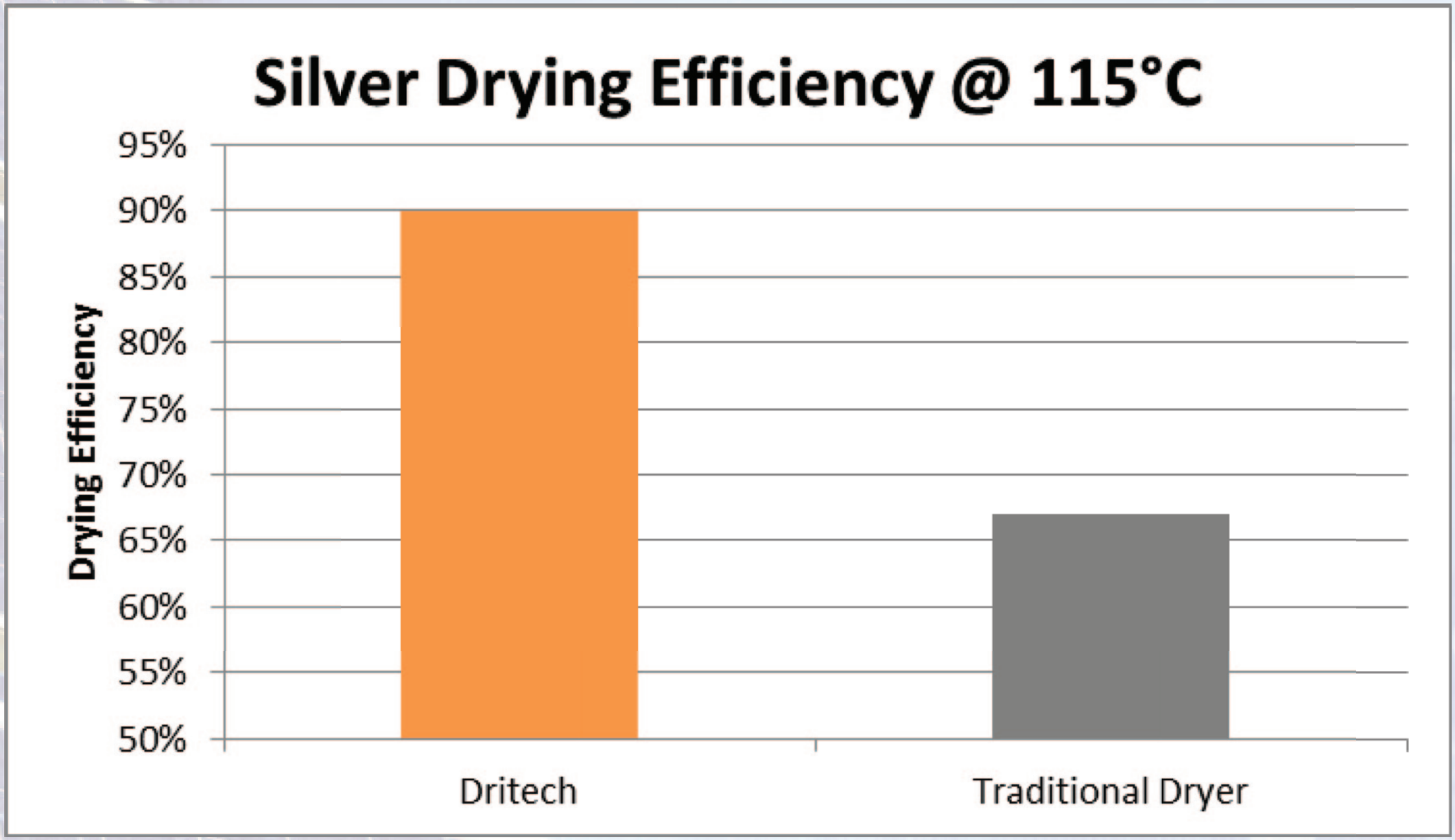
IMPACT OF LOW-TEMPERATURE DRYING ON SILVER PASTE

DriTech's low temperature capability has been tested on silver paste as well as two widely used aluminum pastes. Both Al pastes can be dried at as low as 130°C with the DriTech, whereas a traditional dryer removes less than one third of all solvents at such a low temperature. As evidenced in the graphs, the performance of the DriTech is vastly superior to that of a traditional dryer. The DriTech's low temperature drying capability opens the process window by 70°C.

