



Solder Paste

TAMURA ELSOLD

Solder Paste

Since the beginning of 2020, TAMURA ELSOLD GmbH has been producing TAMURA solder pastes of the highest quality in a newly built solder paste production facility in Ilsenburg under clean room conditions using state-of-the-art equipment. After only 10 months between the ground-breaking ceremony in March 2019 and full commissioning, this represents a major step in the German-Japanese cooperation and TAMURA ELSOLD GmbH's membership in the TAMURA family, which has been in existence since 2017. European customers will thus benefit even more from the combination of international know-how and now significantly shorter delivery distances.

The solder pastes for printing processes formulated in the Japanese development centre offer a solution for almost every application. The focus is on SAC305 T4 pastes (TLF-204), with other grain sizes available on customer request, led by TLF204-NHLV without halides and offering low voids and excellent soldering results.

In addition to these and other solder pastes for printing processes now produced in Germany, the well-known contacts of TAMURA ELSOLD GmbH naturally also offer comprehensive advice and support for the other TAMURA solder pastes for special processes and with special properties, whether for high-performance jet dispensing processes, laser soldering or for applications with high thermal and dynamic loads.



etc,



Solder resists



FA Systems

etc.



Transformers, coils and reactors, and large reactors



Power modules, current sensors, and gate drivers

etc.



TLF204-NHLV

No Halides - Low Voids

SAC
305

Pb
free

T4
T5

RO
LO

Print

- Zero Halogen
- Low Voids
- Prevents joint defects caused by warping of large BGA components and boards - improved oxide film removal ability and re-oxidation prevention effects, suppressing both NVO and HIP failure modes
- Wide range of reflow profiles are possible under Air or N₂ reflow conditions
- Excellent wettability regardless of the component material
- Safety Verified by SIEMENS CT

Reference TLF204-NHLV

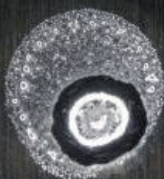
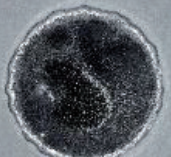
Brass

Ni-Ag

Ni

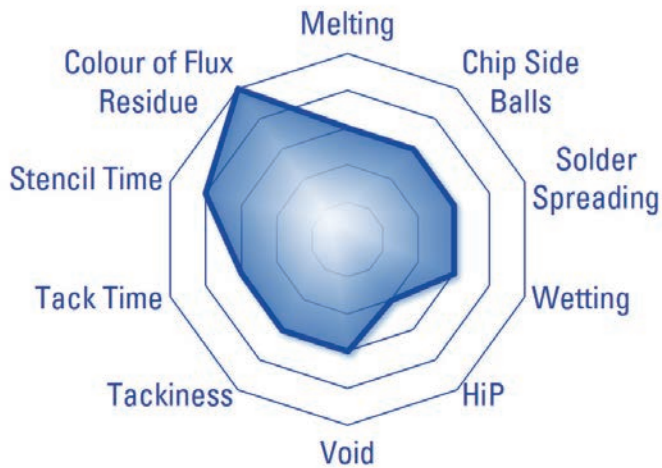
42 Alloy

Zn



TLF-204-111M

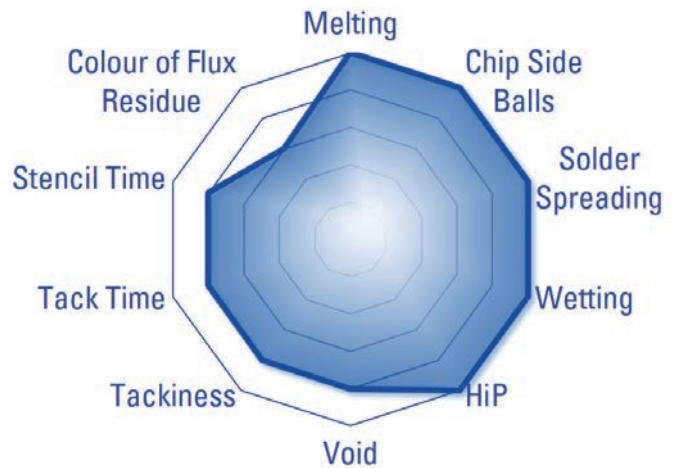
Robust and Bright



- Balanced and Robust Property
- Colourless and Soft Flux Residue
- Superior in Simple and Short Ovens
- Safety Verified by SIEMENS CT

