

# Industry-first adhesives for skin contact wearables



Some of the applications for Dymax 2000-MD series adhesives and encapsulants for wearable electronics

The [Dymax 2000-MW series](#) is a range of medical wearable adhesives and encapsulants which help adapt your wearables devices to industry trends and customer requirements. These materials are the first biocompatible, light-curable adhesive product line to be specifically formulated without common skin irritants and materials of concern for medical wearable and electronics applications.

All adhesives in the range are compliant with ISO 10993-5 for cytotoxicity, with some grades available

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that also meet ISO10993-10 for sensitisation and irritation. Notably, all materials in the 2000-MW range are **formulated without isobornyl acrylate (IBOA)**, a known skin irritant.

Light curable materials bring a whole host of process and cost advantages during wearable device assembly. These adhesives cure in seconds “on demand” on exposure to the correct wavelength of visible and/or UV light, increasing throughput, reducing work in progress and reducing costs. A 100% solids, 100% solvent-free, single part formulation simplifies and reduces cost of handling, processing, and dispensing, while minimising environmental impact and improving worker safety.

Applications include coating and encapsulation of RFID chips or sensor housing assemblies, as well as wire and flex tracking, needle-to-hub bonding, and general assembly bonding. The materials form a reliable bond to many commonly used plastics and have dependable performance against moisture and shock, and can therefore be considered for a wide range of products, including smart monitoring devices such as continuous glucose monitors, pain management devices, sleep monitoring products, and hearing aids, alongside many others.

Any products that come into proximity with the skin are under increased scrutiny. In the highly regulated and rapidly growing wearables market, manufacturers can future-proof their products and avoid costly product recalls and redesigns by choosing adhesives that they know to be safe and compliant with relevant regulations. This new Dymax series of adhesives gives manufacturers some additional peace of mind that the product will be safe for users.

Two formulations in the series are currently available:

- **Dymax 2101-MW-UR** is ideal for the general bonding of medical wearables, offering strong adhesion to a variety of substrates including PC, PVC, and TPU. It also features patented Ultra-Red® fluorescing technology for instant in-line quality control.
- **Dymax 2022-MW** is a versatile general bonding adhesive, coating, and electronics encapsulant

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with minimised water ingress and extremely low water absorption of 0.5%. It bonds well to stainless steel, aluminium, glass and PCBs.

For a thorough walk through of this line up, or for information on our other [medical device adhesives](#), pick up the phone and [give us a call](#).

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