Which gloves can I use to protect against liquefied gases?

Protection against gases

Gases are usually inert and will evaporate quickly into the air. Therefore, a glove is not a relevant way of protection in itself in many of cases. However, for some of the most aggressive gases, a complete protection suit would have to be considered to protect the person from possible toxic fumes.

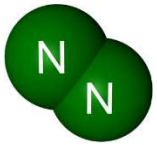
Protection against liquefied gases

A gas can become a liquid when exposed at very low temperatures or when stored into pressurized bottles.

Liquid Nitrogen

Examples:

1. Liquid nitrogen is an inert gas which is often used and stored in flasks in its liquid form. However, to obtain liquid nitrogen, the gas has to be cooled at temperatures around -196°C.



The risk of contact with liquid nitrogen is not the chemical itself, but the extreme cold – this can cause severe cold burns to the skin. First of all, no glove material will withstand immersion in liquid nitrogen. The coating of any glove will crack and break, leaving the hands unexposed to the extreme cold.

2. Liquid ammonia is a refrigerant – when it is released (depressurized), it reverts back to the gas and absorbs heat from anything in the vicinity, including plumbing and people, chilling them towards its boiling point of 28 degrees below zero Fahrenheit (-33.5°C). Any anhydrous ammonia released into the environment will therefore emerge as a very cold gas. Therefore the ideal glove for handling anhydrous ammonia should protect against cold gases.

3. Liquefied Natural Gas is commonly shipped as a liquefied gas under pressure. When the pressure is released, it will boil, and it has a reported boiling point of 160 degrees below zero Fahrenheit (-107°C). Any propane released into the environment will therefore emerge as an extremely cold gas.

The risk of contact with liquefied gases does not come from the chemicals themselves, but from the extreme cold – this can cause severe cold burns to the skin. Therefore, a cold protective glove has to be considered, since a “normal” non-cold protective glove will not withstand immersion in liquefied gases (indeed, the coating of this glove will crack and break, leaving the hands unexposed to the extreme cold).

Which gloves can I use to protect against liquefied gases?

Generally, we recommend the following cold protective gloves for splashes of liquefied gases and for handling recipients containing the liquid:

Scorpio® Hi Lo	09-022
Scorpio®	19-024, 19-026
Polar Grip®	23-700

Please note that the above gloves are approved for EN511 (gloves to protect against cold). This European Standard contains a test at –50°C and the glove passes when the coating will not crack at that temperature. Contact temperature for the above references is recommended down to –25/-30°C only, and lower temperatures are not tested.

For any application which requires direct contact or with a higher risk level, we recommend the usage of cryogenic gloves. These are gloves specifically designed for contact cold at temperatures of –120°C and below.