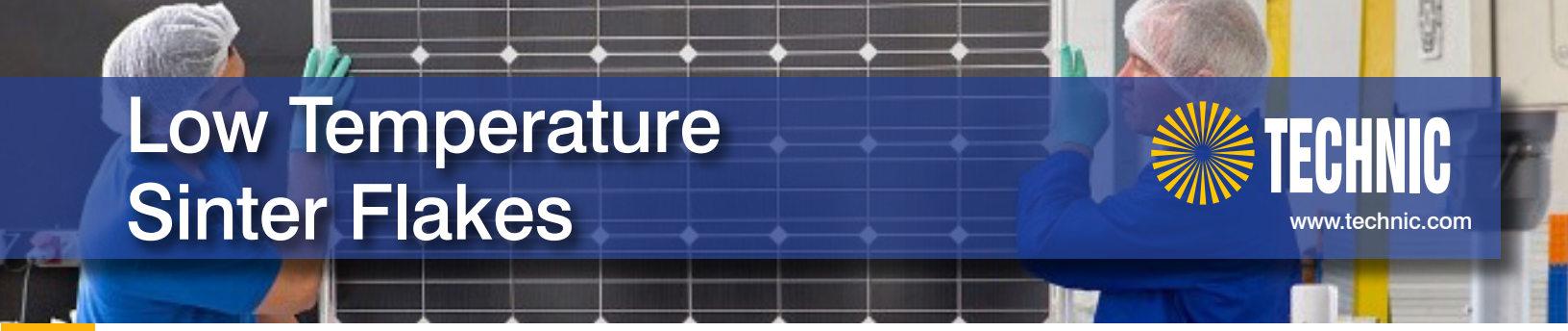

Low Temperature Sinter Flakes

TECHNIC
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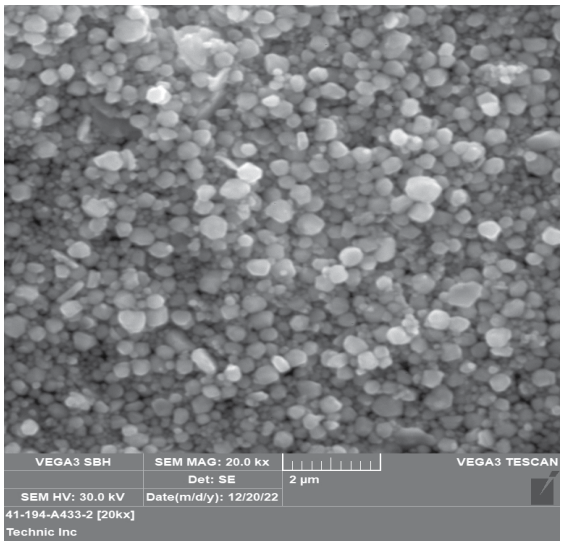
Silflake 174,193,194 and 212

Technic Engineered Powders Division offers a comprehensive range of leading-edge engineered metal powders and flakes to meet the demands of the photovoltaic, electronic, automotive, industrial and medical industries.

The **Silflake®** product line includes a number of products that are derived from the same feedstock powder, which undergoes a mechanical flattening process to create the flake morphology shown in the SEMs (right). The submircon flakes are unique from one another through the different organic coatings used.

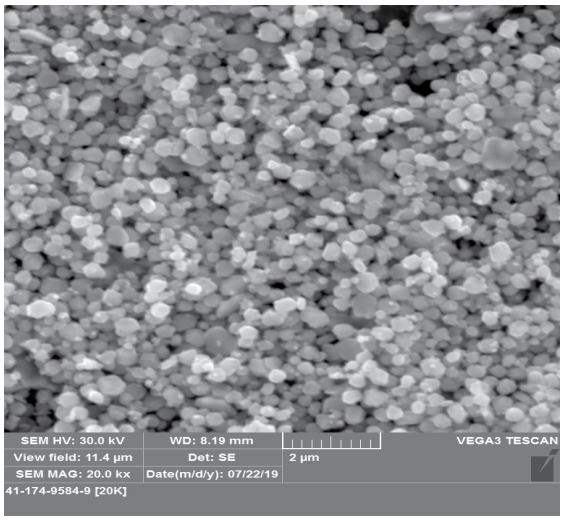
Each flake has a different coating designed to be compatible with most polymeric systems. The four main products (Silflake 174, 193, 194, and 212) have been developed for use in a wide variety of conductive adhesives.

