

AC RATING ON LAMINATE FLOORING VS. 20 MIL WEAR LAYER ON SPC FLOORING: UNDERSTANDING THE DIFFERENCE

When choosing the right flooring for your home or business, two common durability metrics you'll come across are the AC rating on waterproof laminate flooring and the mil wear layer on SPC (Stone Plastic Composite) flooring. These two standards measure different aspects of durability and are crucial in determining the longevity and performance of the flooring in various environments. Below, we break down the differences between these two ratings, how they are tested, and which option may be best for your needs.

WHAT IS THE AC RATING ON WATERPROOF LAMINATE FLOORING?

DEFINITION

The AC rating (Abrasion Class rating) is a standardized system developed by the European Producers of Laminate Flooring (EPLF) to measure the durability of laminate flooring. The rating is based on a series of rigorous tests that determine how well the laminate surface resists wear, impact, stains, and burns.

TESTING PROCESS

Waterproof laminate flooring undergoes a Taber Test, where an abrasive wheel is used to simulate foot traffic wear over time. Other tests include:

- Impact Resistance – Measures how well the flooring resists damage from falling objects.
- Stain and Burn Resistance – Evaluates how the surface reacts to common household stains and cigarette burns.
- Water Resistance – Ensures the core and surface can withstand moisture without swelling.
- Scratch Resistance – Assesses how well the top layer resists scratches.

AC RATING LEVELS

Each waterproof laminate product is assigned an AC rating from AC3 to AC5, with higher numbers indicating greater durability:

- AC3 (Heavy Residential / Light Commercial Use) – Good for high-traffic areas in homes and some light commercial spaces.
- AC4 (General Commercial Use) – Designed for offices, cafes, and moderately busy retail spaces.
- AC5 (Heavy Commercial Use) – Built for high-traffic commercial spaces like shopping malls and public buildings.

The higher the AC rating, the more resistant the laminate flooring is to wear and tear.

WHAT IS THE 20 MIL WEAR LAYER ON SPC FLOORING?

DEFINITION

In SPC flooring, the wear layer is the transparent protective topcoat that shields the printed vinyl layer underneath. This layer is measured in mils (thousandths of an inch). A 20 mil wear layer is a high-durability option commonly used in both residential and commercial settings.

TESTING PROCESS

The wear layer is tested through methods such as:

- Tabor Abrasion Test – Determines the durability of the topcoat against continuous abrasion.
- Indentation Resistance – Measures how well the surface withstands heavy furniture and high heels.
- Chemical Resistance – Ensures the flooring does not degrade from exposure to cleaning agents and spills.

- UV Resistance – Evaluates how well the surface resists fading from sunlight exposure.

WEAR LAYER THICKNESS OPTIONS

SPC flooring comes with different wear layer thicknesses:

- 12-20 mil (Heavy Residential / Light Commercial Use) – Works well for living rooms, kitchens, and small offices.
- 20+ mil (Commercial and High-Traffic Use) – Recommended for offices, hotels, retail spaces, and other busy environments.

The thicker the wear layer, the longer the SPC flooring will last before showing signs of wear and tear.

KEY DIFFERENCES BETWEEN AC RATING AND WEAR LAYER MIL THICKNESS

Feature	AC Rating (Waterproof Laminate)	Wear Layer (SPC Flooring)
What it Measures	Abrasion resistance and durability of waterproof laminate flooring	Thickness of the protective wear layer on SPC flooring
Test Methods	Tabor Abrasion, Impact, Stain, Water Resistance	Tabor Abrasion, Chemical Resistance, UV Resistance
Measurement Scale	AC3 to AC5 (higher is better)	Measured in mils (thicker is better)
Typical Durability	10-25 years depending on rating	10-20 years depending on wear layer thickness
Water Resistance	Highly water-resistant but not fully waterproof	100% waterproof
Scratch Resistance	High scratch resistance, especially at AC4 and AC5	Scratch-resistant but can be dented with heavy objects
Best For	High-moisture areas like kitchens, laundry rooms, and bathrooms	Kitchens, bathrooms, commercial spaces, and basements

WHICH ONE SHOULD YOU CHOOSE?

CHOOSE WATERPROOF LAMINATE FLOORING WITH A HIGH AC RATING IF:

- You want a realistic wood-look floor with better scratch resistance.
- You’re installing in a high-moisture area like a kitchen, laundry room, or bathroom.
- You want a durable flooring option with a strong core.
- You prioritize high impact resistance (good for homes with pets and active children).

CHOOSE SPC FLOORING WITH A 20 MIL WEAR LAYER IF:

- You need 100% waterproof flooring (ideal for kitchens, bathrooms, and basements).
- You want low maintenance flooring that can withstand heavy traffic.
- You need commercial-grade durability with a long lifespan.
- You want flooring that's resistant to dents from heavy furniture.

FINAL THOUGHTS

Both waterproof laminate flooring (AC-rated) and SPC flooring (wear layer rated in mils) offer strong durability, but they excel in different areas. Waterproof laminate is better for areas needing high scratch resistance and a wood-like appearance, while SPC is best for waterproof, high-traffic environments. Understanding these differences will help you make an informed decision that suits your specific flooring needs.