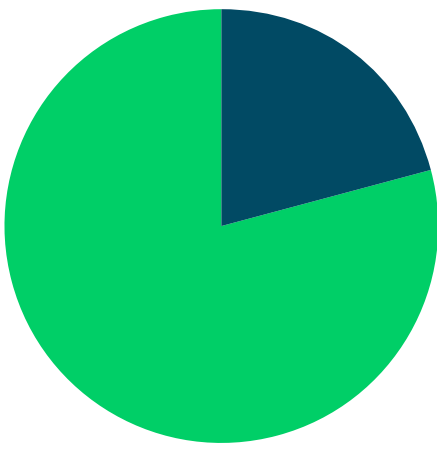


# ANSI/ISEA 105-2023 PUNCTURE LEVELS

ANSI/ISEA 105 Puncture testing identifies the performance characteristics of hand and arm protection products against punctures from pointed objects. There is a separate test (not covered in this guide) for hypodermic needle testing. This testing standard measures the force in Newtons required to puncture the material with a pointed object, in PPE products such as gloves and sleeves. The result is classified on levels 1-5.

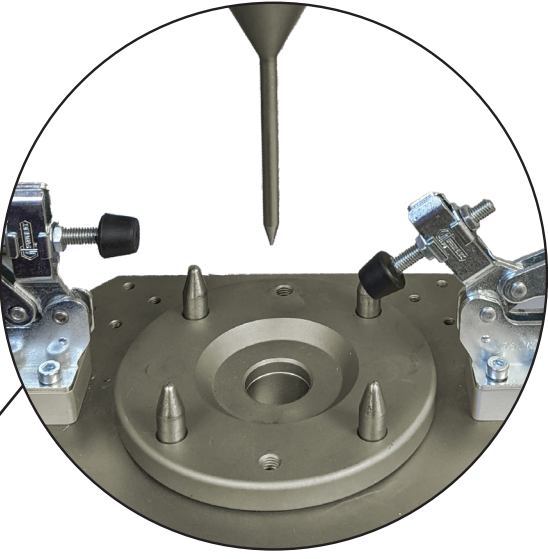
## Overview of Hand and Arm Injuries



**21%**  
of all injuries that  
required days away  
from work in 2020 were  
to the hands and arms



## ANSI/ISEA 105-2023 Puncture Testing Process



1. A pointed probe similar to a ballpoint pen is fitted into the machine at a 90° angle
2. The material to be tested is positioned and secured between two metal plates
3. The probe is lowered, penetrating the test fabric at a speed of 100mm/min
4. Results are reported in Newtons

[Click to watch video](#)

