MATERIAL SAFETY DATA SHEET

1.0 IDENTIFICATION

Product Name: (8") 0.18µ Silicon Wafer
General Use: Semiconductor Manufacturing
Product Description: Semiconductor Finished product

MANUFACTURE
Company Name: Tower Semiconductor LTD.
Address: 4321 Jamboree Road NPB, California 92660 USA

Responsible Div: QA & Safety
Telephone: +1 949-435-8000
Fax: 1-949-435-8757
EMERGENCY TELEPHONE NUMBER: +1 949-435-8000

2.0 COMPOSITION / INFORMATION ON INGREDIENTS

Substances / Mixture : Mixture

<table>
<thead>
<tr>
<th>Composition (Element)</th>
<th>CAS No.</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon (Si)</td>
<td>7440-21-3</td>
<td>99.60</td>
</tr>
<tr>
<td>Other minority Dopant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum (Al)</td>
<td>7429-90-5</td>
<td>&lt;0.25</td>
</tr>
<tr>
<td>Titanium (Ti)</td>
<td>7440-32-6</td>
<td>&lt;0.04</td>
</tr>
<tr>
<td>Indium (In)</td>
<td>7440-74-6</td>
<td>&lt;0.002</td>
</tr>
<tr>
<td>Tungsten (W)</td>
<td>7440-33-7</td>
<td>&lt;0.08</td>
</tr>
<tr>
<td>Cobalt (Co)</td>
<td>7440-48-4</td>
<td>&lt;0.002</td>
</tr>
<tr>
<td>Arsenic (As)</td>
<td>7440-38-2</td>
<td>&lt;0.002</td>
</tr>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>&lt;0.002</td>
</tr>
<tr>
<td>Boron</td>
<td>7440-42-8</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>7723-14-0</td>
<td>&lt;0.002</td>
</tr>
</tbody>
</table>

3.0 HAZARDS IDENTIFICATION

Hazard effects
Human health effects: Skin contact causes irritation.
Environmental effects: NA
Class name of hazard: NA

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4.0 FIRST AID MEASURES

Inhalation: NA
Eye: NA

5.0 FIRE FIGHTING MEASURES

Measures: Shut off fuel as much as possible.
Equipments: Dry chemical or carbon dioxide should be used for small fire.
Fire fighters should wear proper protective clothes.

6.0 ACCIDENTAL RELEASE MEASURES

Equip extinguishers in case of ignition.
Quickly shut off all ignition sources.

7.0 HANDLING AND STORAGE

Handling: Fragile-Handle with care.
Shut off all sources of ignition.
Do not bring contaminated protective tool, such as gloves, to the lounge.
Be careful of personal health after handling.
Storage: Keep away all sources of ignition.
Do not heat.
Store in well-ventilated area.
Keep dry.
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8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMIT VALUES: NA
EXPOSURE CONTROLS
Engineering controls: NA
Personal protection
Respiratory protection: NA
Eye protection: NA
Skin protection

9.0 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Chip
Color: Silver / Gray
Boiling Point: Not Available
Melting Point: Not Available
Density: Not Available
Vapor Pressure: Not Available
Vapor Density: Not Available
Solubility in water: Insoluble

10. STABILITY AND REACTIVITY

STABILITY: Stable
MATERIALS TO AVOID

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Sensitization – N/A
Chronic Toxicity - N/A
Mutagen city - N/A
Carcinogenicity - N/A
IARC - N/A
NTP - N/A
OSHA - N\A
Reproductive and
Developmental Toxicity - N\A
Other – N\A

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12. ECOLOGICAL INFORMATION

ECOTOXICITY -
PERSISTENCE AND
DEGRADABILITY -
BIOACCUMULATIVE
POTENTIAL –

13. DISPOSAL CONSIDERATION

Disposal method:  All excess material must be collected and transferred to a
Professional waste disposal company for treatment.
Carefully review information in -7.HANDLING & STORAGE.

Special control industrial Disposal

14.0 TRANSPORT INFORMATION

UN sorts – N/A
Domestic regulation – N/A
Special safety measurement
And condition

15.0 REGULATIORY INFORMATION

N/A

16.0 OTHER INFORMATION

N/A