HAND SAFETY

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DANGERS TO FINGERS AND HANDS

There are multiple hazards that can cause injury to workers hands.

Impacts

- Blunt force trauma
- Crushing
- Caught between / Pinches

Cuts

- Slicing
- Stabbing / Penetrations

Burns

- Fire / Heat
- Cryogenic / Cold
- Chemical

METHODS FOR PREVENTING HAND INJURIES – HIERARCHY OF CONTROLS

When implementing controls, you must always attempt to work through the hierarchy in top-down order.

Elimination
Physically remove the hazard

Substitution
Replace the hazard
e.g. Replace equipment so that hand tools are not needed

Engineering
Isolate people from the hazard
e.g. tag lines, finger savers

Administrative
Change the way people work
e.g. PTW, SOP, SWMS, JHA

PPE: Protect the worker
e.g. utilise the appropriate gloves

You should always look to **eliminate** the hazards first and use PPE last

METHODS FOR PREVENTING HAND INJURIES – ISOLATION / ENGINEERING

If the hazard cannot be eliminated, or substituted, then ways to isolate the person from the hazard should be investigated.

Engineering or isolation controls prevent the hazard contacting your hands

Hand tools

- Select the right tool for the job
- Can a power tool be used instead?
- Consider the tool swing path

Tool holders / extension handles

- Use tool holders & finger savers

Load guides

- Use taglines
- Use push / pull sticks
- Use lifting hooks

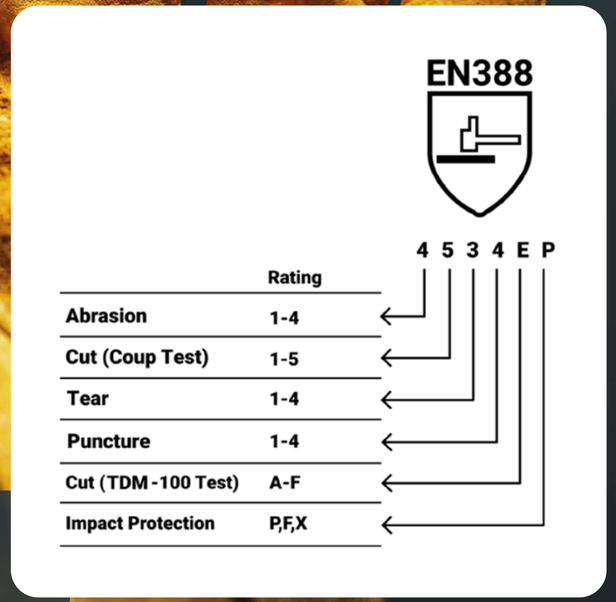
METHODS FOR PREVENTING HAND INJURIES – PPE

Select the right gloves for the task

Gloves should not be used as the primary level of protection

Things to consider when selecting gloves:

- What level of dexterity is required for the task
- Size of glove
- Are moving parts present
- Cut resistance
- Impact resistance
- Chemical resistance
- Different chemicals react differently to different glove materials
- Always check the SDS to see which glove materials are and aren't compatible
- Weather conditions



Glove standards and what they mean (esko website)

GLOVE SELECTION MATRIX

Todd Energy Well Services use a glove matrix to help determine what gloves should be used for each task. This matrix is available for all to utilise.

Offers guidance for:

- Glove selection for specific tasks
- Minimum specifications for the task
- There may be a requirement to use a different tool or glove to what is usually used
- The task and glove should be assessed to ensure they are an effective combination

TASK / APPLICATION	MECHANICAL				CHEMICAL		THERMAL	
	IMPACT LIQUID	**IMPACT DRY**	**PRECISION LIQUID**	**PRECISION**	**CHEMICAL**	**DISPOSABLE**	**COLD / CRYO**	**WELDING / HOT WORK**
	Rubber protection on back of thumb, fingers, and back of hand. Rubber dipped up to cuff. Good grip.	Rubber protection on back of thumb, fingers, and back of hand. Good grip.	Good dexterity. Rubber dipped up to cuff. Good grip on palm and fingers.	Cut resistant material. Good dexterity. Good grip on palm and fingers.	Thick rubber around hand. Long cuff for chemical splashes.	Thin rubber. Designed to keep hands clean and free from contact with chemicals.	Thick lining designed to stop cold transfer from contact. Waterproof outer to resist splashes.	Thick lining with heat resistant outer. Designed to resist heat transfer.
	 Example: Graphex Quantum+ LQR	 Example: PortWest A721 Impact	 Example: Graphex Precision LQR	 Example: Graphex Beyond	 Example: Ansell AlphaTec 58-535B	 Example: SafeTouch Disp Nitrile	 Example: TempShield Cryo	 Example: Esko Blue Brute Premium
	Minimum Requirements EN388 – 4241XP / 4X41BP	Minimum Requirements EN388 – 4241XP / 4X41BP	Minimum Requirements EN388 – 4X21X	Minimum Requirements EN388 – 4X21A 4121X	Minimum Requirements EN407 – X1XXXX	Minimum Requirements Nitrile rubber	Minimum Requirements EN511 – 131	Minimum Requirements EN407 – 413X 4X
Rigging up, lifting heavy equipment	✓	✓						
Using sledgehammers, large Chain tongs or Pipe wrenches	✓	✓						
Rigging up hammer union pipework	✓	✓						
Rigging up, lifting light equipment	✓	✓	✓	✓				
Handling equipment covered / contaminated with hydrocarbons	✓	✓	✓			✓		
Using small hand tools			✓	✓				
Installing / removing small nuts, bolts or grub screws			✓	✓		✓		
Applying grease and lubricants	✓		✓		✓	✓		
Mixing chemicals	✓		✓		✓	✓		
Taking chemical samples	✓		✓		✓	✓		
Cleaning with solvents and / or chemicals	✓		✓		✓	✓		
Operating LN2 equipment for extended periods							✓	
Welding / Grinding								✓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