

**Ansell**



## GETTING A GRIP ON SAFETY

# MINIMISING THE SAFETY RISKS POSED BY EXPOSURE TO GREASE, OIL AND CHEMICAL COMPOUNDS



Contact with oil, grease and specialised lubricants is a daily occurrence for workers in many industries. The prevalence of these substances in a working environment creates safety issues that range from detrimental health implications through to productivity losses. For safety and operations managers aiming to minimise risk, today's available hand protection solutions incorporate advanced technologies that deliver suitable barrier protection and superior handling capability in both dry and oily industrial applications.

# DERMAL EXPOSURE CONCERNS

**Liquids and chemical compounds commonly found in (or generated by) industries such as oil and gas production, mining, assembly, stamping, metal-working and manufacturing are known to be harmful to humans. Equally, many occupations — such as machinery installation and maintenance workers — necessitate constant contact with lubricants and oils that are readily absorbed through the skin and can cause irritation or contamination.**

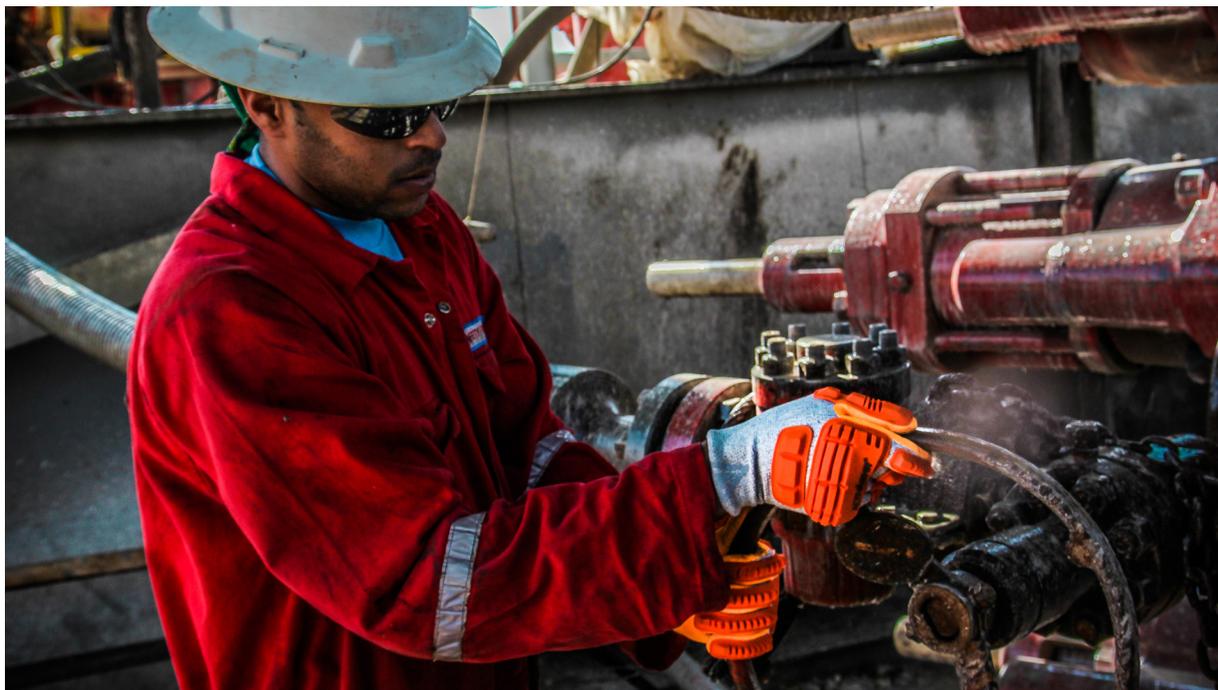
The relative degree of harm varies according to the chemical composition of each specific substance, as well as the probability of direct contact or exposure. Possible undesirable outcomes of dermal exposure to liquids and oils varies widely, with conditions ranging from skin irritation and allergies (including contact dermatitis), through to more serious complaints in the case of known — or as yet unidentified — carcinogenic compounds.

