



Thermoset Laminate Life Expectancy

Thermoset laminated materials are designed specifically for long life in high stress applications and environments. While it is impossible for any Laminator to test their products' life cycle in each and every application, Norplex-Micarta's experience is that products remain in service decades after production. To insure this performance, Norplex-Micarta has adopted the highest standards for raw materials in the Industry, processes material in a tightly controlled ISO certified manufacturing environment, and provides follow on technical support to our customers and OEM's for each product that we sell. Excepting for exposure to extreme storage conditions, these materials in their fully cured laminate form are not subject to a shelf life restriction. Should you need to discuss a particular application, please contact one of Norplex-Micarta's Technical Applications professionals for advice and guidance.

Optimum Storage Conditions

While ideal storage conditions are often not possible, Norplex-Micarta recommends that cured laminated materials, including sheets, rolled tubes, and molded shapes be stored on flat surfaces in temperature and humidity controlled indoor storage locations to prevent subtle changes due to temperature and humidity fluctuations. Optimum storage conditions are 72+/- 9 degrees Fahrenheit (25 +/- 5 degrees Celsius) and 50% +/- 10% relative humidity in original or similar containers to reduce exposure to ultraviolet light. Under these conditions all properties should remain nearly constant for storage periods of years or decades.

Acceptable Storage Conditions

Acceptable storage conditions are near ambient temperature of -40F – 150F (-40C – 65C) and humidity (0% - 100%) in warehouse locations. Under these conditions, with daily temperature and humidity fluctuations expected, Norplex-Micarta cannot warranty fully cured laminate physical and electrical properties, including warp and twist, dielectric breakdown, dissipation factor, and dielectric constant for a period of more than 90 days because of the absorption and desorption of moisture in these storage conditions.

Ultraviolet Light Exposure

While fully cured laminates are usable for years or decades in many applications, ultraviolet light exposure should be minimized to prevent the breakdown of the organic resins used to produce these laminates. All laminates will change colors after long-term exposure to ultraviolet light, with phenolic resins darkening noticeably in only a few weeks. These changes are primarily in the surface layers of the laminates, but Norplex-Micarta cannot warranty the color stability over long storage periods of fully cured laminates because of the natural color changes that occur in the resins over time. If the laminates are to be used for extended periods of time outdoors, we strongly recommend painting the materials with exterior latex, acrylic, or polyurethane paints to protect it from ultraviolet light.