

Alloys in the XF3-series



S62-XF3

Alloy: Sn62Pb36Ag2
Melt.Range: 179-189 °C
Density: 8.4 g/cm³
Metal content: 89.49%

Sn100C-XF3

Alloy: SnCu0.7Ni0.05
Eutectic: 227 °C
Density: 7.4 g/cm³
Metal content: 87.93%



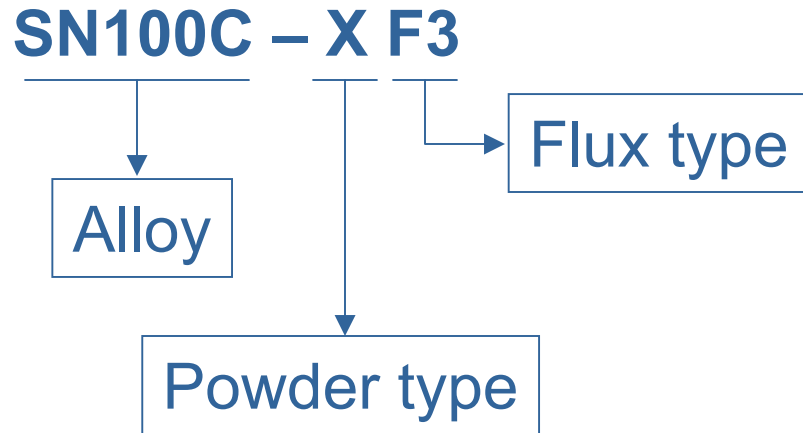
SAC3-XF3

Alloy: Sn3.0Ag0.5Cu
Melt.Range: 217-221 °C
Density: 7.5 g/cm³
Metal content: 88.00%

