Hand Protection

Assessment of Hazards

- If a workplace hazard assessment reveals that employees face potential injury to hands and arms that cannot be eliminated through engineering and work practice controls, employers must ensure that employees wear appropriate protection.

What are the Hazards?

- Skin absorption
- Chemical burns
- Thermal burns
- Electrical
- Cuts
- Punctures

Leather Gloves

- Sparks
- Heat
- Chips
- Rough objects
- Not chemicals

Coated Fabric Gloves

- Usually non-slip
- Handling bricks & wire
- Chemical containers
- Not chemicals

Butyl Gloves

- Peroxide
- rocket fuels
- highly corrosive acids (nitric acid, sulfuric acid, hydrofluoric acid and red-fuming nitric acid)
- strong bases
- Alcohols
- Aldehydes
- Ketones
- Esters

Latex Gloves

- Weak water solutions of:
  - Acids
  - Alkalis
  - Salts
  - Ketones

Neoprene Gloves

- hydraulic fluids
- Gasoline
- Alcohols
- Organic acids and alkalis

Nitrile Gloves

- Oils
- Greases
- Acids
- Caustics
- Alcohols
- Not recommended for:
  - strong oxidizing agents
  - aromatic solvents
  - Ketones
  - Acetates

Best method for Determining Effectiveness

1. Determine the ingredients of the chemicals you will be working with
2. Review the Safety Data Sheet
    1. SDS's have been know to only say "Use appropriate gloves"
3. Choose a brand of glove
4. Use the manufactures data recommendations for the glove material

Example of Glove Selection

- Chemical Ingredient
  - Acetone

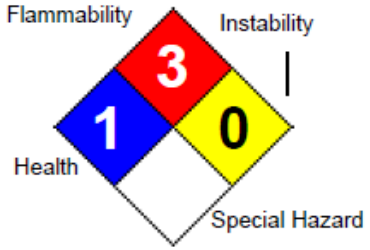
Safety Data Sheet

MATERIAL SAFETY DATA SHEET

Page: 1

Klean-Strip Acetone

HEALTH	1
FLAMMABILITY	3
PHYSICAL	0
PPE	



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Supercedes Revision: 11/13/2008

1. Product and Company Identification

Product Code: 1640.1

Product Name: Klean-Strip Acetone

Reference #: 1640.1

Manufacturer Information

Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113

Phone Number: (901)775-0100

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear chemical resistant gloves suited for use with acetone. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

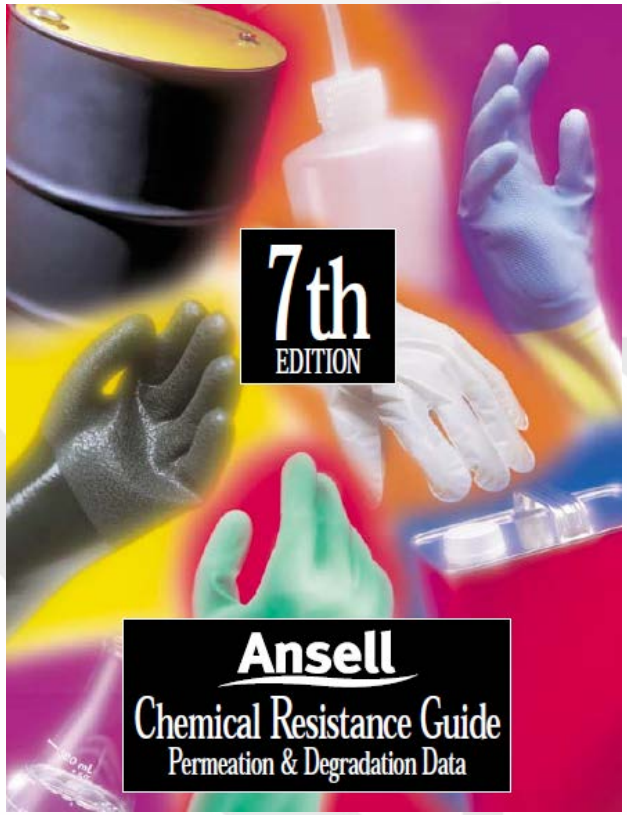
Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or your experience slight dizziness, headache, nausea, or eye-watering - STOP - ventilation is inadequate. Leave area immediately.

I Chose Ansell Brand gloves

- Most PPE manufactures will have guidance documents to help choose the best glove for your chemical ingredient.



Look Up the Chemical

Permeation/Degradation Resistance Guide for Ansell Gloves

The first square in each column for each glove type is color coded. This is an easy-to-read indication of how we rate this type of glove in relation to its applicability for each chemical listed. The color represents an overall rating for both degradation and permeation. The letter in each square is for Degradation alone…

- GREEN: The glove is very well suited for application with that chemical.
- YELLOW: The glove is suitable for that application under careful control of its use.
- RED: Avoid use of the glove with this chemical.

CHEMICAL	LAMINATE FILM BARRIER			NITRILE SOL-VEX			UNSUPPORTED NEOPRENE 29-865			SUPPORTED POLYVINYL ALCOHOL PVA			POLYVINYL CHLORIDE (Vinyl) SNORKEL			NATURAL RUBBER CANNERS AND HANDLERS*			NEOPRENE/ NATURAL RUBBER BLEND CHEMI-PRO*		
	Degradation Rating	Permeation: Breakthrough	Permeation: Rate	Degradation Rating	Permeation: Breakthrough	Permeation: Rate	Degradation Rating	Permeation: Breakthrough	Permeation: Rate	Degradation Rating	Permeation: Breakthrough	Permeation: Rate	Degradation Rating	Permeation: Breakthrough	Permeation: Rate	Degradation Rating	Permeation: Breakthrough	Permeation: Rate	Degradation Rating	Permeation: Breakthrough	Permeation: Rate
1. Acetaldehyde	■	380	E	P	—	—	E	10	F	NR	—	—	NR	—	—	E	7	F	E	10	F
2. Acetic Acid	■	150	—	G	270	—	E	60	—	NR	—	—	F	180	—	E	110	—	E	260	—
3. Acetone	▲	>480	E	NR	—	—	E	10	F	P	—	—	NR	—	—	E	10	F	G	10	G

The Best Rated Glove

- Laminated Film Glove.
- Natural rubber and unsupported neoprene both had excellent degradation however had a 10 minute breakthrough time.
- Nitrile, PVA, & PVC gloves were recommended by the manufacturer to not be used with Acetone.

Be Safe

Acknowledgement

I _____, have completed the PPE Hand Protection training.

(Print Name)

Date: _____

Please print the acknowledgement sheet, fill in requested information and email to srsweb@unm.edu to complete training.