» *TECHNICAL RELEASE*

HAZARDS IN RESEARCH LABORATORIES: CHEMICAL EXPOSURE

Working in a laboratory often requires handling a wide range of chemicals, from acids, bases, inorganic and organic chemicals to solvents with different functional groups, each presenting a different health hazard upon exposure. These health hazards range from skin burns and irritation to respiratory injury and carcinogenic health effects.

Chemical splash is the most commonly occurring hazard or incident in a laboratory. Therefore, it is necessary to protect the researchers across the breadth of chemicals handled, and new chemical entities, for which complete toxicological testing has not been yet performed.

To protect researchers against chemical exposure, it is paramount to understand how gloves protect from chemicals:

- Recognize that every glove style delivers a different level of protection from specific chemicals and hazards based on the material of construction
- Conduct a hazard assessment, read chemical safety data sheets and consider all substances gloves may come in contact with.
- Ask yourself whether the wearer requires:
  - » Chemical Splash or Chemical Immersion Protection
- If so, what chemicals is the wearer working with, and for how long might they be exposed?

Ansell's broad range of disposable gloves will protect laboratory researchers against chemical splashes across a spectrum of chemical compounds. Developed by scientists, this broad offering protects you against most of the solvents that you would encounter in your research environment.

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Table 1. Commonly Used Hazardous Chemicals and Hand Protection Recommendations *

	Hazard	Chemical Splash Protection Gloves	Chemical Immersion Protection Gloves
Acetaldehyde	irritant	Microflex® 93-853, TouchNTuff® 92-605	ChemTek™ 38-514 Barrier® 02-100 with TouchNTuff 92-600 overglove
Chloroform	irritant	Microflex® 93-260	PVA® 15-554
Cyclohexane	irritant	Microflex® 93-260	AlphaTec® 58-128 Solvex® 37-675 or 37-900
Diethyl ether	irritant	Microflex® 93-853 TouchNTuff® 92-605	PVA® 15-554 Barrier® 02-100 with TouchNTuff® 92-600 overglove
DMSO	toxic	Microflex® 93-853 TouchNTuff® 92-605	Bi-Colour™ 87-900 Neotop® 29-500 ChemTek™ 38-628
Ethanol or IPA	may cause skin irritation	Microflex® 93-853 TouchNTuff® 92-600 or 92-605	AlphaTec® 58-535 Solvex® 37-675 or 37-900
Ethyl acetate	irritant	Microflex® 93-853 TouchNTuff® 92-605	PVA® 15-554 ChemTek™ 38-628
Hexane or Heptane	irritant	Microflex® 93-853 or 93-843 TouchNTuff® 92-600 or 92-605	AlphaTec® 58-128 Solvex 37-675 or 37-900
MEK	irritant	Microflex® 93-260	ChemTek™ 38-628 Barrier® 02-100 with TouchNTuff® 92-600 overglove
Sodium Hydroxide 40-50 % solution	corrosive, burns	Microflex® 93-833, 73-847, 93-843, 93-852, 93-856, or 93-853 TouchNTuff® 92-600 or 92-605	AlphaTec® 58-128 Solvex® 37-675 or 37-900
Sulfuric acid	corrosive, irritant	Microflex® 73-847 for dilute concentrations or Microflex® 93-260 for strong concentrations above 50%	AlphaTec® 58-128 for dilute concentrations Scorpio® 08-354 for strong concentrations above 50%
Xylene	irritant	Microflex® 93-260	PVA® 15-554 Barrier™ 02-100 with TouchNTuff® 92-600 overglove

*Recommendations made in this note are based on extrapolations from laboratory test results and information regarding the composition of chemicals and may not adequately represent specific conditions of end use. Synergistic effects of mixing chemicals have not been accounted for. For these reasons, and because Ansell has no detailed knowledge of or control over the conditions of end use, any recommendation must be advisory only and Ansell fully disclaims any liability including warranties related to any statement contained herein.

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