



# Personal Protective Equipment Best Practices

## NCCA Tool Kit #37

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There are many tasks in the coil coating process that are inherently safety risks. To limit these risks, Personal Protective Equipment (PPE) when worn properly can serve as a barrier of protection. PPE refers to protective clothing, helmets, gloves, face shields, goggles, facemasks and/or respirators or other equipment designed **to protect the wearer from injury.**

This tool kit provides recommended PPE best practices to reduce the risk of injury when performing the following coil coating tasks:

- De-canning overseas coils
- Coil field/warehouse operations
- Cutting samples from coils – coil bay
- Metal sample handling – lab setting
- Coater clean-up
- Chemical coater clean-up
- Paint mixing/supply to coaters
- Metallic coating - drossing



When selecting cut-resistant PPE, ANSI cut resistance ratings can be used to narrow down the field of possible PPE manufacturers/models.

Higher ANSI cut resistance ratings correlate to increased cut resistance.

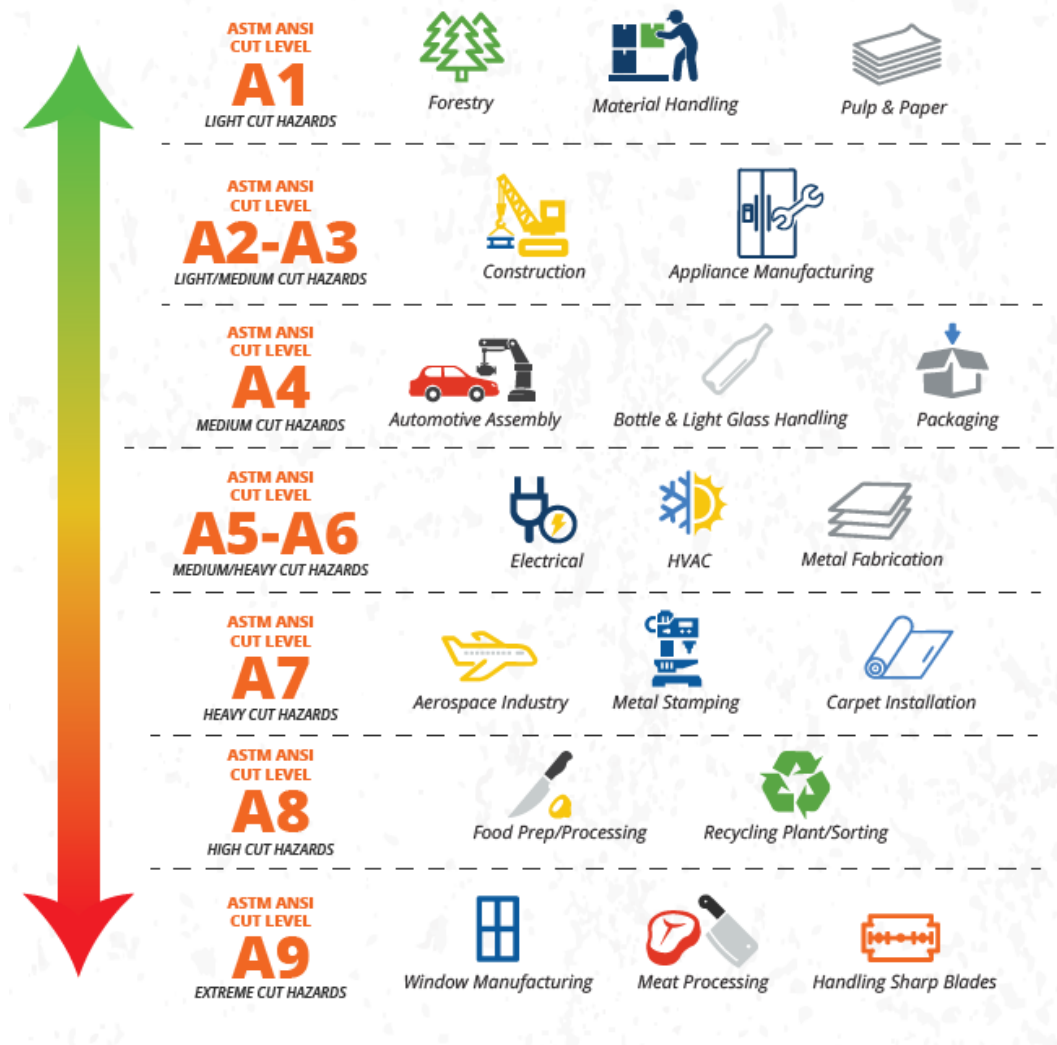
ANSI ratings previously went up to a max of A5, however, the ratings were revised in 2016 for a new maximum of A9. This was changed to provide more consistency within a given ANSI range.

