

20-Apr-2022

Statement on California Proposition 65 Substances in TTM Unpopulated Printed Circuit Boards

California's Proposition 65, officially known as the Safe Drinking Water & Toxic Enforcement Act of 1986 (<https://oehha.ca.gov/proposition-65>) contains a list of chemicals and exposure thresholds which the State of California has determined present a risk of cancer, birth defects or other reproductive harm. The entire list of chemical substances can be found on the State of California website at <https://oehha.ca.gov/proposition-65/proposition-65-list>.

TTM is a "build to print" manufacturer, primarily of custom unpopulated printed circuit boards (bare boards) that are not intended as consumer products. Each part is manufactured to order and in accordance with the design and material specifications provided by the customer.

TTM expects that customers always use appropriate personal protective equipment, including gloves, when handling parts manufactured by TTM, and that TTM bare boards are fully enclosed prior to end use. Once enclosed, there should be no exposure route for Proposition 65 substances used in TTM bare boards during normal or reasonably foreseeable use. As such, TTM does not believe that our bare boards, when used as intended, present an exposure risk of ingestion, inhalation or by absorption through the skin of any of Prop 65's current list of chemicals. Nonetheless, out of an abundance of caution, and in the event TTM's products are misused or used in ways we do not foresee, we are taking the precaution of providing this Statement.

As TTM parts are custom ordered, individual analysis of parts for Proposition 65 substance levels is not feasible. TTM periodically compares the substances potentially contained in bare boards that we manufacture against the Proposition 65 list. The following listed substances may be found in the surface layer of unpopulated printed circuit boards manufactured by TTM:

Substance	CAS No.	Details
Antimony trioxide	1309-64-4	This substance is found in some flexible laminate materials.
Bisphenol A (BPA)	80-05-7	Small residual amounts of this substance can be found in some laminate and soldermask materials.
C.I. Solvent Yellow 14	842-07-9	This substance is found in some yellow nomenclature legend inks.
N,N-Dimethylacetamide	127-19-5	This substance is found in some flexible laminate materials.
Lead	7439-92-1	This substance is found in Lead-containing surface finishes.
Nickel	7440-02-0	Trace amounts of this substance can be found in some lead-free solder materials.
Tetrabromobisphenol A	79-94-7	Small residual amounts of this substance can be found in some laminate materials.

As noted, there is no significant opportunity for exposure or release under normal usage. Additional information on Proposition 65 warnings can be found at <https://www.p65warnings.ca.gov/>.

Sincerely,



Meaghan Jones  
Environmental and Sustainability Manager  
TTM Technologies, Inc.