TLF-204-191

Activity for Perfect Wetting



- Excellent Wetting on Various Metals
- Avoid Solder Wetting Defects
- Perfect for Difficult Soldering Jobs

Delivery Forms and General Product Information

Pastes for Printing

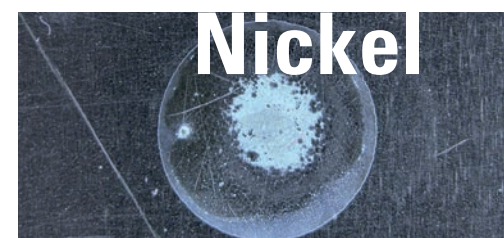
- Slip Lid Jar 500 g white / white-yellow
- Screw Cap Jar 500 g blue-green, yellow, green, white
- Pro-Flow Cassettes
- Cartridges 6 oz
- Cartridges 12 oz

Pastes for Dispensing

- Syringes 10 cc
- Syringes 30 cc

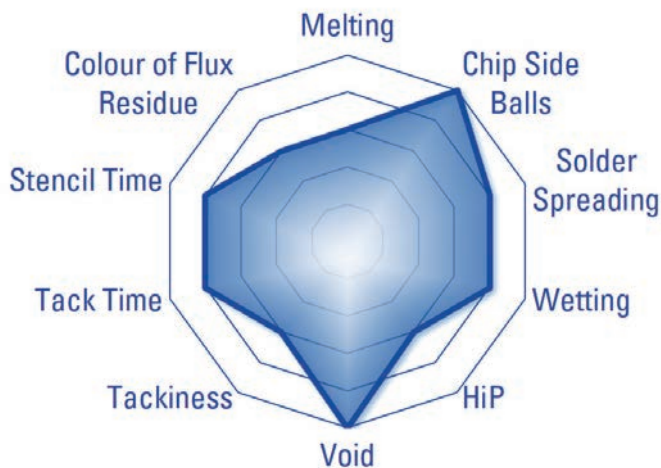


If required, please ask for other grain sizes, alloys and adapted flux contents/viscosities for all solder pastes. We are happy to fulfill (almost) all your wishes.



TLF-204-GT01

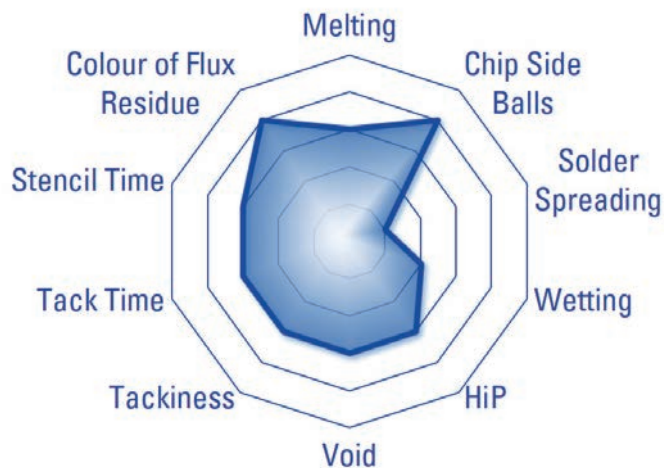
Avoid a Void



- Excellent Void Reduction, Independent of Reflow Profile
- Perfect for QFN
- Fast Printing & Reliable Soldering

TLF-204-NH(20-36)