- Example: The previous A4 rating test range was from 1500 to 3499 grams of cut resistance. A4 gloves could perform very differently depending on where they fell in the range.

PPE used in the coil coating industry generally falls within the A4 to A8 range.

## Which ANSI Level Do I Choose?

Even if you understand the standards applied to cut-resistant gloves, making a product selection can be difficult. To help make that process a little easier, here are some common applications for each level of cut resistant gloves provided by Superior Glove.



ANSI cut resistance ratings are determined by using the TDM Method. This utilizes a Tomodynamometer (model TDM-100) to perform the test.

- All cuts are in the same direction and are the same length (20 mm on average)
- After each cut cycle, a new blade is installed, and weight (grams) is added until cut-through is achieved.
- A conductive substrate provides precise measurement of when cut-through is achieved.

When testing, the palm of the glove is used as the test area, as this replicates the real-world use of the glove.

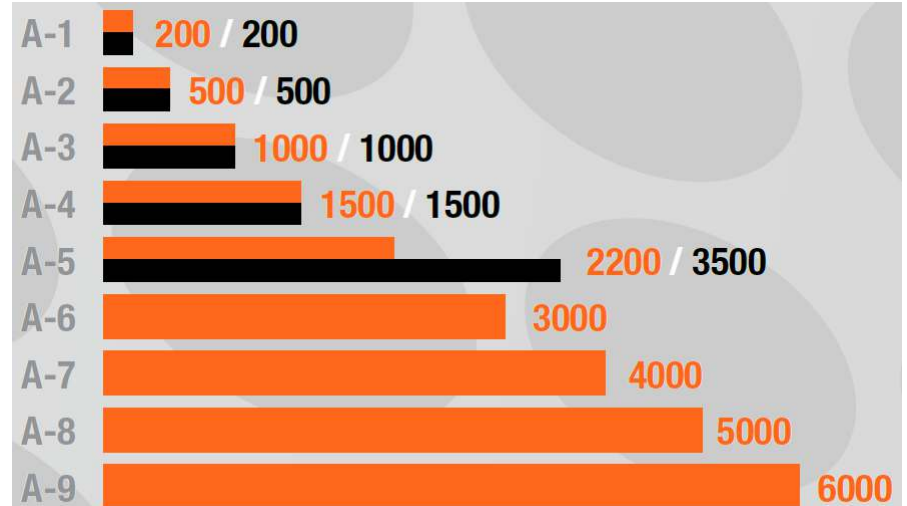
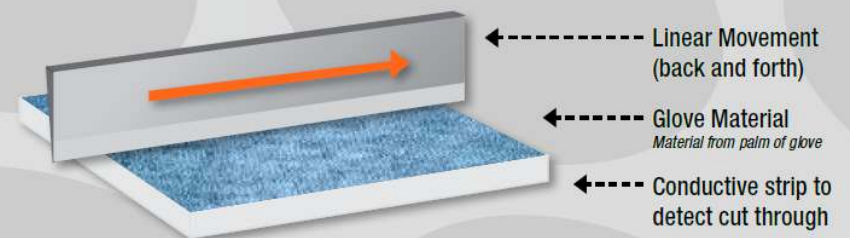
ANSI cut resistance level is then determined based on the grams of force required to cut the sample.

The European EN Standard uses different test equipment and is not directly comparable to the TDM test method.

