SECTION 1 – IDENTIFICATION

Product Name: SolderQuik BGA Preforms™
Manufacturer: Winslow Automation, Inc.
905 Montague Expressway, Milpitas, CA 95035
Information Telephone: (408) 292-9004
Emergency (24-hr): For emergencies in the United States, call INFOTRAC (800) 535-5053

SECTION 2 – HAZARD(S) IDENTIFICATION

GHS CLASSIFICATION: Health Hazard

Signal Word: DANGER

WHMIS Classification:
GHS08, GHS07

GHS08 Health Hazard:
Carc. 2 H351: Suspected of causing cancer.
Repr. 1 H360: May damage fertility or the unborn child.
STOT RE 2 H373: May cause damage to organs through prolonged or repeated exposure.

GHS07:
Acute Tox. 4 H302: Harmful if swallowed.
Acute Tox. 4 H332: Harmful if inhaled.

Hazard Statements
H302+H332: Harmful if swallowed or if inhaled.
H351: Suspected of causing cancer.
H360: May damage fertility or the unborn child.
H373: May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements
P270: Do not eat, drink, or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P311: If swallowed: Call a poison center or doctor/physician.
P302+P352: If on skin: Wash with plenty of soap and water.
P304+P340: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P405: Store locked up.
P501: Dispose of contents/container to an approved waste disposal plant.
**SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>Hazardous Ingredients:</th>
<th>C.A.S Number</th>
<th>Ingredient % by weight</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (Pb)</td>
<td>7439-92-1</td>
<td>0 – 90*</td>
<td>0.05 mg/m³</td>
<td>0.15 mg/m³</td>
</tr>
<tr>
<td>Tin (Sn)</td>
<td>7440-31-5</td>
<td>10 – 96.5*</td>
<td>2 mg/m³</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Silver (Ag)</td>
<td>7440-22-4</td>
<td>0 – 4</td>
<td>0.01 mg/m³</td>
<td>N.E.</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>7440-50-8</td>
<td>0 – 1</td>
<td>0.1 (fume)</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

**Non-Hazardous Ingredients:**

| Water-Dispersible Paper | N/A | N/A | N/A | N/A |

Note: Product under normal conditions does not represent an inhalation, ingestion, or contact health hazard.

*The weight percent of Lead and Tin varies depending on the number of solder balls on the preform and the type of solder ball used.

**SECTION 4 – FIRST-AID MEASURES**

**Eye Contact:**
Immediately flush eyes with clean running water for at least 15 minutes. Get medical attention if irritation develops or overexposure persists.

**Skin Contact:**
Immediately wash with water and soap and rinse thoroughly. If molten material contacts skin, cool area immediately with water. DO NOT attempt to remove material from the skin. Treat as a burn and seek medical attention.

**Inhalation:**
If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

**Ingestion:**
Seek immediate medical attention.

**SECTION 5 – FIRE-FIGHTING MEASURES**

**Extinguishing Media:**
CO₂, extinguishing powder, or water spray

**Protective Equipment:**
As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA Ratings:**

| NFPA Health: | 2 |
| NFPA Fire:    | 0 |
| NFPA Reactivity: | 0 |

905 Montague Expressway • Milpitas, CA 95035
Phone: (408) 292-9004
Fax: (408) 956-0199
www.winslowautomation.com
SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personnel Precautions: Ensure adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers, ditches, and waterways.

Methods for Containment: Dispose contaminated material to an approved waste disposal plant.

Methods for Cleanup: Ensure adequate ventilation.

SECTION 7 – HANDLING AND STORAGE

Handling: Use with adequate ventilation. Avoid breathing vapor and fumes.

Storage: Store in a cool area. Keep container tightly sealed.

Special Handling Procedures: No further relevant information available.

Hygiene Practices: Wash thoroughly after handling.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye/Face Protection: Wear tightly-fitting safety goggles.

Hand Protection: Wear appropriate protective gloves. Nitrile rubber or natural rubber gloves are recommended.

Respiratory Protection: Use suitable respiratory protective device in case of insufficient ventilation.

