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TSK Labels

DESCRIPTION:	Tyco Electronics "TSK" is a thermal transfer printable glossy white polyimide label material with a permanent acrylic static dissipative adhesive. TSK is deemed to be a Static Safe product in accordance with EIA 625, EIA 541. Test methods were in accordance with EOS/ESD S11.11.
USE:	Suitable for high temperature labeling requirement such as printed circuit boards. Suitable for direct wave (bottom side) and IR reflow (top side) PCB applications. Designed to withstand harsh fluxes, cleaners, saponifiers, and wave solder environments. Can be used for space applications where low outgassing is required.
PRINT METHOD:	Thermal Transfer Preferred Printer/Ribbon: Tyco Electronics T312S printer, Tyco Electronics 1330-0619-10 ribbon Alternative Printer/Ribbon: Tyco Electronics T424S printer, Tyco Electronics 1330-0619-08 ribbon
COLOR:	Glossy White
APPROXIMATE THICKNESS:	Substrate: 0.038mm (0.0015 in) Adhesive: 0.025mm (0.0010 in) Total: 0.64mm (0.0025 in)
ADHESIVE:	Permanent high-temperature acrylic, static dissipative
ADHESION:	PCB (G-10): 20 oz/inch (0.218 N/mm)- 1 min dwell ASTM-D-3330 (180° peel direction) at 21° C (70°F) Stainless Steel 32 oz/inch (0.25N/100mm) 20 minute dwell 41 oz/inch (0.36N/100mm) 72 hour dwell
TACK:	25oz (710g) ASTM-D2979 at 21C (70F, 1 second dwell)
STATIC SHEAR:	10000/1000g at 21°C (70°F). 10000/500g at 70°C (158°F).
SERVICE TEMPERATURE:	5 Minutes: -40°C to 538°C (-40°F to 1000°F). Long Term: -40 °C to 204°C (-40°F to 399°F)
VACUUM OUTGASSING:	0.93% Typical Total Mass Loss after 24 hours at 125°C (266°F); pressure <10 ⁻⁵ torr. 0.03% Typical Vacuum Condensable Material after 24 hours at 125°C (257°F); pressure <10 ⁻⁵ torr
SHELF LIFE:	1 year when stored at 27C (81F) at 50% R.H.

ABRASION RESISTANCE:

Resistant to repeated abrasion:
 Printing remains legible for 50 revolutions of CS-10 wheel, 500g load (Taber-Abraser Model 5130). Print not affected with repeated Rub testing as per AS-81531

CHEMICAL SOAK RESISTANCE:

Results after soaking for 5 minutes.

Fluid

Alpha Flux: 2110(23°C), 870-25(70°C),
 615(23°C)
 Alpha S30 cleaner(23°C)

Result

No effect on print contrast
 Print remains clearly legible

PRINT PERMANENCE:

Meets the requirements of MIL-STD-202 method 215J.

Good resistance to fluids and repeated cleaning:

SOLVENT	TEST	EFFECT
Detergent mix	Repeated cleaning (200 cycles Crockmeter)	No visual effect
IPA	Repeated cleaning (100 cycles Crockmeter)	Print remains clearly legible
IPA (70%)	7 day immersion	No visual effect
Water	7 day immersion	No visual effect
Water at 95°C (203°F)	Typical PCB wash cycle	No visual effect
Toluene	Repeated cleaning (10 wipes)	Print remains clearly legible
Toluene	30 second soak only	No visual effect

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