The link between dermal contact and presenting symptoms may not be immediately apparent and therefore initially go unrecognised. For example, exposure to oil — a combination of substances including powerful neurotoxins — can lead to nausea, euphoria, headache and dizziness. Each of these is an indication that the body's nervous system is suffering damage, but the correlation between skin contact and these symptoms is not necessarily a logical link to the affected worker or safety staff.

As many of these potentially harmful materials are an inherent and unavoidable part of the industry sector in which they are found, or derived from required processes and actions, the best defence against unwanted dermal contact is provision of suitable personal protective equipment (PPE).

To provide an adequate safeguard, hand protection solutions should incorporate advanced liquid repellence technology, such as a liquid impermeable nitrile coating that prevents oils and lubricants from even incidental contact with a worker's skin. The liquid layer should be integrated into a knit glove design that allows the wearer flexibility and movement, while still providing full mechanical protection.

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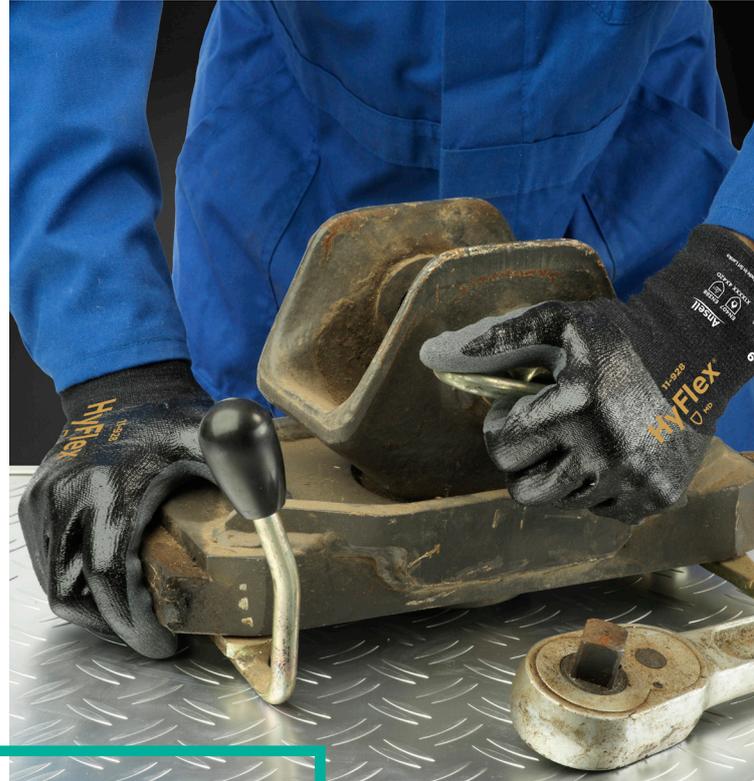


# GRIP VERSUS SLIP

**An equally problematic effect of incidental or sustained contact with liquids is compromised grip, which can easily lead to injury and decreased productivity.**

Mechanical equipment — including engines, generators, dredges, pumps and gearboxes — usually requires regular lubrication to maintain functionality, but the presence of oils and degreasers makes maintenance tasks more difficult and can extend the time required to inspect, remove, replace and reassemble parts and machinery.

If the hand protection solution selected doesn't provide adequate grip, objects can be easily dropped or mishandled, particularly when oils and lubricants are present. Grip also dictates how much force is needed to handle an item or tool, meaning that excessive force may be required for extended periods. This can quickly lead to hand and arm fatigue, productivity losses and the real possibility of developing musculoskeletal disorders in the long-term.



**“ Compromised grip can easily lead to injury and decreased productivity. ”**



Advanced hand protection grip technology is now available in the form of a coating treatment that produces an irregular texture on the glove. The texture pushes oils and liquids away from the surface of an object on contact, relieving hand and arm strain caused by poor grip and improving dexterity, safety and productivity.

In situations where workers are exposed to oils, lubricants and other chemical compounds, a thorough risk assessment process should cover the full gamut of unwanted potential outcomes —from direct dermal exposure through to the ill effects of compromised grip and handling. Understanding the full picture will better enable safety and operations managers to make an informed PPE selection that best meets the specific needs of an application.

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