How are breakthrough times estimated for glues and resins in Chemical Guardian?

When we look at the Material Safety Data Sheets (MSDS) for glues or resins, these adhesives are normally formulated as liquids.

To measure the chemical resistance of glove materials versus liquid chemicals, we can use standard test procedures such as ASTM F739 (US) or EN374 (Europe). But if those procedures were used with glues, the test cells could permanently be glued together, rendering such a standard test procedure unsuitable. Nevertheless, we're often asked to state expected permeation breakthrough times for such chemical mixtures.

We therefore have chosen to base ourselves on the stated ingredients composition in the MSDS, and estimate a theoretical breakthrough time.

Please be informed that – in practice – a glove might be offering a far better resistance than our estimations. The glue or resin could harden already on the outer surface of the glove, and not permeate at all.

Often gloves are replaced only because the fingers are glued together and they have become unsuitable as such. One approach could then be to opt for disposable types of gloves that can be discarded after each application.

The glove selection – as always – should be part of a broader risk assessment, taking into account all parameters of the application (severity of risk, intensity of contact, required dexterity etc.). Breakthrough times can be used to compare different glove materials. However, a practice test should confirm the actual suitability in the application and the time of usage of the PPE.