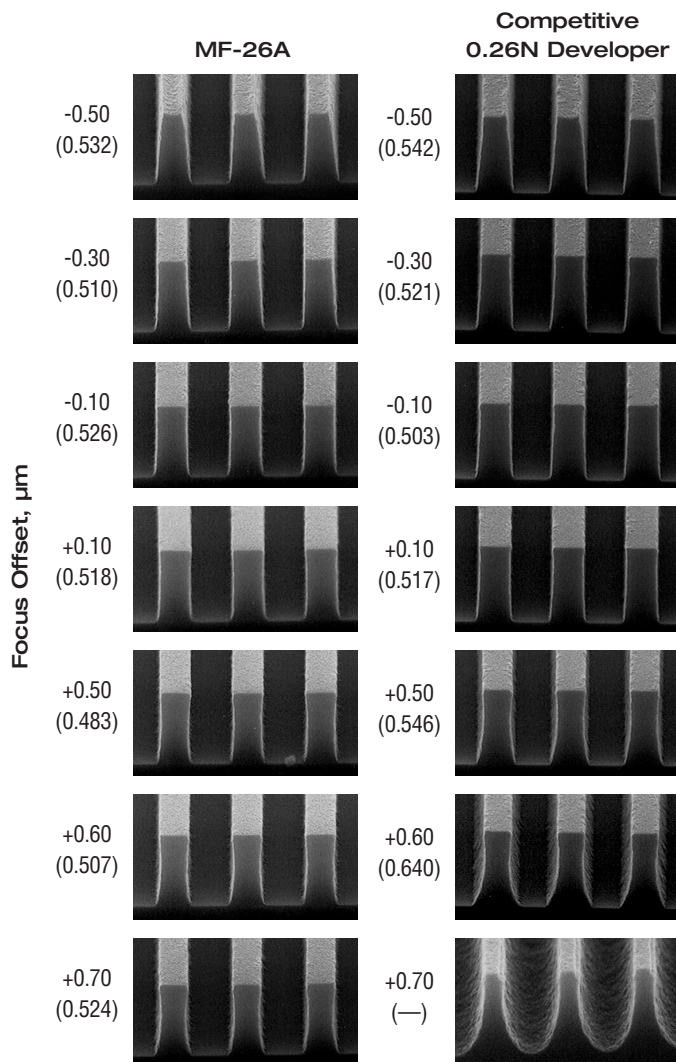
Wide Process Latitude/High Throughput

MEGAPOSIT SPR™350-1.2

Nominal 0.500 μm

Dense Lines/Spaces

Focus Latitude



79 mJ/cm²

85 mJ/cm²

Photospeed, E_0 49 mJ/cm²
 Sizing Energy, E_s 79 mJ/cm²
 E_s/E_0 Ratio 1.6
 Linearity @ E_s 0.400 μm
 Resolution @ E_s 0.375 μm
 Exposure Latitude ~28%
 Focus Latitude @ E_s 1.3 μm

56 mJ/cm²
 85 mJ/cm²
 1.5
 0.450 μm
 0.400 μm
 ~22%
 1.0 μm

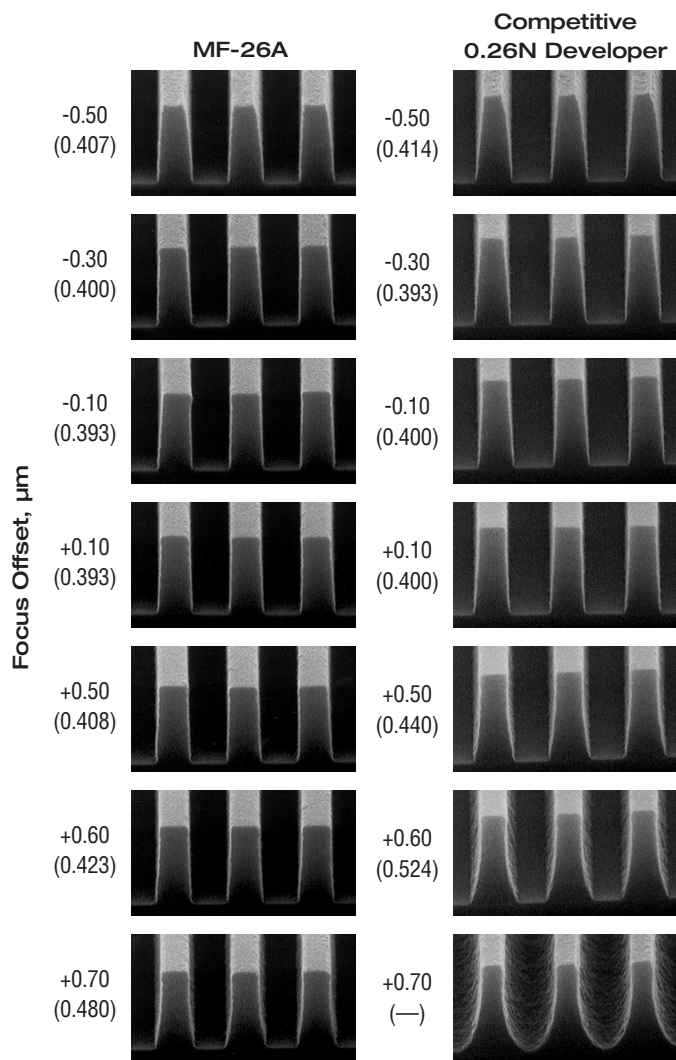
SUB = 100 mm Silicon
 FT = 10,750Å, $\pm 25\text{\AA}$
 SB = 90°C/60 sec. Contact Hotplate
 EXP = ASM PAS5500/200 i-Line (0.57 NA, 0.60 σ)
 PEB = 110°C/60 sec. Contact Hotplate
 DEV = As Indicated/40 sec. SSP @ 21°C

MEGAPOSIT SPR 850-1.0

Nominal 0.400 μm

Dense Lines/Spaces

Focus Latitude



133 mJ/cm²

151 mJ/cm²

Photospeed, E_0 72 mJ/cm²
 Sizing Energy, E_s 133 mJ/cm²
 E_s/E_0 Ratio 1.83
 Linearity @ E_s 0.350 μm
 Resolution @ E_s 0.325 μm
 Exposure Latitude $\geq 18.30\%$
 Focus Latitude @ E_s 1.3 μm

82 mJ/cm²
 151 mJ/cm²
 1.80
 0.375 μm
 0.350 μm
 $\geq 16.23\%$
 1.0 μm

SUB = 100 mm Silicon
 FT = 9,690Å, $\pm 20\text{\AA}$
 SB = 90°C/60 sec. Contact Hotplate
 EXP = ASM PAS5500/200 i-Line (0.57 NA, 0.60 σ)
 PEB = 110°C/60 sec. Contact Hotplate
 DEV = As Indicated/30 sec. SSP

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