Other Protective: Wash hands thoroughly after handling. Keep away from food or drinks.
EXPOSURE GUIDELINES:

**Lead (Pb):**
PEL: Long-term value: 0.05 mg/m³
REL: Long-term value: 0.05 mg/m³
TLV: Long-term value: 0.05 mg/m³

**Tin (Sn):**
PEL: Long-term value: 2 mg/m³
REL: Long-term value: 2 mg/m³
TLV: Long-term value: 2 mg/m³

dust and fume

**Silver (Ag):**
PEL: Long-term value: 0.01 mg/m³
REL: Long-term value: 0.01 mg/m³
TLV: Long-term value: 0.01 mg/m³

**Copper (Cu):**
PEL: Long-term value: 1* 0.1** mg/m³
as Cu *dusts and mists **fume
REL: Long-term value: 1* 0.1** mg/m³
as Cu *dusts and mists **fume
TLV: Long-term value: 1* 0.2** mg/m³
*dusts and mists; **fume; as Cu

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Paper wafer with solder balls in grid array format

**Appearance:**

**Color:** Off-white paper with silver gray solder balls

**Odor:** Odorless

**Boiling Point:** Undetermined

**Melting Point:** Undetermined

**Density (g/cm³):** Varies

**Vapor Pressure (mm Hg):** Not Applicable

**pH:** Not Applicable
Flash Point: N/A
Auto-Ignition Temperature: Product is not self-igniting.
Danger of explosion: Product does not present an explosion hazard.

Solubility in/Miscibility with Water: Insoluble

SECTION 10 – STABILITY AND REACTIVITY

Chemical Reactivity: Stable under normal temperatures and pressures.
Hazardous Polymerization: No known hazardous reactions.
Conditions to Avoid: Humidity and water will degrade the product.
Incompatible Materials: Oxidizing acids, strong oxidizers
Special Decomposition Products: Thermal degradation is not significant at temperatures achieved during proper use, as directed by product use guide. Thermal degradation products may include, but are not limited to, carbon monoxide, carbon dioxide, oligomers of ethylene glycol and glycerol. At temperatures greater than 1000°F (538°C), oxides of lead and tin may be released. These combustion by-products are toxic and should not be inhaled.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity: Harmful if swallowed or inhaled.
Lead (Pb):
CAS: 7439-92-1
Oral: LD50: 500 mg/kg (ATE)
Inhalative: LC50/4h: 1.5 mg/l (ATE)

Primary Irritant Effect:
Eye: Classification criteria not met.
Skin: Classification criteria not met.
SECTION 12 – ECOLOGICAL INFORMATION
Ecotoxicity: No ecotoxicity data was found for this product.
Environmental Fate: No environmental information found for this product.

SECTION 13 – DISPOSAL CONSIDERATIONS
Waste Disposal: Hazardous Waste Solid, n.o.s., Class 9, NA3077, PGIII. Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classification of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or other guidelines, if applicable, to ensure compliance. Arrange disposal in accordance with the EPA and/or state and local guidelines.

SECTION 14 – TRANSPORT INFORMATION
Department of Transportation: Hazardous Waste Solid, n.o.s., NA3077, Class 9, Miscellaneous

SECTION 15 – REGULATORY INFORMATION
TSCA Status: Ingredients in this product are reported in the EPA TSCA Inventory, 1980.
SARA Status: This Chemical is subject to the reporting requirements of Section 313, Title III.
California Proposition 65: This product contains LEAD which is known to the State of California to cause cancer, birth defects, or other reproductive harm.
## SECTION 16 – OTHER INFORMATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Use:</td>
<td>This product is designed to join a BGA package to corresponding solder lands on Printed Circuit Board (PCB).</td>
</tr>
<tr>
<td>HMIS Health Hazard:</td>
<td>1</td>
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<tr>
<td>HMIS Fire Hazard:</td>
<td>0</td>
</tr>
<tr>
<td>MHIS Reactivity:</td>
<td>0</td>
</tr>
<tr>
<td>SDS Creation Date:</td>
<td>March 10, 1999</td>
</tr>
<tr>
<td>SDS Revision Date:</td>
<td>October 15, 2019</td>
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### Disclaimer:

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. This information is supplied in accordance with OSHA Hazard Communication Standard (29CFR1910.1200). Users are advised to ensure that this information is brought to the attention of the employees, agents, or contractors handling this product. Winslow Automation, Inc. extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchasers’ use. The data on this Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Safety Data Sheet as a source for hazard communication.