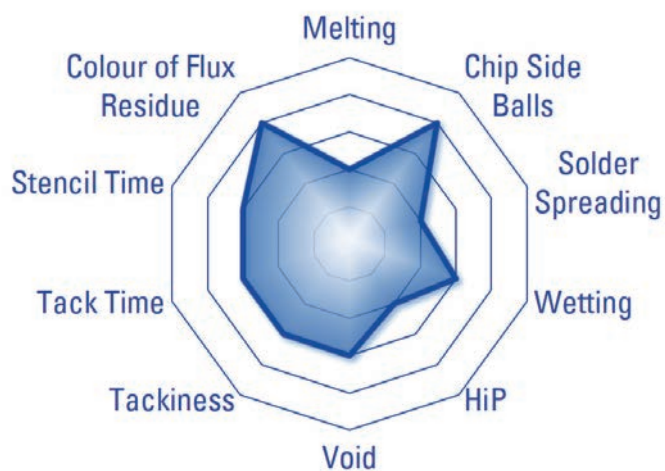
Halogen- and Halide-Free



- 100% Halogen- and Halide-Free
- Highest Safety Against Corrosion and Electromigration

GP-213-NH15S

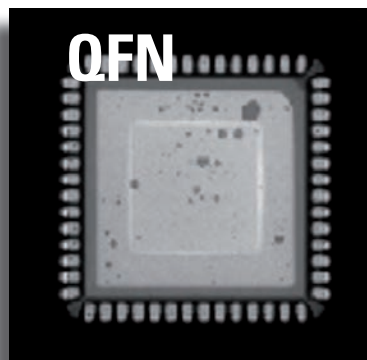
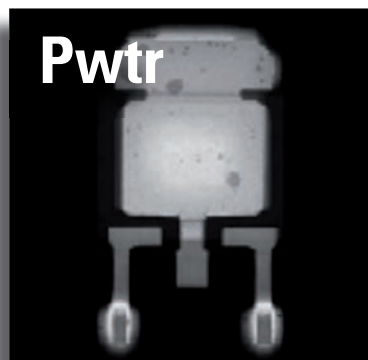
Low-Silver



- Halogen- and Halide-Free
- Just 1% Silver for Reduced Costs
- Perfect for Consumer Electronics and White Goods

Pwtr

QFN



TLF-204-171AK

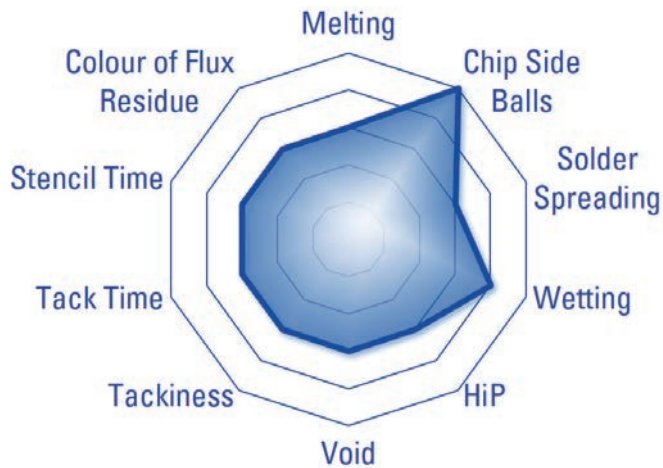
TLF-204-TNA23K



- Also available in the future.
- For new projects we recommend the new generation of pastes TLF204-NHLV

TLF-204-203

For Pin-In-Paste



- No Paste Outflow in Pin-in-Paste/ Through-Hole Reflow Processes
- High Reliability by Crack-Free Flux Residues at Thermo Cycling

