

Work **Safe!** Bulletin

PROTECTIVE GLOVES

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Workers in Manitoba may be exposed to risk of health or physical injury to their hands in various occupations. Hand protection is designed to protect the hands against a wide variety of hazards in the workplace. To ensure that the appropriate hand protection is selected and used, both employers and workers must assess the type and severity of all hazards in their work environment.

The **WORKPLACE SAFETY AND HEALTH ACT, W210**, and applicable regulations require that workers be provided with and use suitable hand protection when engaged in work which may constitute a hazard to the hands.

CHOOSE hand protection that will adequately protect the hands from the hazard. **REVIEW** Material Safety Data Sheets (MSDS) and Manufacturers' Information to determine which hand protection is recommended.

ENSURE that the hand protection fits properly.

INSPECT & TEST all hand protection for defects before using—holes in chemical gloves are of particular concern and can be identified by pressurizing the glove with air or water.

RINSE chemical protective gloves with water before removing.

REFER to and follow manufacturers' instructions on the maintenance and care of hand protection.

Guide to the Selection of Skin Protection		
HAZARD	DEGREE OF HAZARD	PROTECTIVE MATERIAL
Abrasion	Severe	- Reinforced heavy rubber, stable-reinforced heavy leather
	Less severe	- Rubber, plastic, leather, polyester, nylon, cotton
Sharp edges	Severe	- Metal mesh, staple-reinforced heavy leather, Kevlar-steel mesh
	Less severe	- Leather, Terry cloth (Aramid fiber)
	Mild with delicate work	- Lightweight leather, polyester, nylon, cotton
Chemicals and Fluids	Risk varies according to the chemical, its concentration, & time of contact among other factors. Refer to the manufacturer or product MSDS.	Dependant on chemical. Examples include natural rubber, neoprene, nitrile rubber, PTFE, Teflon, Viton, polyvinyl chloride, polyvinyl alcohol Saranex, 4H, Barricade, Chemret, Responder.
Cold		Leather, insulated plastic or rubber, wool, cotton
Electricity		Rubber-insulating gloves tested to appropriate voltage with leather outer-glove
Heat	High temperature- over 350°C	- Asbestos, Zetex
	Medium high - over 350°	- Nomex, Kevlar, neoprene-coated asbestos, heat resistant leather with linings
	Warm - up to 200°C	- Nomex, Kevlar, heat resistant leather, terry cloth (Aramid fiber)
	Less warm - up to 100°C	- Chrome-tanned leather, terry cloth
General Duty		Cotton, terry cloth, leather
Product Contamination		Thin-film plastic, lightweight leather, cotton, polyester, nylon
Radiation		Lead-lined rubber, plastic or leather

The accompanying guide to the selection of skin protection is based on the Canadian Centre for Occupational Health & Safety (CCOHS) Infogram K10, January 1998.

In selecting CHEMICAL GLOVES, factors to consider

- ✓ In general, there is no such thing as ‘impermeable’ plastic or rubber.- No one material will be a barrier to all chemicals.
- ✓ Chemical resistance can vary significantly from product to product. For example, not all brands of nitrile gloves provide equivalent protection.
- ✓ Lot-to-lot variations do occur and may go undetected in manufacturer’s quality control procedures.
- ✓ Some commercially available gloves will provide only minimal protection when exposed to certain chemicals or chemical mixture—safe worker activity is thereby reduced.
- ✓ Abrasion, puncture and tear resistance and reaction to perspiration, crumpling and temperature should be considered.

References:

1. *Canadian Centre for Occupational Health & Safety (CCOSH), Infogram K-10 January 1998*
2. *A.D. Schwope and P.P. Costas, Chemical Protective Clothing Selection. Applied Industrial Hygiene 4(1) R-2 to R-5 (1989)*