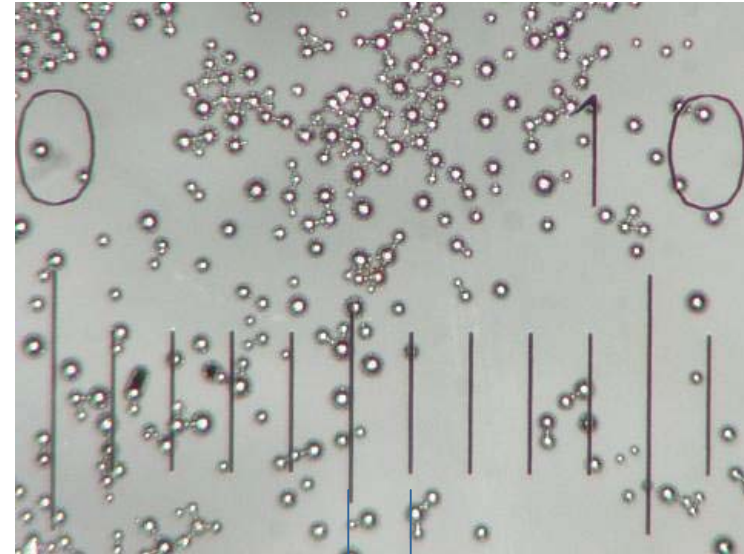


RoHS compliant:
SGS documents available

Solder particles



Source: Nihon Superior



100 microns

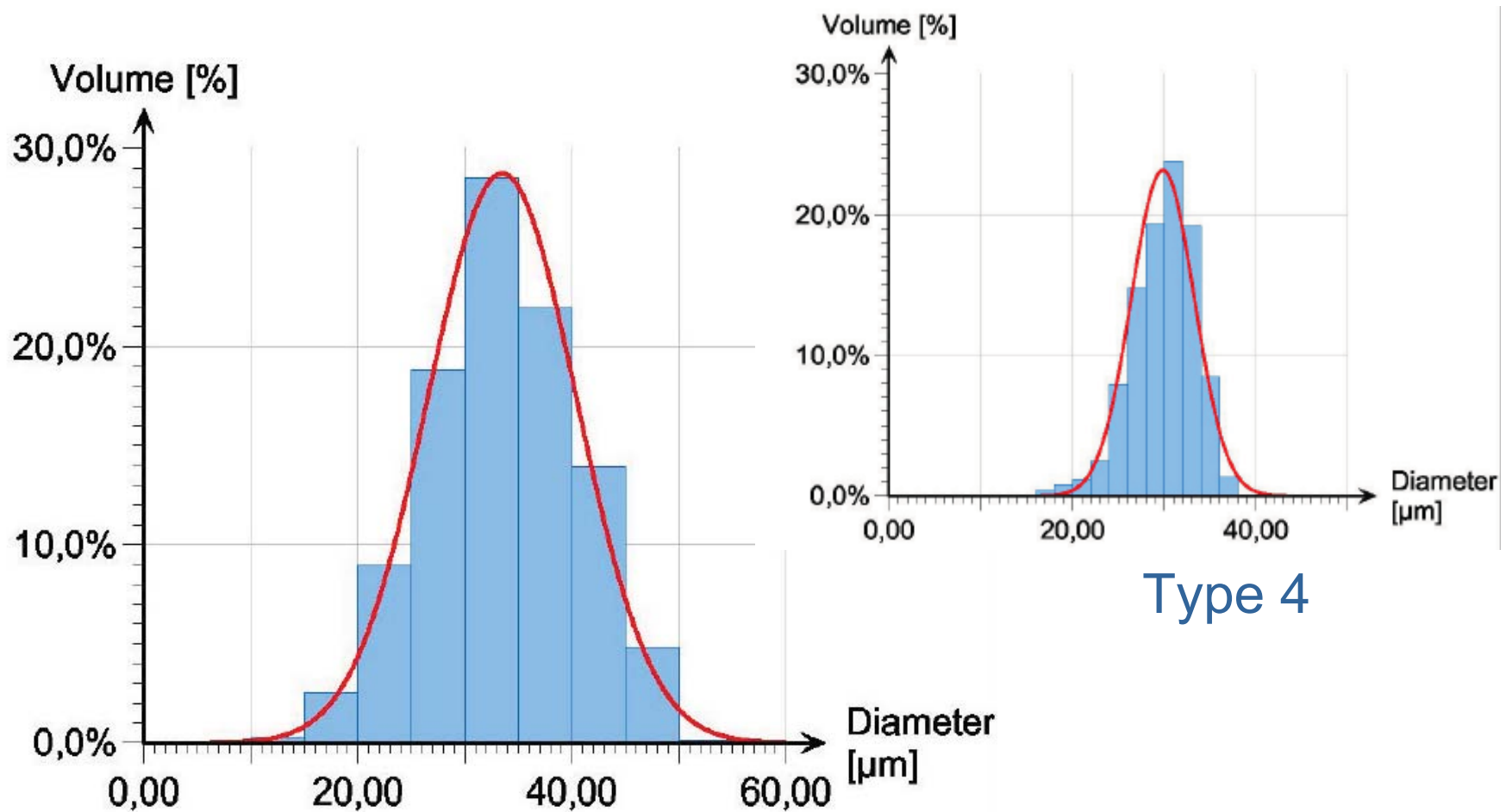
Powder types:

X = Type 3 (25 – 45 microns)

H = Type 4 (25 – 38 microns)

Solder Powder Particle Shape: Spherical

Solder particles distribution



Type 4

Distribution of XF3 solder particles – Type 3.

