

**This is an RFQ (Request for Quote) for Supply of resists and related chemicals to be used for microelectronics applications (Quotes from Domestic manufacturers / vendors only).**

**Procedure:**

1. Vendors will be required to submit a quote containing details of the Indian OEM with FOR - IISc Bengaluru price in INR only.
2. The technical description should take into account the following requirements and information that has been provided:

Chemicals	Quantity
<p><i>Photoresist and relevant chemicals</i></p> <p><b>Type:</b> Positive, Negative, Image Reversal (with minimum dark erosion)  <b>Wavelength(nm):</b> UV(365,375,390, 405) and DUV(248nm) (with Absorption Spectra, Contrast Curve)  <b>Developer:</b> TMAH based (for Residue free development)  <b>Bake Temperatures:</b> 80 to 180C  <b>Thickness(um):</b> 0.5 to 1.5 (with Spin Curve, Uniformity ,&lt;3% on 4" wafer)  <b>Resist Profile:</b> 85 to 90 degree(with a good control on angle)  <b>Adhesion:</b> Self to Si,SiO2, Pt (i.e resist should have good adhesion with Semiconductors, Insulators and metals)  <b>Primer:</b> Self HMDS, LOR or any customized  <b>Removers/Strippers:</b> Non Toxic Room temperature to &lt;80C  <b>Etch Resistance:</b> Dry Etch Selectivity (1:1) or better with F, Cl, O2 and Wet etch resistance compatibility  <b>Shelf Life:</b> Minimum 6 Months(12 months preferred)  <b>Resolution(um):</b> UV 0.5um to 1um, DUV(0.2 to 0.8)  <b>Exposure Dose:</b> &gt;5mJ/cm2  <b>Relevant Documents:</b> MSDS, TDS</p>	<p>12 Litre(minimum supply capacity per year) for resist, primer  60 Litre(minimum supply capacity per year) for each of Developers, Removers and Strippers</p>
<p><i>eBeam Resist and relevant chemicals</i></p> <p><b>Type:</b> Positive, Negative; (with minimum dark erosion)  <b>Developer:</b> TMAH based (for Residue free development)  <b>Bake Temperatures:</b> 80 to 200C  <b>Thickness(um):</b> 0.05 to 0.5 (with Spin Curve, Uniformity ,&lt;3%</p>	<p>6 Litre(minimum supply capacity per year) for resist,primer  30 Litre(minimum supply capacity per year) for each of Developers, Removers and</p>

<p>on 4" wafer) <b>Resist Profile:</b>85 to 90 degree(with a good control on angle) <b>Adhesion:</b> Self to Si,SiO<sub>2</sub>, Pt (i.e resist should have good adhesion with Semiconductors, Insulators and metals) <b>Primer:</b> Self HMDS, LOR or any customized <b>Removers/Strippers:</b> Non Toxic Room temperature to &lt;80C <b>Etch Resistance:</b> Dry Etch Selectivity (1:1) or better with F, Cl, O<sub>2</sub> and Wet etch resistance compatibility <b>Shelf Life:</b> Minimum 6 Months(12 months preferred) <b>Resolution(um):</b> 0.010um to 1um <b>Exposure Dose:</b> &gt;100mJ/cm<sup>2</sup> <b>Relevant Documents:</b> MSDS, TDS</p>	<p>Strippers</p>
<p><i>UV NIL and relevant chemicals</i></p> <p><b>Type:</b> UV, DUV(248nm) <b>Wavelength(nm):</b>325,365, 405and DUV(248nm) (with Absorption Spectra, Contrast Curve) <b>Bake Temperatures:</b> 60 to 180C (room temperature imprint preferred) <b>Thickness(um):</b> 0.1 to 1 (with Spin Curve, Uniformity ,&lt;3% on 4" wafer) <b>Adhesion:</b> Self to Si,SiO<sub>2</sub>, Pt (i.e resist should have good adhesion with Semiconductors, Insulators and metals) <b>Primer:</b> Self mr APS1,LOR compatible or any customized <b>Removers/Strippers:</b> Non Toxic, Room temperature to &lt;80C, O<sub>2</sub> ashing <b>Etch Resistance:</b> Dry Etch Selectivity (1:1) or better with F, Cl, O<sub>2</sub> and Wet etch resistance compatibility <b>Shelf Life:</b> Minimum 6 Months(12 months preferred) <b>Resolution(um):</b> 0.020um to 1um (and also upto 100um) <b>Exposure Dose:</b> &gt;10mJ/cm<sup>2</sup> <b>Stamps:</b> PDMS, Quartz Fused Silica (with excellent stamp release properties) <b>Imprint Pressure:</b> 1 to 2 MPa (wider range preferred) <b>Relevant Documents:</b> MSDS, TDS</p>	<p>12 Litre(minimum supply capacity per year) for resist,primer 60 Litre(minimum supply capacity per year) for each of Removers and Strippers</p>
<p><i>Thermal NIL and relevant chemicals</i></p> <p><b>Glass Transition(Tg):</b>35C to 100C (No Tg after imprinting, i.e higher thermal stability) <b>Bake Temperatures:</b> 60 to 180C <b>Imprint Temperatures:</b>100C to 200C,Release temperatures 30C to</p>	<p>12 Litre(minimum supply capacity per year) for resist,primer 60 Litre(minimum supply capacity per year) for each of Removers and Strippers</p>

<p>90C</p> <p><b>Thickness(um):</b> 0.1 to 1 (with Spin Curve, Uniformity ,&lt;3% on 4” wafer)</p> <p><b>Adhesion:</b> Self to Si,SiO<sub>2</sub>, Pt (i.e resist should have good adhesion with Semiconductors, Insulators and metals)</p> <p><b>Primer:</b> Self mr APS1,LOR compatible or any customized</p> <p><b>Removers/Strippers:</b> Non Toxic, Room temperature to &lt;80C, O<sub>2</sub> ashing</p> <p><b>Etch Resistance:</b> Dry Etch Selectivity (1:1) or better with F, Cl, O<sub>2</sub> and Wet etch resistance compatibility</p> <p><b>Shelf Life:</b> Minimum 6 Months(12 months preferred)</p> <p><b>Resolution(um):</b> 0.020um to 1um (and also upto 100um)</p> <p><b>Stamps:</b> PDMS, Quartz Fused Silica (with excellent stamp release properties)</p> <p><b>Imprint Pressure:</b> 20 to 3000 Newton (wider range preferred)</p> <p><b>Relevant Documents:</b> MSDS, TDS</p>	
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3. The commercial comparison will be done as per Government of India rules, specifically GFR 2017. Note that GFR has recently been amended.
4. As per recent edits to the GFR, there are three classes of vendors distinguished by their “local content”. In the cover letter, vendors must mention which applies to them:  
Class 1 supplier: Goods and services have a local content of equal to or more than 50%  
Class 2 supplier: Goods and services have a local content more than 20% but less than 50%  
Non-local supplier: Goods and services have a local content of equal to or less than 20%
5. Quotes will be entertained from Class 1 or Class 2 suppliers only.
6. The deadline for submission of quotes is the 23<sup>rd</sup> July 2021, 5:30 pm Indian Standard Time. Proposals should arrive at the NNFC office, GF-20, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India, by the above deadline



7. Please note: GST applicable to IISc will be 5 %. GST concessional certificate will be provided.

Thanking you,

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