



**MATERIAL DECLARATION**

|                    |               |                      | MATERIAL DECLARATION |  |              |                |                 |                       |         |
|--------------------|---------------|----------------------|----------------------|--|--------------|----------------|-----------------|-----------------------|---------|
|                    |               |                      | PART NUMBER          | AS4C256M16D4-xxBxN   | PART WEIGHT  |                | 186.769mg       |                       |         |
| No.                | Part Name     | Material Name        | Component wt (mg)    | Material Content (Element)   | CAS Number   | Element wt (%) | Element wt (mg) | wt % of Total unit wt | PPM     |
| 1                  | Substrate     | HL-832NX-A / AUS 308 | 55.187               | Thermosetting resin (Including filler)   | Trade secret | 13.76%         | 7.594           | 4.07%                 | 137600  |
|                    |               |                      |                      | Glass cloth  | 65997-17-3   | 13.76%         | 7.594           | 4.07%                 | 137600  |
|                    |               |                      |                      | Copper   | 7440-50-8    | 56.50%         | 31.178          | 16.69%                | 564950  |
|                    |               |                      |                      | Other(impurity)  | Trade secret | 1.53%          | 0.842           | 0.45%                 | 15250   |
|                    |               |                      |                      | Gold   | 7440-57-5    | 0.17%          | 0.094           | 0.05%                 | 1700    |
|                    |               |                      |                      | Acrylate resin   | Trade secret | 3.30%          | 1.824           | 0.98%                 | 33048   |
|                    |               |                      |                      | Colorant   | Trade secret | 0.03%          | 0.014           | 0.01%                 | 259.2   |
|                    |               |                      |                      | Filler   | Trade secret | 2.53%          | 1.395           | 0.75%                 | 25272   |
|                    |               |                      |                      | Aromatic carbonyl compounds  | Trade secret | 0.32%          | 0.179           | 0.10%                 | 3240    |
|                    |               |                      |                      | Amine compound   | Trade secret | 0.05%          | 0.029           | 0.02%                 | 518.4   |
|                    |               |                      |                      | Antifoamer&Leveling agent  | Trade secret | 0.13%          | 0.072           | 0.04%                 | 1296    |
|                    |               |                      |                      | Diethylene glycol monomethylether acetate  | 112-15-2     | 0.01%          | 0.007           | 0.00%                 | 129.6   |
|                    |               |                      |                      | Dipropylene glycol monomethylether   | 34590-94-8   | 1.18%          | 0.651           | 0.35%                 | 11793.6 |
|                    |               |                      |                      | 3-methoxy-3-menthyl butylether   | 103429-90-9  | 1.85%          | 1.023           | 0.55%                 | 18532.8 |
|                    |               |                      |                      | Solvent naphtha (petroleum) , Heavy arom   | 64742-94-5   | 0.31%          | 0.172           | 0.09%                 | 3110.4  |
|                    |               |                      |                      | Acrylate monomer   | Trade secret | 0.51%          | 0.279           | 0.15%                 | 5054.4  |
|                    |               |                      |                      | Epoxy resin  | Trade secret | 1.72%          | 0.951           | 0.51%                 | 17236.8 |
|                    |               |                      |                      | Barium sulfate   | 7727-43-7    | 0.84%          | 0.465           | 0.25%                 | 8424    |
|                    |               |                      |                      | Organic Filler   | Trade secret | 0.17%          | 0.093           | 0.05%                 | 1684.8  |
|                    |               |                      |                      | Nickel   | 7440-02-0    | 1.33%          | 0.734           | 0.39%                 | 13300   |
| 2                  | Mold compound | CEL-1702HF           | 70.504               | Epoxy resin  | Trade Secret | 8.50%          | 5.288           | 2.83%                 | 75000   |
|                    |               |                      |                      | 2,2'-((3,3',5,5'-tetramethy-(1,1'-biphenyl)-4,4'-diyl)-bis(oxymethylene))-bis-oxirane              | Trade Secret | 6.00%          | 4.583           | 2.45%                 | 65000   |
|                    |               |                      |                      | Formaldehyde, polymer with 2-(chloromethyl)oxirane and 2-methylphenol                              | Trade Secret | 0.50%          | 0.353           | 0.19%                 | 5000    |
|                    |               |                      |                      | Hardener   | Trade Secret | 8.50%          | 5.640           | 3.02%                 | 80000   |
|                    |               |                      |                      | Carbon black   | 1333-86-4    | 0.50%          | 0.353           | 0.19%                 | 5000    |
|                    |               |                      |                      | Amorphous silica 1   | 60676-86-0   | 68.50%         | 48.296          | 25.86%                | 685000  |
| Amorphous silica 2 | 7631-86-9     | 7.50%                | 5.993                | 3.21%  | 85000        |                |                 |                       |         |
| 3                  | Epoxy         | 6202C                | 1.926                | 2-(2-Ethoxyethoxy)ethyl acetate  | 112-15-2     | 50.00%         | 0.963           | 0.52%                 | 500000  |
|                    |               |                      |                      | Butadiene, acrylonitrile polymer, carboxy-terminated, polymer with bisphenol A and epichlorohydrin | 68610-41-3   | 50.00%         | 0.963           | 0.52%                 | 500000  |
| 4                  | Solder ball   | Sn96.8Ag3.0Cu0.2     | 33.346               | Tin  | 7440-31-5    | 96.80%         | 32.279          | 17.28%                | 968000  |
|                    |               |                      |                      | Silver   | 7440-22-4    | 3.00%          | 1.000           | 0.54%                 | 30000   |
|                    |               |                      |                      | Copper   | 7440-50-8    | 0.20%          | 0.067           | 0.04%                 | 2000    |
| 5                  | Gold wire     | Au                   | 0.233                | Au   | 7440-57-5    | 99.99%         | 0.233           | 0.12%                 | 999900  |
|                    |               |                      |                      | Others   | Trade Secret | 0.01%          | 0.000           | 0.00%                 | 100     |
| 6                  | Die           | Chip                 | 25.573               | Silicon  | 7440-21-3    | 100.00%        | 25.573          | 13.69%                | 1000000 |
|                    |               |                      | 186.769              |  |              | 600.00%        | 186.769         | 100.00%               | 6000000 |