

Hand Protection Use and Selection

Select the proper hand protection for the hazard, keeping in mind the durability, dexterity, and sensitivity needed for your task as well as glove material, fit, and comfort. The American National Standards Institute (ANSI) rates a glove's level of protection. Ratings are found on the label; a higher rating indicates more protection. Cut resistance is rated A1–A9; impact resistance 1–3; puncture resistance 0–5; and abrasion resistance 0–6.

CHEMICAL PROTECTION

Use when working with hazardous chemicals or oil and grease and as directed by safety data sheets (SDS).

Example
Disposable Nitrile



- Features**
- antistatic
 - no natural rubber
 - chemical resistance
 - high dexterity

- Limitations**
- one-time use
 - no resistance to cuts, punctures, abrasions, or impacts

ABRASION PROTECTION

Use when handling general materials and for general maintenance operations.

Example
Cowhide Leather and Cotton



- Features**
- durable
 - heat and abrasion resistant

- Limitations**
- no resistance to cuts, punctures, chemicals, or impacts
 - limited dexterity

Example
Ansell HY FLEX 11-600
(polyurethane and nylon)



- Features**
- ANSI level-3 abrasion resistance
 - solid grip in both dry and lightly oily environments
 - flexible and breathable with an ergonomic fit
 - high dexterity

- Limitations**
- no resistance to cuts, punctures, or impacts

CUT PROTECTION

Use when working with sharp hand tools or handling objects and materials with sharp edges.

Example
Superior Glove
(polyurethane-dipped knit)



- Features**
- ANSI level-A4 cut resistance
 - ANSI level-4 abrasion resistance
 - flexible and breathable with an ergonomic fit
 - good dexterity

- Limitations**
- no resistance to punctures, chemicals, or impacts

PUNCTURE PROTECTION

Use when working with objects with sharp points (e.g., wire mesh or thorns).

Example
HexArmor Chrome 4026
(synthetic leather and PVC)



- Features**
- ANSI level-2 puncture resistance
 - ANSI level-6 abrasion resistance
 - ANSI level-A8 cut resistance
 - ANSI level-2 impact resistance
 - breathable
 - reliable grip in both dry and lightly oily environments
 - high-visibility color and reflective tape

- Limitations**
- limited dexterity
 - no resistance to chemicals

CRUSH AND IMPACT PROTECTION

Use when handling heavy materials or repairing machines.

Example
Ironclad Mechanic's Glove
(synthetic leather with foam palm)



- Features**
- ANSI level-2 puncture resistance
 - ANSI level-3 abrasion resistance
 - impact and vibration absorption through foam palm
 - reinforced fingertips and thumb
 - breathable

- Limitations**
- no resistance to cuts or chemicals

Maintenance and Storage

Inspect gloves for damage and replace as needed. Clean according to manufacturer guidelines and store in a dry, cool place.

Resources

Contact Environmental Health and Safety at ehs@northwestern.edu; visit northwestern.edu/environmental-health-safety/facility-safety/personal-protective-equipment.html; or scan the QR code.

