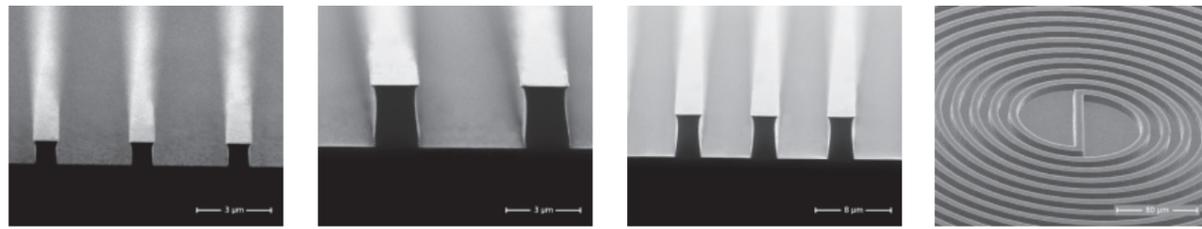


Positive Photoresist Series

Resist		ma-P 1205	ma-P 1210	ma-P 1215	ma-P 1225	ma-P 1240	ma-P 1275
Film thickness	µm	0.5	1.0	1.5	2.5	4.0	7.5
Spin coating	rpm s	3000 30					
Dose @ 365 nm (broadband exposure)	mJ cm ⁻²	35	35	45	55	110	210

Resist patterning with mask aligner broadband exposure



1 µm ma-P 1210,
1 µm lines/ 3 µm spaces

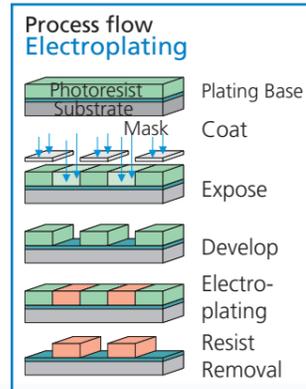
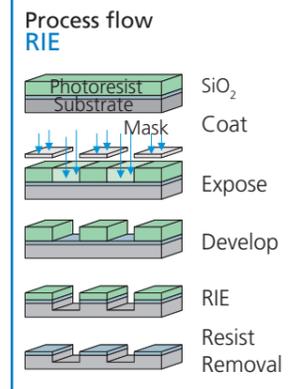
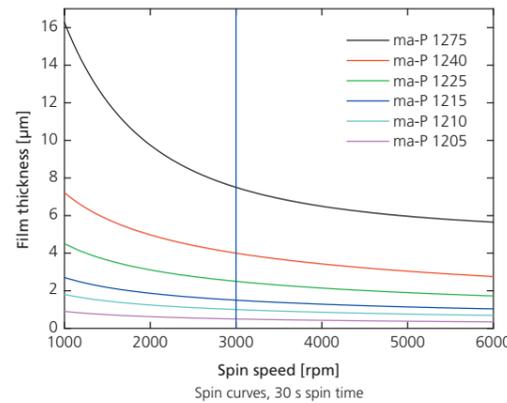
2.5 µm ma-P 1225,
2 µm lines/ 4 µm spaces

4 µm ma-P 1240,
3 µm lines/ 5 µm spaces

7.5 µm ma-P 1275,
coil, 10 µm trace with

ma-P 1200 series for microelectronics and microsystems technology

ma-P 1200 is a positive tone photoresist series designed for the use in microelectronics and microsystems technology. The resists are available in a variety of viscosities for film thicknesses of 0.3 – 40 µm in one spin-coating step.



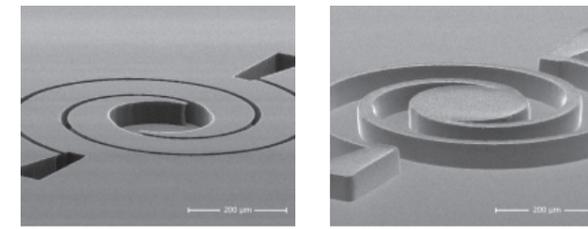
- Outstanding pattern stability in wet etch processes and acid and alkaline plating baths
- Highly stable in dry etch processes e.g. CHF₃, CF₄, SF₆
- Aqueous alkaline development
- Resists available in a variety of viscosities