## CUT PROTECTION TESTING METHODS

### TDM METHOD - VARIABLE LOAD (gr/N)

ANSI  
A? ANS/ISEA



# De-Canning Overseas Coils

- **Task Definition** – removing metal canning, banding, and other packaging from imported material
- **Hazards** – sharp edges and pointy edges due to packaging damage in transit
- **Best Practice PPE Requirements**
  - Face shield
  - Safety glasses
  - Heavy cut resistant gloves
  - Cut resistant gauntlets – full-arm length (or)
  - Cut resistant jacket
  - Safety toe shoes
  - Hearing protection (if applicable)
  - High-visible clothing (if applicable)
  - Hardhat (if applicable)



**Best-in-Class PPE – Magid Kevlar/ Double Leather Glove  
Superior Glove Endura 4 Glove (A4 rating)**

# Coil Field/Warehouse Operations



- **Task Definition** – Crane operation, inventory, and walking within coil storage areas
- **Hazards** – sharp edges / points due to damage, crane or forklift traffic
- **Best Practice PPE Requirements**
  - Safety glasses
  - Cut resistant gloves
  - Elbow-length cut resistant gauntlets or jacket
  - Safety toe shoes
  - Hearing protection (if applicable)
  - Hardhat (if applicable)
  - High-visible clothing

**Best-in-Class PPE – Magid M-Gard Gauntlets (A4 – A6 rating)**

# Cutting Samples from Coils – Coil Bay

- **Task Definition** – cutting samples from coils in a coil bay using hand-held shears (manual or powered)
- **Hazards** – sharp edges from coils in storage, cut hazards from handling samples, crane / forklift traffic
- **Best Practice PPE Requirements**
  - Safety glasses
  - Cut resistant gloves
  - Cut resistant gauntlets – full-arm length (or)
  - Cut resistant jacket
  - Safety toe shoes
  - Hearing protection (if applicable)
  - High-visible clothing (if applicable)
  - Hardhat (if applicable)



**Best-in-Class PPE – WhiZard Metalguard LP Glove (A7 rating)  
Magid Cut-Master XKS200LEA Glove (A6 rating)**

# Metal Sample Handling – Lab Setting

- **Task Definition** – Handling of small metal samples in the lab for testing
- **Hazards** – sharp edges / points on samples
- **Best Practice PPE Requirements**
  - Safety glasses
  - Cut resistant gloves (better-dexterity designs)
  - Cut resistant gauntlets
  - Safety toe shoes
  - Hearing protection (if applicable)



**Best-in-Class PPE – Body Guard EC105 Glove (A4 rating)**

**Magid D-ROC GPD782 Glove (A7 rating)**



# Coater Clean-up

- **Task Definition** – clean-up of a paint coater using solvents and various implements
- **Hazards** – Class 1 Division 1 paint and solvent hazards, nip hazards
- **Best Practice PPE Requirements**
  - Face shield
  - Splash goggles
  - Respirator - organic cartridges (if applicable)
  - Elbow-length chemical resistant gloves
  - Chemical-resistant apron
  - Safety toe shoes
  - Hearing protection (if applicable)
  - High-visible clothing (if applicable)



**Best-in-Class PPE – Ansell PVA Coated Cotton Glove, Model 15-554**

# Chemical Coater Clean-up

- **Task Definition** – clean-up of a chemical coater using cleaners and various implements
- **Hazards** – chemical hazards, nip hazards
- **Best Practice PPE Requirements**
  - Face shield
  - Splash goggles
  - N95 mask or respirator (if applicable)
  - Elbow-length chemical resistant gloves
  - Chemical-resistant apron
  - Safety toe shoes
  - Hearing protection (if applicable)
  - High-visible clothing (if applicable)



**Best-in-Class PPE – Showa Neoprene Coated Cotton Glove, Model 6797-10**



## Paint Mixing / Supply to Coater

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- **Task Definition** – clean-up of paint coater using solvents and various implements
- **Hazards** – Class 1 Division 1 paint and solvent hazards
- **Best Practice PPE Requirements**
  - Face shield
  - Safety glasses
  - Respirator - organic cartridges (if applicable)
  - Elbow-length chemical resistant gloves
  - Chemical-resistant apron
  - Safety toe shoes
  - Hearing protection (if applicable)
  - High-visible clothing (if applicable)

**Best-in-Class PPE – Ansell PVA Coated Cotton Glove, Model 15-554**