## Puncture Levels Testing Results

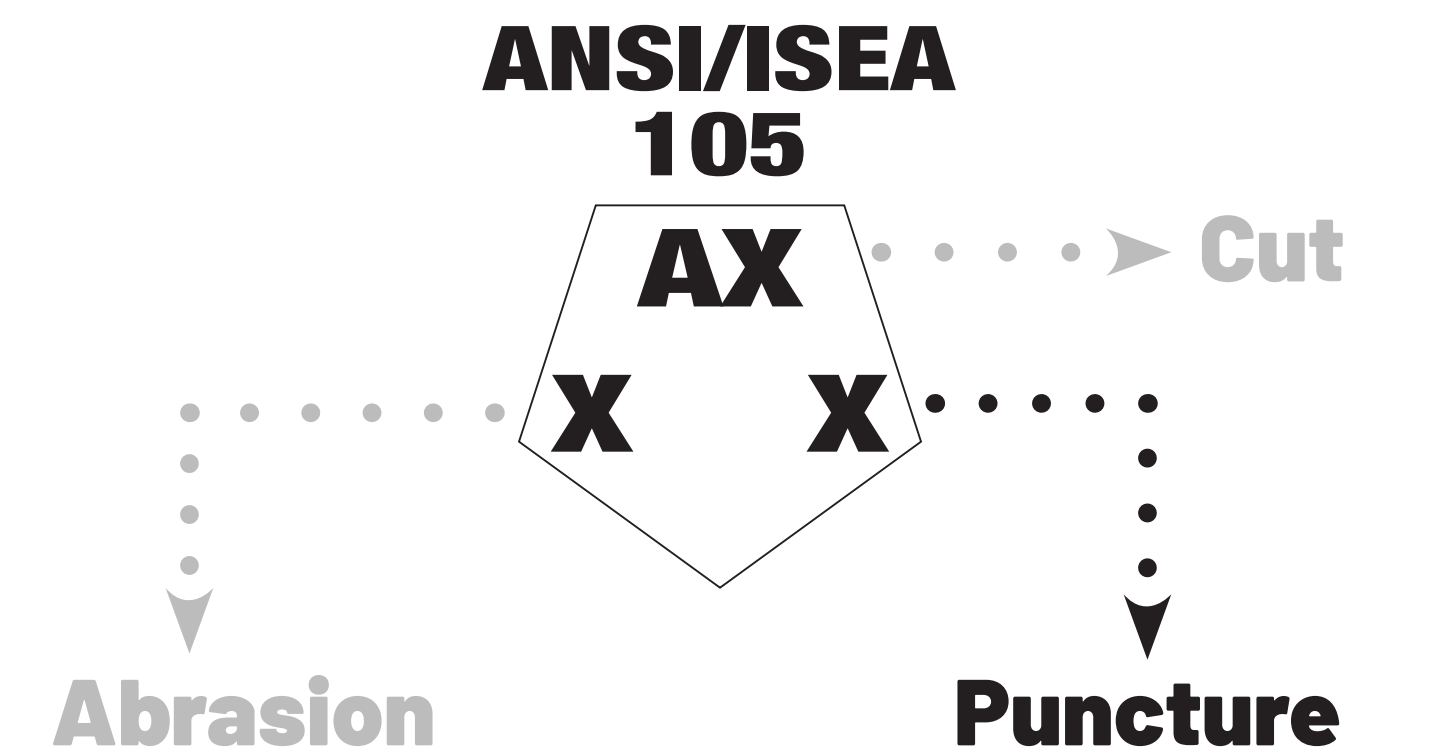


## Puncture Levels Common Industries

Common industries that may utilize the ANSI/ISEA 105 Puncture levels are listed below. Keep in mind that these are not a complete list, but only examples of gloves and sleeves that may work for these applications. You should speak to a safety professional before purchasing PPE to identify appropriate hand and arm protection for the job.

PUNCTURE LEVEL 1	PUNCTURE LEVEL 2	PUNCTURE LEVEL 3	PUNCTURE LEVEL 4	PUNCTURE LEVEL 5
<ul style="list-style-type: none"><li>General Maintenance</li><li>General Purpose</li><li>Manufacturing</li><li>Small Parts Handling</li></ul>	<ul style="list-style-type: none"><li>Automotive</li><li>Construction</li><li>Landscaping</li><li>Material Handling</li><li>Warehouse</li></ul>	<ul style="list-style-type: none"><li>Brickwork</li><li>Assembly</li><li>Oil and Gas</li><li>Mining</li><li>Petrochemical</li><li>Utilities</li></ul>	<ul style="list-style-type: none"><li>Aerospace Industry</li><li>Carpentry</li><li>Demolition</li><li>Glass Handling</li><li>HVAC</li><li>Infrastructure Maintenance</li><li>Metal Fabrication</li><li>Recycling</li><li>Roofing</li><li>Steel Framing</li></ul>	<ul style="list-style-type: none"><li>Cable</li><li>Construction</li><li>Forestry</li><li>Lumber</li><li>Rebar Handling</li><li>Barbed Wire</li><li>Waste Management</li></ul>

## ANSI/ISEA 105-2023 New Icon Designation



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