Conventional Rosin-Based Solder Paste

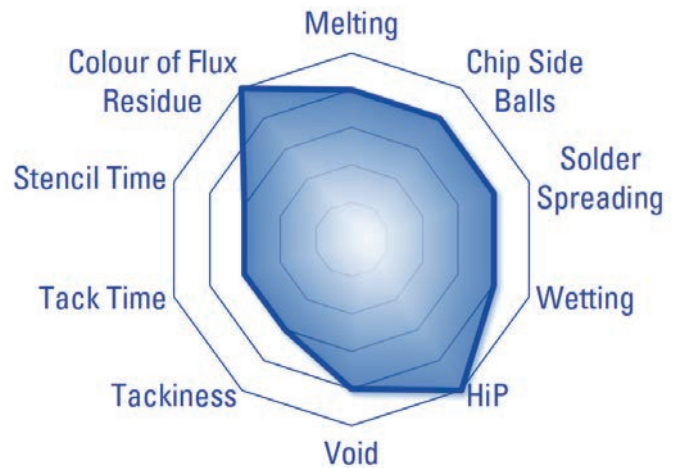
TLF-204-203

Flux Residue Appearances after -40°C / +125°C 1000 cycles



TLF-204-GTS-VR1

Anti-Crack Flux

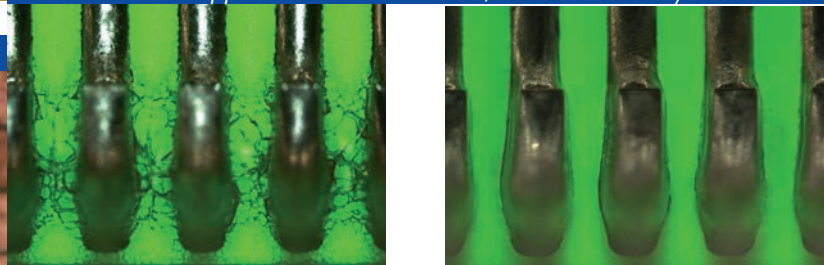


- Crack-free Flux Residues also at High Dynamic Stresses
- Prevention of Crack Induced Corrosion and Electromigration
- Improved Joint Reliability by Adhesive Effect and Mechanical Stability of Residues