- Main applications**
- Mask for etching e.g. Si, SiO₂, Other semiconductors, Metals
 - Mask for ion implantation
 - Mould for electroplating

Thick Positive Photoresists

Film thickness		7.5 µm	11 µm	20 µm	30 µm	40 µm	50 µm
ma-P 1275	rpm s	3000 30	-	500 60	350 60	250 60	-
ma-P 1275 HV	rpm s	-	3000 30	1100 60	700 60	500 60	400 60

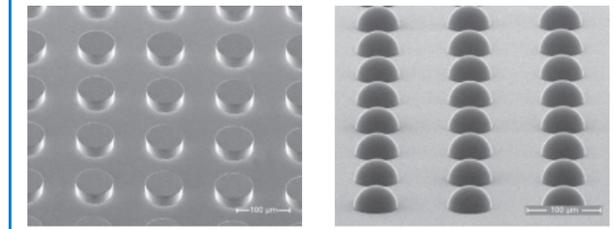
Electroplating



50 µm ma-P 1275 HV
mould

40 µm electroplated Ni

Resist pattern reflow

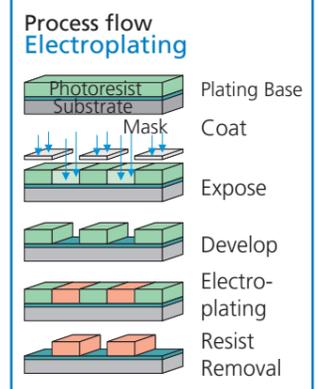
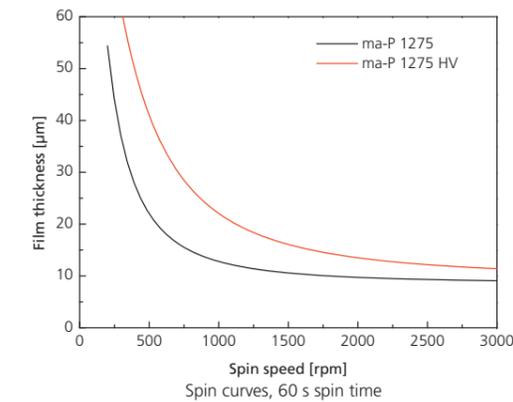


20 µm ma-P 1275, 60 µm
diameter pillar

30 µm reflowed ma-P
1275, 60 µm diameter

ma-P 1275 & ma-P 1275 HV for microsystems technology

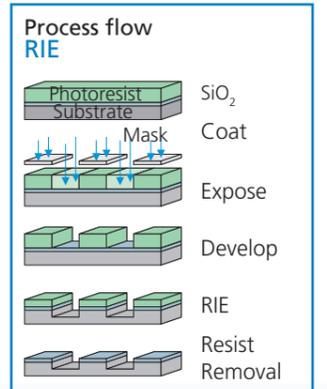
ma-P 1275 & ma-P 1275 HV are high viscosity positive tone photoresists for film thicknesses of up to 60 µm designed for electroplating structures in microsystems technology and excellently suited for the use as etch mask.



- Specifically designed for electroplating of structures in microsystems technology
- High stability in acid and alkaline plating baths
- Very well suitable also for the use as an etch mask exhibiting high dry and wet etch resistance
- Good thermal stability of the resist patterns attainable
- Aqueous alkaline development
- Side wall angle up to 87° with mask aligner broadband exposure

Main applications

- Mould for electroplating – e.g. for micro coils, micro springs, micro optical components
- Etch mask for metal and semiconductor substrates – e.g. microlenses from reflowed patterns
- Mask for ion implantation



micro resist technology

Gesellschaft für chemische Materialien spezieller Photoresistsysteme mbH

Positive Photoresists

- ma-P 1200 series
- Thick resists ma-P 1275, ma-P 1275 HV

Unique features of the positive photoresists

- Sensitivity to g-line, i-line or broadband exposure
- No post exposure bake
- Easy removal
- Ready-to-use resist solutions in a variety of viscosities
- Broad process window and easy to handle

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Positive Photoresists

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