Which gloves can be used to protect against epoxies?

Epoxy resins, widely used in different industries as coatings (for example building & construction industry, windmill construction) are known to be a cause of occupational diseases.

Testing of permeation breakthrough for epoxy resin systems is impossible with the standard test methods (EN374 or ASTM F-739), because of hardening of the chemical in the test cell.

In 2003 however, Ansell participated in a scientific testing program organized by a German health & safety organization for the building & construction industry. A specific testing method was developed to determine the permeation through protective gloves. During this research, Ansell has tested the following gloves using this test method:

- Barrier® (02-100)
- Solvex® (37-900, 37-675, 37-695)
- TouchNTuff® (92-600)

The tested epoxy resin was the low solvent type (containing typically 10% xylene and 10% toluene) based on the monomer Bisphenol A/F – this was found to be the resin type with highest probability of permeation through gloves (these solvents – xylene, toluene – are the components that "drive" the permeation through the glove).

- Barrier® (02-100) and Solvex® (37-900, 37-675, 37-695) gloves did not show any permeation after 8 hours contact with the epoxy resin.
- TouchNTuff® (92-600) did show some permeation rate after +/- 45 minutes, but the permeation rate was under 1 µg/cm².min (EN374-3).

Conclusion:
Based on those findings, we can recommend the following gloves from the current Ansell range: Solvex®, Sol-Knit®, AlphaTec®. As a splash protection: nitrile disposable gloves of min. 0.12 mm such as TouchNTuff®, MicroFlex® Supreno EC (93-853) are recommended.

Gloves made out of neoprene, natural rubber or vinyl, are not recommended as protection against epoxies.