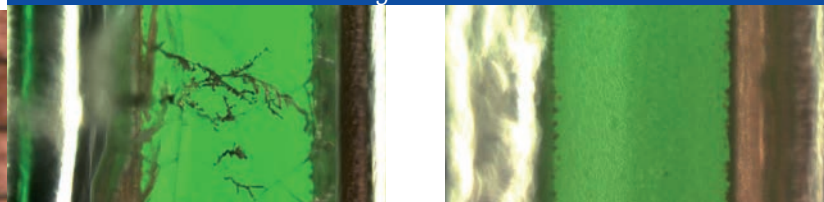
Conventional Rosin-Based Solder Paste

TLF-204-GTS-VR1

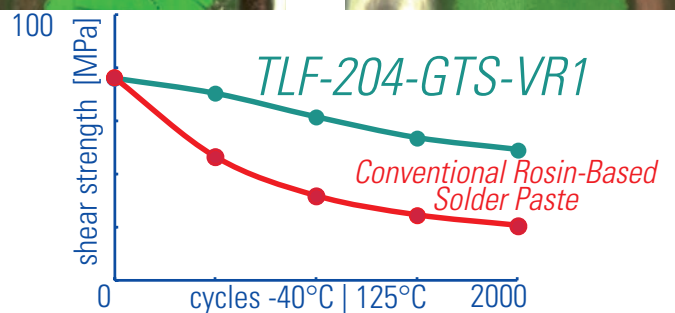
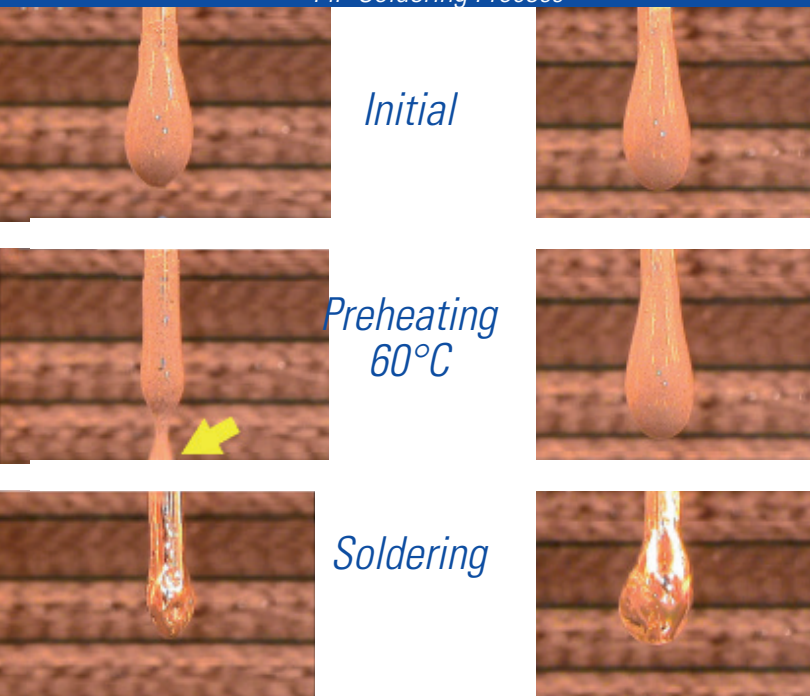
Flux Residue Appearances after -40°C / +125°C 1500 cycles



No Crack Induced Electro-Migration with TLF-204-GTS-VR1



PiP-Soldering Process



TLF-287-CA32-NH

High-Reliability Paste

SAC
SbBiNi

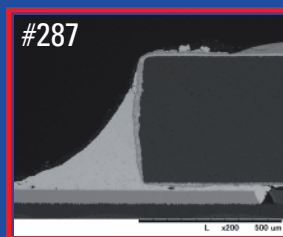
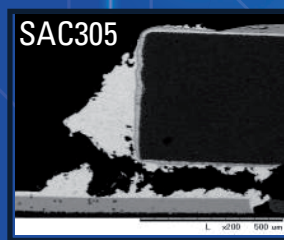
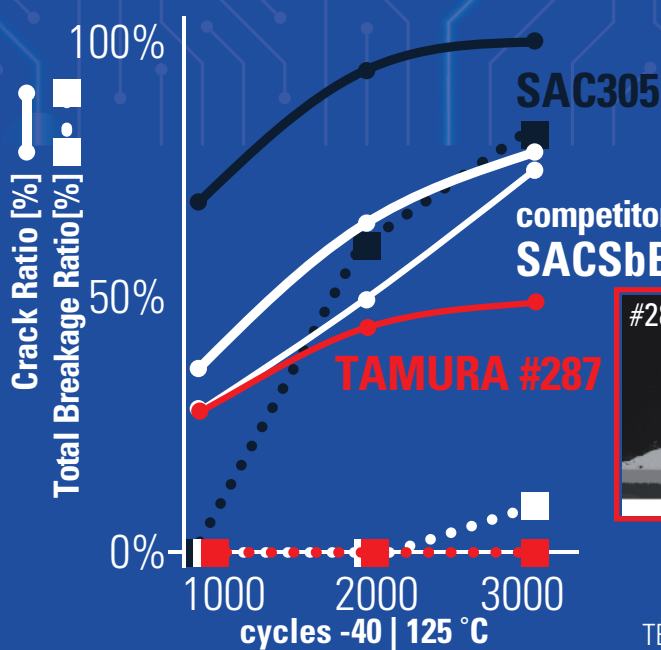
Pb
free

T4

RO
LO

Print

- Alloy #287:
The New Benchmark of Reliability and Lifetime
- Perfectly Suited for Automotive Applications by Highest Crack Resistance at Thermo Shock Cycle up to -40 °C | +150 °C
- Reduced Polycrystallization and Growth of Intermetallic Phases
- Highest Safety & Best Printing Results Regardless of Speed
Verified by SIEMENS CT