Applications include touch panel, fine line printing, and low temperature sintering.



Features

- Residual lubricant works well in most fired and polymeric systems
- Sinters below 200° C
- Disperses well, as it exhibits few agglomerates
- Narrow distribution, as the D95 is less than 1 micron



Benefits

- Excellent fine line printing properties
- Used by themselves or as additives in low temperature sintering applications
- Different coatings were designed for compatibility with most polymers
- Moderate density allows for higher silver loading

Low Temperature Sinter Flakes

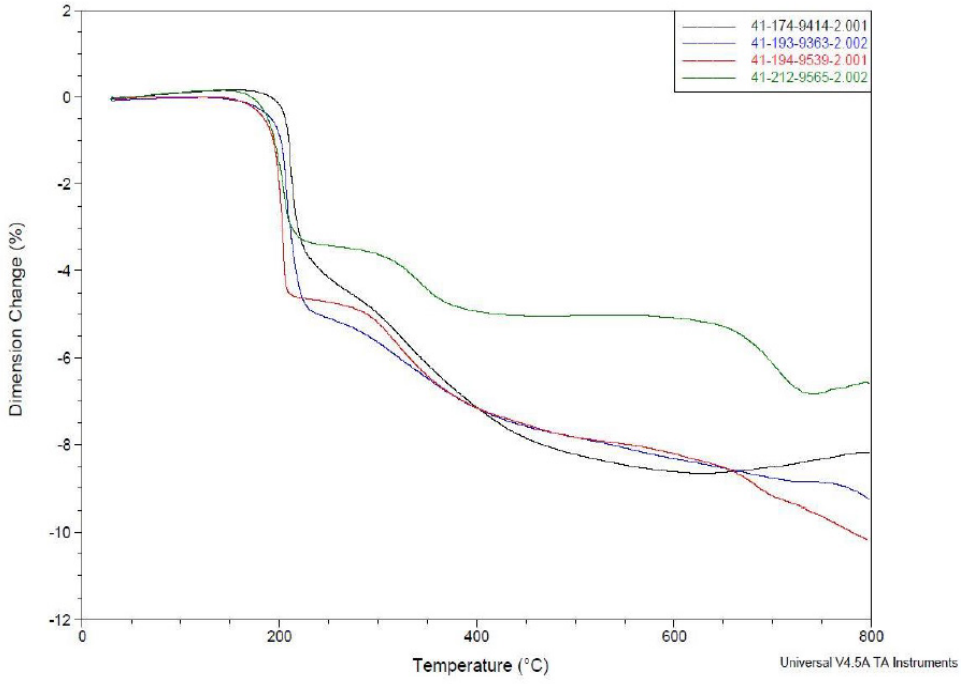
Process Specifications

Typical Data

Product	D_{10} (µm)	D_{50} (µm)	D_{95} (µm)	SSA (m^2/g)	TD (g/cm^3)	538°C WL (%)
41-174	0.1	0.2	0.6	3.5	3.3	0.70
41-193	0.1	0.2	0.6	3.8	3.2	0.71
41-194	0.1	0.2	0.6	3.7	3.1	0.71
41-212	0.1	0.2	0.7	3.6	3.3	0.68

Note: Very narrow particle distribution, as the D50 and D95 are compressed.

TMA Sintering temperatures



Note: Sintering begins around 195° C and is very rapid.

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