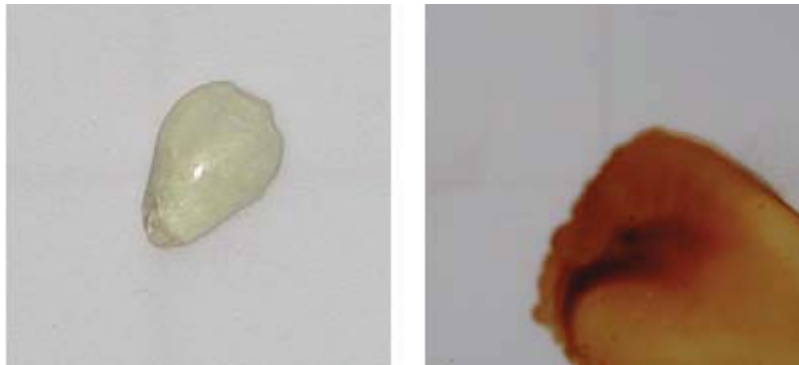
Flux system functions

- Provides a homogeneous suspension of the powder
- Prevents oxidation of the powder and surfaces
- Provides flow properties in printing or dispensing
- Holds powder in place after printing or dispensing
- Provides tack to hold components in position
- Provides self-alignment of components during reflow
- Inhibits re-oxidation of powder and surfaces to be joined during the reflow process
- Provides controlled cooling of the joint

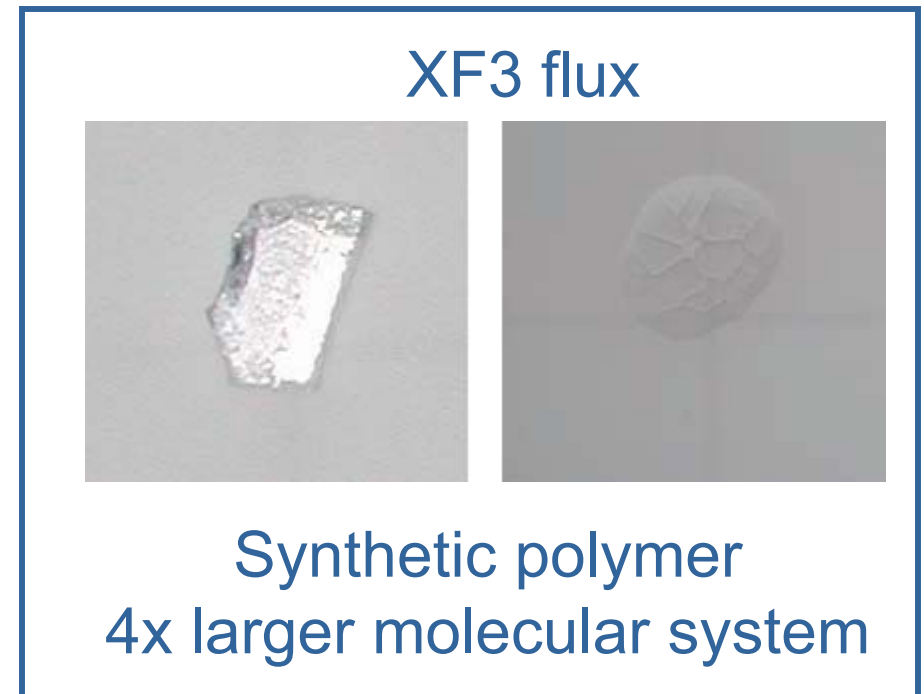
XF3 flux system

XF3 flux is developed for reflow processes with extended temperature profiles (lead-free)

- Nitrogen not required (cost benefit)
- Incorporates organic materials with more advanced molecular structure



