



**NATIONAL INSTITUTE FOR
OCCUPATIONAL HEALTH**








Division of the National Health Laboratory Service

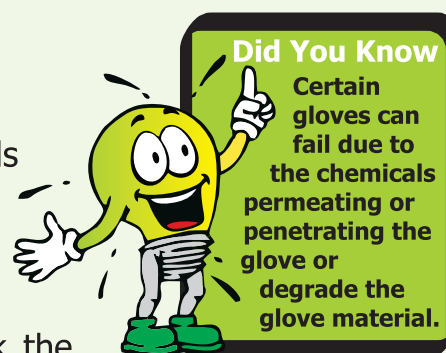


A HANDY GUIDE: CHOOSING THE CORRECT GLOVES FOR WORK

This guide provides information needed to help workers choose the appropriate gloves to protect their hands from hazards in the workplace, if risk cannot be avoided through other approaches. The choice of gloves is important and should be based on a risk assessment to identify the hazards (biological, chemical or physical) and the task requirement. For example, the need for dexterity and grip for the job, duration of contact with the hazard and level of protection required.

HANDY TIPS

-  Health & safety risk assessment of the job must clearly demonstrate that exposure is unavoidable & all other methods of control are not reasonably practical.
-  Gloves must be appropriate for the purpose and must give the best possible level of protection. It is important to check the performance of the gloves on the job.
-  Gloves should fit properly and should not increase the overall risk (e.g. not get caught in machinery).
-  Use good quality gloves to avoid damaging the workers hands.
-  If gloves are required for heat protection it is important to determine if heat is dry or moist, whether there is an open flame or sparks and temperatures in which gloves are to be used.
-  Periodically review the choice of gloves to ensure they meet requirements and that the level of risk has not changed.
-  Workers should be trained on how to correctly put on (donning) and remove gloves (doffing).



QUALITY

It is recommended that gloves used should comply with the South African National Standards (SANS: 11193) or other relevant international standards such as: ASTM (American Society for Testing and Materials) or European Union (EN) standards certification. These organisations test gloves to ascertain if they meet the expected performance requirements like the protective effects and durability under various conditions.



Glove material	Intended use	Advantages	Disadvantages
Natural latex rubber	biological & water based materials (including some acids & bases)	<ul style="list-style-type: none"> thumbs up icon: comfortable thumbs up icon: good touch sensitivity 	<ul style="list-style-type: none"> thumbs down icon: adversely affected by oils & water immiscible substances (hydrocarbons) thumbs down icon: contain proteins to which some people react
Nitrile	water miscible substances, aliphatic & aromatic substances, some resistance to certain chlorinated solvents	<ul style="list-style-type: none"> thumbs up icon: moderate physical strength thumbs up icon: do not contain proteins to which some people react 	<ul style="list-style-type: none"> thumbs down icon: adversely affected by ketones & some chlorinated hydrocarbons (e.g. methylene chloride, trichloroethylene) thumbs down icon: less comfortable & lower dexterity than NRL thumbs down icon: easily torn
Neoprene	water miscible substances, acids (even 'super acids'), moderate resistance to aliphatic solvents	<ul style="list-style-type: none"> thumbs up icon: good touch sensitivity thumbs up icon: contains no proteins thumbs up icon: moderate physical strength 	<ul style="list-style-type: none"> thumbs down icon: poor resistance to chlorinated solvents thumbs down icon: easily torn thumbs down icon: become slippery once wet
Butyl rubber	acids, (including 'super acids' e.g. hydrofluoric), epoxy resins, gases	<ul style="list-style-type: none"> thumbs up icon: resist abrasion 	<ul style="list-style-type: none"> thumbs down icon: poor resistance to water immiscible substances thumbs down icon: may have cumbersome fitting – low dexterity thumbs down icon: low wearer comfort
PVC gloves	acids, bases, oils, fats, peroxides, and amines	<ul style="list-style-type: none"> thumbs up icon: good resistance to abrasions 	<ul style="list-style-type: none"> thumbs down icon: poor for most organic solvents
Leather gloves	thick gloves for physical hazards – heat & cold, abrasion, puncture & for welding thin skinned gloves - if sensitivity & dexterity is required (e.g. pig skin)	<ul style="list-style-type: none"> thumbs up icon: good temperature protection thumbs up icon: good abrasion & cut protection thumbs up icon: soft & pliable when dried thumbs up icon: good puncture resistance & durability 	<ul style="list-style-type: none"> thumbs down icon: cumbersome once wet thumbs down icon: hardens on drying thumbs down icon: not best protection against abrasion & cuts



This pamphlet was produced by NIOH. For more information there are some websites that gives guidance to glove selection e.g. <http://www.cdc.gov/niosh/ncpc/ecpc.html> : (Recommendations for Chemical Protective Clothing). <http://www.ehs.berkeley.edu/workplace-safety/glove-selection-guide>. Glove manufacturers and suppliers also have information on glove selection or contact us at **011 712 6400**

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