	SAC305	#287
MELTING RANGE [°C]	217-219	209-226
TENSILE STRENGTH [MPa]	41	99
CRACK RATIO [%] 3000 CYCLES -40 125 °C	95.6	47.0

LSM10 Series

Laser Soldering Paste

SAC
305

Pb
free

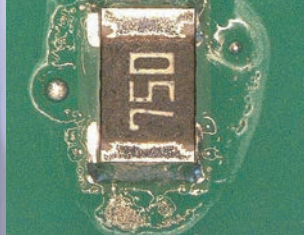
T4

RO
MO

Dispens

- Extrem Low Spattering
- Perfect for Fast Laser Heating
- Typical Soldering Time: 0.3 sec.
- Easy Cleaning (if required)
- Absolute Stable Dispensing for More Than 30,000 Shots
- **LSM10-204-NH03:**
Improved Stability and Lowest Slumping
also Suitable for Hot-Plate, IR, ...
- **LSM10-204-02:**
Improved Wetting, also for Difficult to
Solder Surfaces

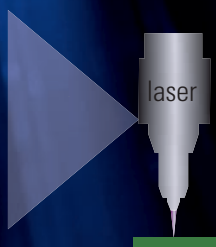
**Conventional
Paste**



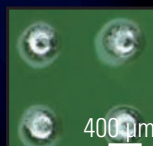
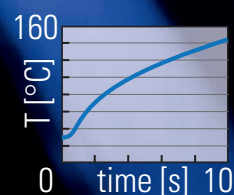
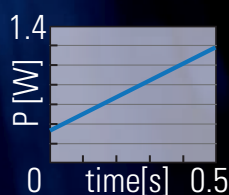
**LSM Series
Paste**



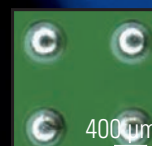
hand
soldering
process



automatisation
with
higher quality
and
process stability



LSM (SAC305)



LSM (SnBi)

JDS Series

Jet Dispensing Paste



- Perfectly Suitable for MY600 and MY700
- Easy to Adjust Deposit Shape and Volume
- 180 Days Shelf Life
- Further Jet Pastes for Other Jet System Available on Request

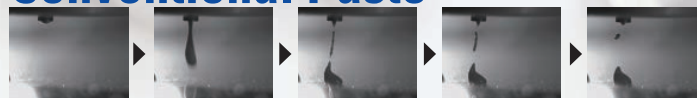
JDS204F-MJ21-HF

- T5 (15-25 μm)
- 315-520 μm dot size
- 300-400 dot/sec.

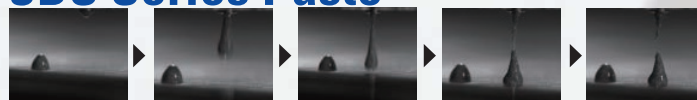
JDS204G-MJ21-HF

- T6* (8-18 μm)
- 190-250 μm dot size
- 200-250 dot/sec.

Conventional Paste



JDS Series Paste



AP-10-Series

For Lead and Bismuth

SnBi

SnPb

T3
T4

RO
L1

Print
Dispens

- Perfect for Leaded Solder Pastes and Low-Melting SnBi-Pastes
- For Printing and Dispensing
- Different Variations for Each Application
- Safety Verified by SIEMENS CT

			Print	Dispens
BiSn42	139°C	T3	90.0%	86.5%
BiSn42Ag1	137-139°C	T3	90.0%	86.5%
BiSn(Ag) +SAC305	150-200°C adjustable	T3		87.0%
SnPb63	183°C	T3	90.0%	87.0%
		T4	88.0%	88.0%
SnPb62Ag2	179°C	T3	90.0%	87.5%
		T4	90.0%	87.5%
PbSn5Ag2.5	287-296°C	T3	90.0%	

NEW: AP-10G

For a Higher Level of Work Safety

AP-10-G is a modification of AP-10, which has been very successfully tested in extensive industrial use, and differs only in one solvent used, with an amount of flux of less than 5%, so that it is easy to switch between the two products if necessary; the soldering properties of both pastes do not differ. However, the advantage of the AP-10-G flux is that, unlike the conventional AP-10, it is not classified as a hazardous substance, thus achieving a higher level of work safety.