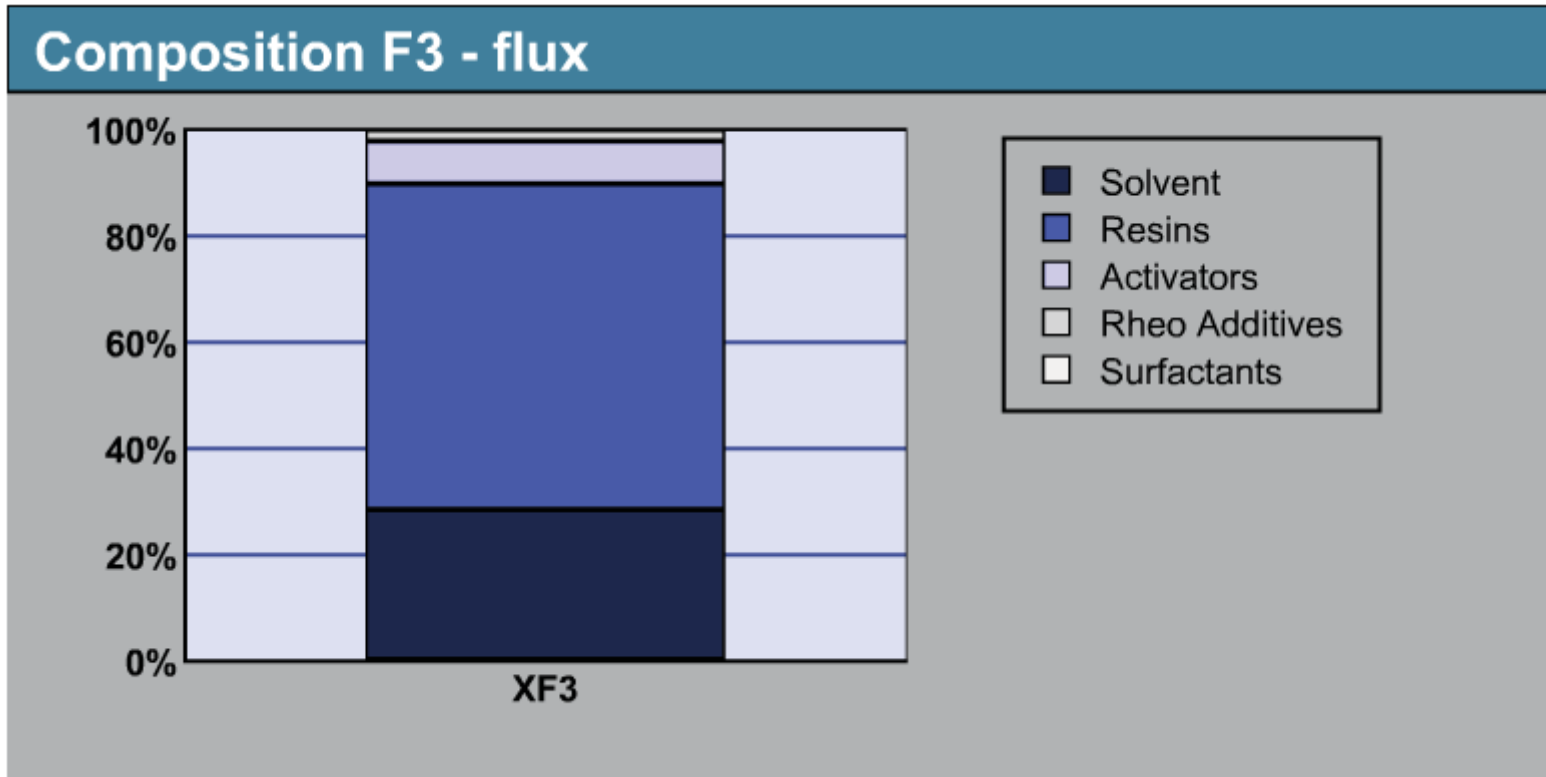
Modified wood resin



XF3 flux

Synthetic polymer
4x larger molecular system

Composition flux



Percentage flux [% w/w]: approximately 12%

Solder paste flux

Flux classification J-STD-004

Flux materials of composition	Symbol
Rosin	RO
Resin	RE
Organic	OR
Inorganic	IN

Flux activity level [% Halide]	Flux type
Low (0%)	L0
Low (<0.5%)	L1
Moderate (0%)	M0
Moderate (0.5-2%)	M1
High (0%)	H0
High (2%)	H1

Classification example: RE L0

XF3 flux is
RE L0