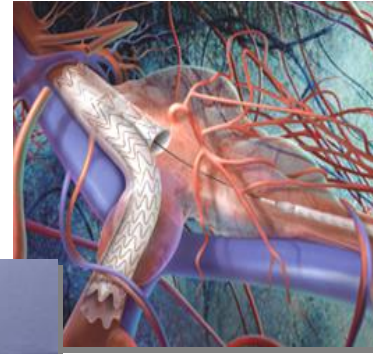


# WL Gore & Associates

An enterprise organized around four divisions



**Fabrics**



**Medical  
Products**



**Electronic  
Products**



**Industrial  
Products**

## Gore Fabrics Division

- The Gore Fabrics Division is divided into two sub divisions, TOF and COF
  - TOF stands for Technically Oriented Fabrics. Meaning Business to Business sales. Products are designed and approved for use in the the worst weather conditions. This clothing is designed and tested to meet the demands of the PPE Directive 89/686/EEC.
  - COF is Consumer Oriented Fabrics. Meaning sales directly to a private person through a ordinary distribution channel (shop, on-line etc)

## Another way to view the difference



### Consumer Oriented Fabrics

Consumer garments are covered by the Gore “Guaranteed to Keep You Dry” e.g. a jacket from The North Face – Limited use



### Technical Oriented Fabrics

Technical garment are certified to conform to relevant standards and industry norms e.g. EN343, EN11612 – Extended use

Or . . .



### **Consumer Oriented Fabrics**

Laminates and styles change frequently as it is focused on the fashion industry



### **Technical Oriented Fabrics**

Laminates are extensively tested to validate performance and meet industry requirements and remain available for many years

## Risk assessment

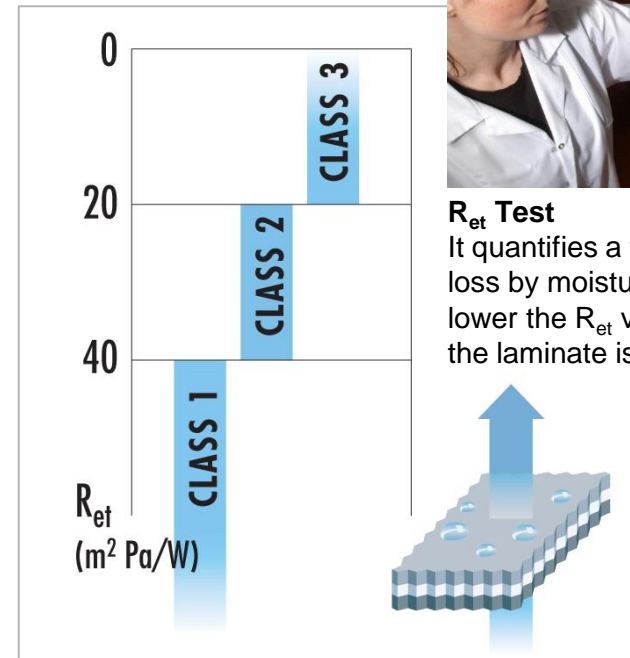
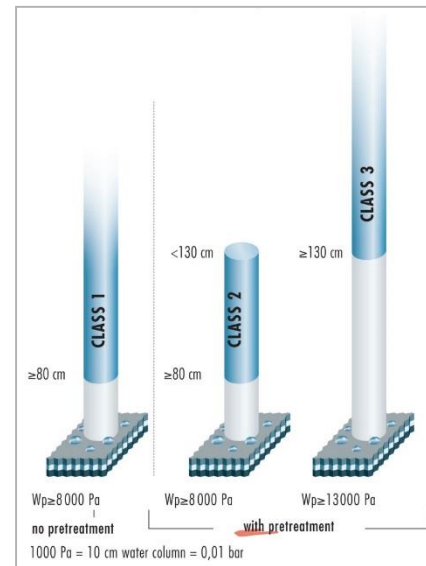
- According to the PPE directive. Employers are responsible to carry out a risk assessment for each job/role. If a risk can not be avoided or mitigated through procedures, PPE must be identified/sourced to mitigate risks.
- When selecting PPE, the employer should procure products that have been tested and comply with industry standards and norms.
- In the main waterproof clothing is tested for breathability and resistance to water entry pressure.
- Norms that include testing for this;
  - EN 343 Protective Clothing against Rain
  - EN 14360 - Protective Clothing Against Rain
  - EN 469 - Protective clothing for fire-fighters
  - EN 342 – Protective clothing against cold
  - Etc.
- The Gore TOF laminates that are being used in industrial applications are also tested to higher demands than COF laminates. Key differences such as higher abrasion, tear, tensile, wash temperatures, shrinkage, high visibility fluorescent colours, colour fastness, flame, etc.



# EN 343 - Protective Clothing – Protection against Rain

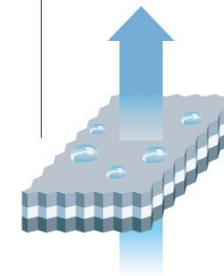
## Main characteristics

Test	Method	Value
Tensile strength	ISO 1421 or EN ISO 13934-1	≥ 450 N
Tear strength	ISO 4674	≥ 25 N
Dimensional change	EN 340	< 3%
Flexing	EN ISO 7854:1997	9000
Seam strength	EN ISO 13935-2	≥ 225 N
Abrasion	EN ISO 12947	9kPa 1000 cycles



### R<sub>et</sub> Test

It quantifies a fabric's resistance to heat loss by moisture vapor transfer. The lower the R<sub>et</sub> value, the more breathable the laminate is



# Additional tests for TOF Garments

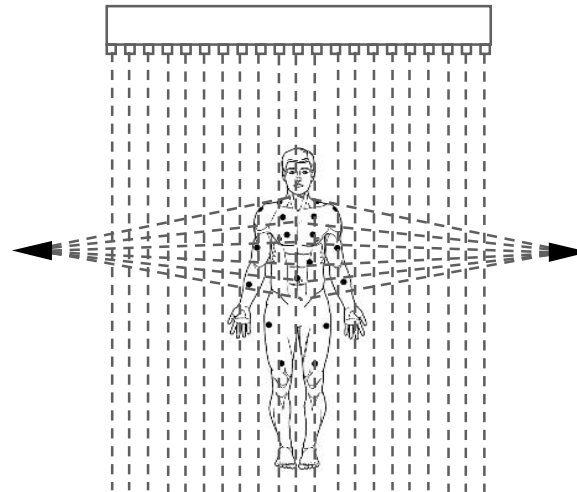
Tested to be durably waterproof for a whole working day



## Gore Performance Standard (GPST) and Gore Rain Tower testing



### Gore test method GPST2



- Testing in European cloudburst conditions from the top (definition in EN14360):

60 mins  
450 l/m<sup>2</sup>h **plus** Gore side rain

- More strict than EN 14360
- Side rain (wind driven rain) tests waterproof construction details on front and back of the garment
- Pre-treatment defined
- Pass/Fail criteria defined
- Advice on construction techniques