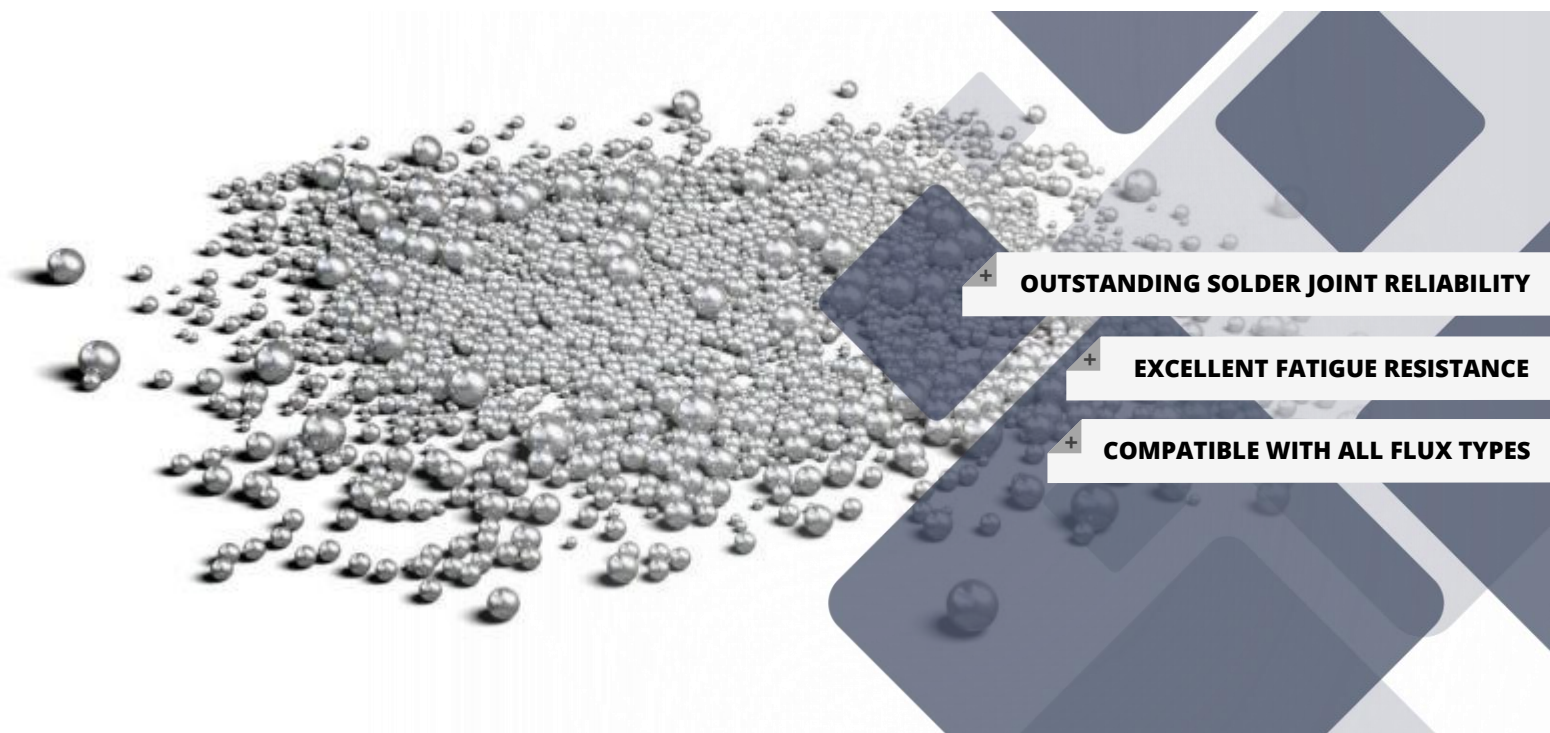


# **CAPLINQ™ SAC305 Solder Spheres**

Lead Free 96.5% Tin, 3% Silver & 0.5% Copper Alloy Solder Spheres



**OUTSTANDING SOLDER JOINT RELIABILITY**

**EXCELLENT FATIGUE RESISTANCE**

**COMPATIBLE WITH ALL FLUX TYPES**



## **PRODUCT DESCRIPTION**

Lead-free Tin/Silver/Copper alloys that contain 96.5% Tin (Sn), 3% Silver (Ag), and 0.5% Copper (Cu)



## **PRODUCT APPLICATION**

Industry standard lead-free solder spheres for companies working with BGA, CSP, LBGA, PBGA and CBGA components.