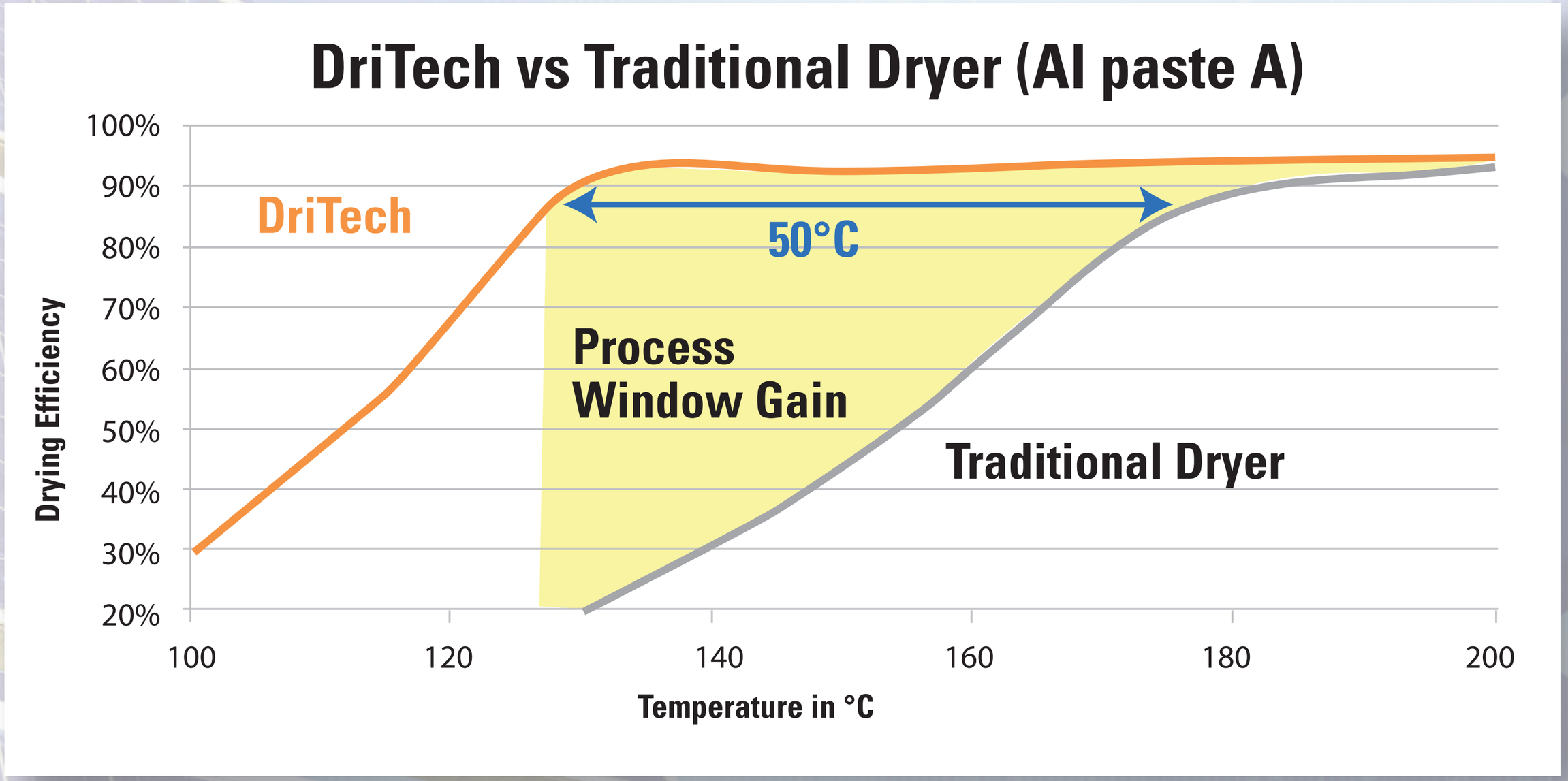
DriTech™ eliminates process deficiency for critical silver drying

The low temperature drying feature is especially critical for silver pastes. The graph below shows that DriTech is able to dry silver pastes at just 115°C. This means that with DriTech it is now possible to selectively remove all solvent without impacting any other paste constituents – ensuring maximum efficiencies.