AP-20 Series

SM-388 Series

SC
SAC

Pb
free

T3 T4
T5 T6

RE
LO

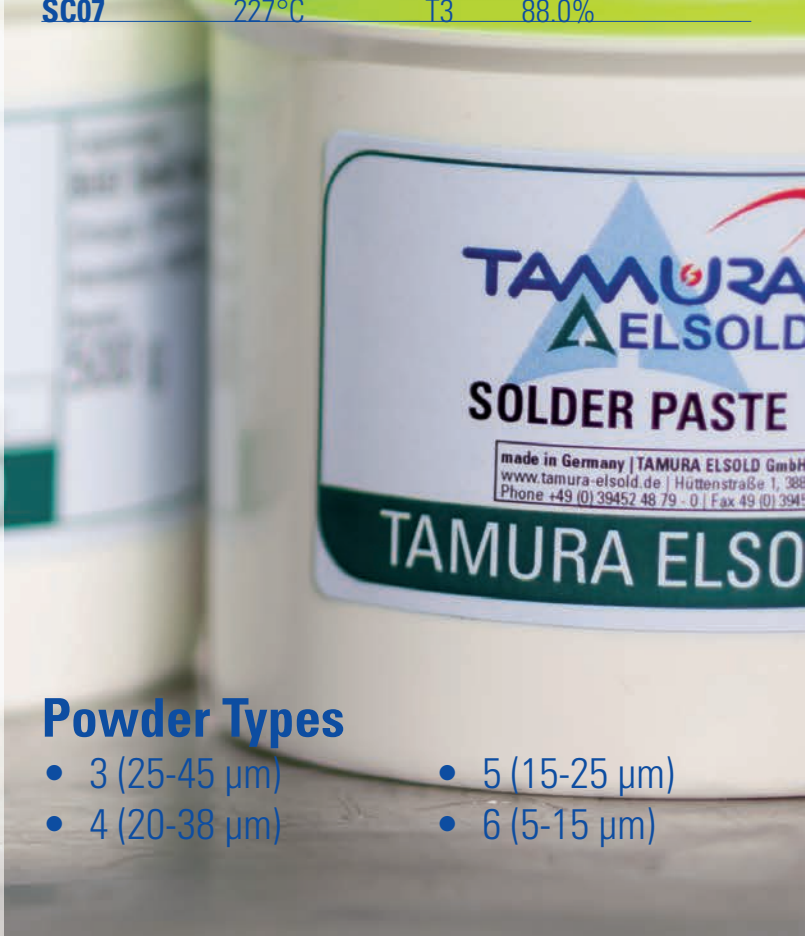
Print
Dispens

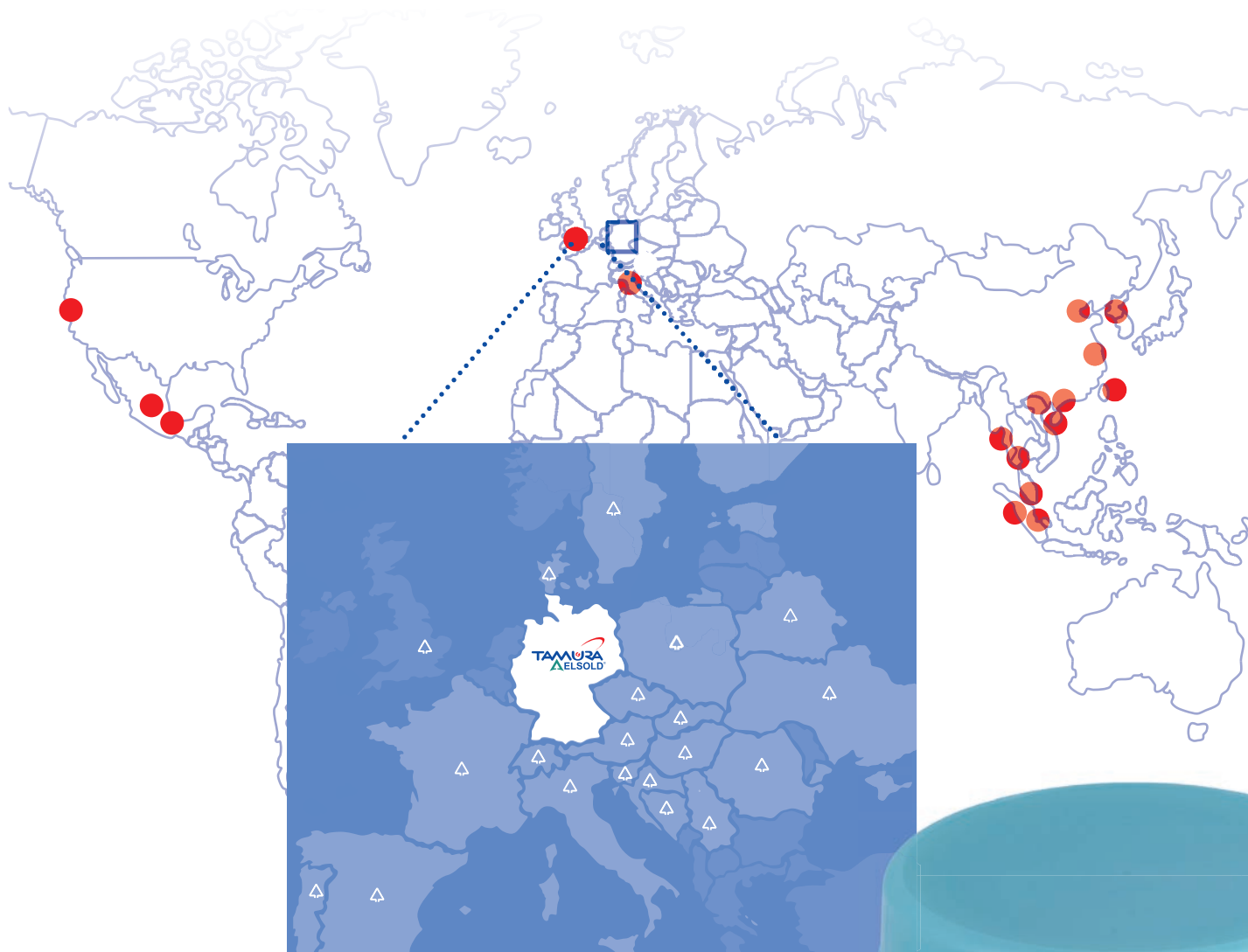
- For Printing and Dispensing
- Different Variations for Each Application
- Safety Verified by SIEMENS CT
- AP-20: 100% Halogen- and Halide-Free and Highest Safety Against Corrosion and Electromigration
- SM-388: Improved Activity and Wetting

			Print	Dispens
SAC305	217-219°C	T3	88.5%	87.0%
		T4	88.0%	86.0%
		T5	87.5%	86.0%
		T6	87.0%	86.0%
SAC305 MA	217-219°C	T4	88.0%	
SN100Ag3MA-S	217-219°C	T4	88.0%	
SC07	227°C	T3	88.0%	

Powder Types

- 3 (25-45 µm)
- 4 (20-38 µm)
- 5 (15-25 µm)
- 6 (5-15 µm)





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