## **PRODUCT FEATURES**

Lowest cost Sn/Ag/Cu alloy with excellent fatigue resistance. SAC305 solder spheres are compatible with all flux types and offer excellent solder joint reliability.

# CAPLINQ™ SAC305 Solder Spheres

Lead Free 96.5% Tin, 3% Silver & 0.5% Copper Alloy Solder Spheres



Specialty Chemicals, Plastics & Products



## PRODUCT DESCRIPTION

**CAPLINQ SAC305 Solder Spheres** are lead-free Tin/Silver/Copper alloys that contain 96.5% Tin (Sn), 3% Silver (Ag), and 0.5% Copper (Cu) and is often written as Sn96.5Ag3.0Cu0.5. CAPLINQ SAC305 Solder Spheres are the least expensive of the two industry standard lead-free solder spheres (the other being SAC405) and are used by companies working with BGA, CSP, LBGA, PBGA and CBGA components who have made the transition to Lead-free (Pb-free) soldering.

**CAPLINQ SAC305 Solder Spheres** are compatible with all major flux brands and types. CAPLINQ SAC305 solder spheres offer superior solder joint reliability and very good fatigue resistance. Because of their fast wetting speed CAPLINQ SAC305 Solder Spheres provide excellent solderability.

**CAPLINQ SAC305 Solder Spheres** are originally manufactured solder spheres packed into jars with inert gas (nitrogen). The lid of the jar is always sealed with a shrink-wrapped plastic wrap ensuring that the solder spheres do not oxidate in the jar.

**CAPLINQ SAC305 Solder Spheres** diameter tolerance:

0.075mm - 0.35mm (3-14 mils) :  $\pm 0.005\text{mm}$  ( $\pm 0.2$  mils)

0.38mm - 0.60mm (15-24 mils) :  $\pm 0.010\text{mm}$  ( $\pm 0.4$  mils)

0.65mm - 0.76mm (25-30 mils) :  $\pm 0.015\text{mm}$  ( $\pm 0.6$  mils)



*SAC305 Solder Spheres*

## PRODUCT APPLICATION



CAPLINQ SAC305 Solder Spheres are recommended for companies who have made or want to make the transition to Pb-free soldering.

### ► Applications

Designed for;

- Ball Grid Array (BGA)
- Chip Scale Package (CSP)
- Flip Chip wafer bumping



## PRODUCT FEATURES

PRODUCT PROPERTIES	UNIT	VALUE
Alloy Composition	-	Sn96.5Ag3.0Cu0.5
Solidus Melting Point	°C	217
Liquidus Melting Point	°C	219
Peak Reflow Temperature	°C	245 ~ 250
Density	g/cm <sup>3</sup>	7.4
Vickers Hardness	Hv	15.5
Tensile Strength	Mpa	42
Young's Modulus	Gpa	48
Elongation	%	37
Electrical Resistivity	μΩ·cm	13.2
Thermal Conductivity	W/m·K	64

## ► PRODUCT FEATURES &amp; BENEFITS:

- Lowest Cost Sn/Ag/Cu Alloy
- Excellent Fatigue Resistance
- Compatible with all Flux Types
- Excellent Solder Joint Reliability
- Best Wetting Sn/Ag/Cu Alloy

## ► PRODUCT NOMENCLATURE

**SAC:** Sn, AG & Cu**305:** AG 3.0% & Cu 0.5%

## STORAGE AND HANDLING

CAPLINQ SAC305 Solder Spheres are packaged in jars of either 250k piece or 1 million pieces. The jars should be kept in a clean and dry environment. The product should be stored in sealed containers and should not be refrigerated. Probing of spheres in jars with fingers or other implements can damage the material by changing its shape or scoring the sphere surface or by contaminating the material. This could result in sphere placement difficulties. Shelf life of all solder spheres, stored in sealed jars that are not agitated, is 2 years.

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

## DATA RANGES

The data contained herein may be reported as a typical value and/or range values based on actual test data and are verified on a periodic basis.

**The above figures are typical material properties only and are not to be used for product specification purposes.** To generate a specification for this product, please contact our Quality Manager and request a copy of the current stock specification. The information and recommendations supplied in this document are believed to be accurate but no guarantee of their accuracy is made; they are for guidance only and should not be construed as a warranty. All implied warranties are expressly disclaimed, including without limitations any warranty of merchantability and fitness for use. It is recommended that purchasers before using this product conduct their own tests to determine whether the product is suitable for their particular purposes under their own operating conditions.

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