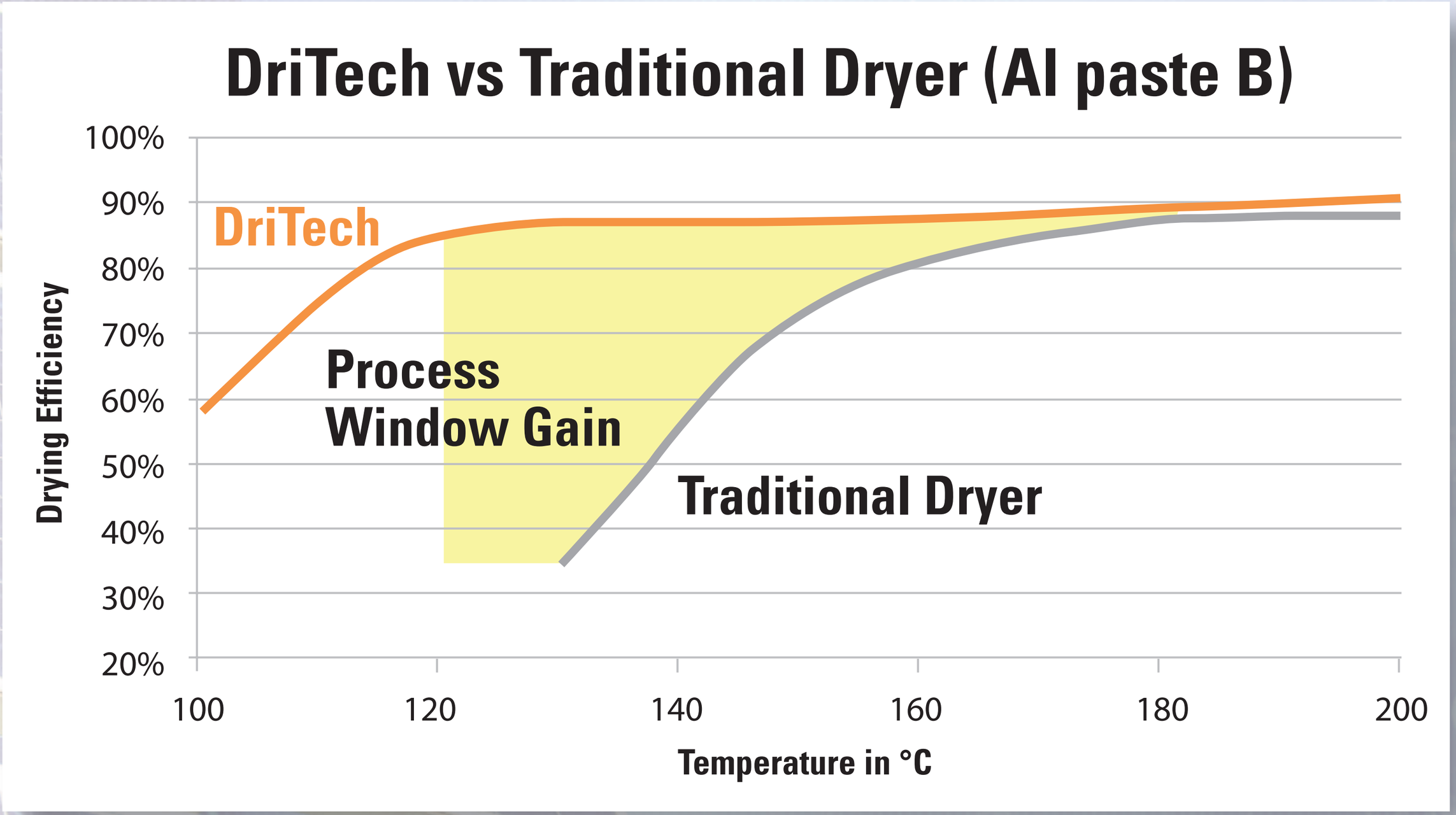
With traditional dryers, temperatures are high enough to cause binder burn-out but not high enough for a densification process to take place as it is in the firing furnace. The voids that are created during this premature binder burn-out are a cause for high series resistance. DriTech avoids this process deficiency by drying silver paste at optimum temperatures.


Silver Drying Efficiency @ 115°C
Drying Efficiency
95%
90%
85%
80%
75%
70%
65%
60%
55%
50%
Dritech
Traditional Dryer

DriTech™ opens the process window by 50°C!



Comparison of drying process window on DriTech and a traditional dryer for a widely used aluminum paste A



Comparison of drying process window on DriTech and a traditional dryer for a widely used aluminum paste B