Tile Slip Resistance Guide
R Rating and DCOF

DCOF stands for Dynamic Coefficient of Friction, and it's a widely used measure of slip resistance for tiles, especially in the U.S. and other countries that follow the ANSI A137.1 standard. Here's a detailed explanation:

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1. What DCOF measures

- DCOF quantifies how much friction a tile surface provides while someone is walking on it, especially when the tile is wet.
- It is measured dynamically, meaning the test simulates the actual motion of walking, not just standing still.
- A higher DCOF means more grip and less risk of slipping.

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2. How the DCOF test works

- A swinging pendulum device or a tribometer moves a rubber or leather slider across the wet tile surface.
- The frictional resistance between the slider and tile is measured.
- The result is given as a decimal (e.g., 0.42, 0.60).
    - **0.42 or higher** is generally considered **safe for wet floors** for commercial or residential use.

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3. DCOF values and their meaning

DCOF Value	Slip Resistance	Typical Use
< 0.42	Low	Not recommended for wet areas
≥ 0.42	Moderate/Good	Suitable for most wet indoor areas (bathrooms, kitchens)
≥ 0.60	High	Very slip-resistant

R Rating; the R9 to R12 slip resistance ratings are part of the DIN 51130 standard, which measures the slip resistance of floor surfaces, especially in wet conditions. This is important for tiles used in areas like kitchens, bathrooms, or commercial spaces where slipping is a risk. Let me break it down clearly:

1. What the R ratings mean

- **R** stands for "Rutschklasse", which is German for “slip class.”
- The scale goes from R9 to R12 (sometimes R9–R12 is most commonly referenced for commercial/residential tiles):
    - **R9:** Least slip-resistant
    - **R12:** Highest slip-resistant

2. How the testing works

- A person walks on the tile surface at an inclined ramp.
- The ramp is coated with a lubricant (like oil or soapy water) to simulate slippery conditions.
- The **angle of the ramp** at which a person can walk safely without slipping determines the R rating.

3. Approximate slip angles for each class

R Rating	Incline Angle (°)	Typical Use Case
R9	6–10	Dry areas, low-slip risk (living rooms, bedrooms)
R10	10–19	Bathrooms, kitchens, light commercial areas
R11	19–27	Wet areas, commercial kitchens, poolside
R12	27–35	Very wet areas, industrial kitchens, outdoor ramps