



Foul Weather Clothing

EN 343



EN 343 is a European Standard for protective clothing that outlines a minimum level of protection against wet weather, with the whole garment construction taken into consideration in addition to the fabrics. For example, EN 343 Class 3:3 - the first digit denotes its water penetration resistance, whilst the second digit denotes its breathability.

The waterproofing is measured using a hydrostatic pressure test. This involves applying a quantity of pressurised water to the garment and the water penetration rating indicates the pressure it can withstand. Below is a breakdown of how the water penetration is classified. Water penetration is tested both before and after pre-treatments, which include abrasion, flexing and washing.

Protective Clothing with reference WR x, y, R

| x or y (see label) | x: Resistance to water penetration (m) | y: Water vapour resistance (Ret: m ² .Pa/W) |
|-----------------------|---|---|
| Class 1 | ≥ 0.8 | ≥ 40 |
| Class 2 | ≥ 0.8* | 25 < Ret ≤ 40 |
| Class 3 | ≥ 1.3 | 15 < Ret ≤ 25 |
| Class 4 | ≥ 2* | ≤ 15 |

(*) Water column, fabric tested after pre-treatment

R = Readymade garment rain tower test, optional (replaced with 'x' when not been tested)

The breathability is tested in accordance with ISO 11092. A skin model is used to replicate human skin and measures water vapour resistance, which is initially expressed as an RET number (Resistance of Evaporation of a Textile). The lower the RET rating, the greater the breathability, and therefore the higher the item will score in the overall EN 343 rating.

Once the garment breathability has been classed as 1, 2, 3 or 4, you can refer to the recommended wearing times below when working in various temperatures. These times can be prolonged where there are breaks in the work, or the garment has effective openings for ventilation.

| Recommended working minutes based on water vapour resistance | CLASS | | | |
|---|----------|---------------|---------------|----------|
| | 1 | 2 | 3 | 4 |
| Operating Temperature | RET > 40 | 20 < Ret ≤ 40 | 15 < Ret ≤ 25 | Ret ≤ 15 |
| 25°C | 60 mins | 105 mins | 205 mins | No limit |
| 20°C | 75 mins | 250 mins | No limit | No limit |
| 15°C | 100 mins | No limit | No limit | No limit |
| 10°C | 240 mins | No limit | No limit | No limit |
| 5°C | No limit | No limit | No limit | No limit |

Read more on Clad Safety's Safety Standards Guide [here](#).