STATEMENT OF COMPLIANCE AND DECISION RULE

What is a statement of compliance?

A statement of compliance is a document or a group of documents declaring that goods, such as products, comply with the requirements of technical standards and/or the law.

Declaring the compliance of something means ensuring in writing that our products meet the minimum characteristics defined by these applicable standards.

The Performance Lab, in addition to performing accredited tests, can therefore check that the results meet the requirements defined by applicable technical standards, specifications and laws, and can add a statement of compliance to the test report for the tested product.

How is it expressed?

Let's consider for example the test which assesses a surface's tendency to retain dirt. For the "countertops" class of UNI 11216, this test is passed with a value ≥4 (limit). If the result obtained by the laboratory is 4 with an uncertainty of ±1, the statement of compliance would be:

> *"The tested sample has been found to have an alleged compliance for assessment of the determination of the tendency of surfaces to retain dirt according to the "countertops" class of UNI 11216 with a probability of 50%, according to the relaxed acceptance rule for numerical assessments, with a confidence level of 95%"*

Let's see how this sentence should be interpreted.
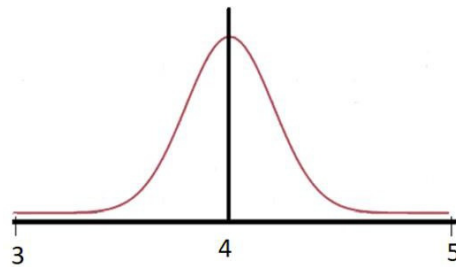
In order to issue a statement of compliance, the laboratory must:

- indicate the standard or the specifications on the basis of which it is determined.
  The laboratory must check whether the test results exceed the limits imposed by the standard or by the specifications requested by the customer.
- indicate the test results accompanied by the **measurement uncertainty**:
  *Nobody is perfect, not even an accredited laboratory! Although it performs tests analytically and accurately, it will always be subject to system-based and random errors that produce uncertainty. The result provided will therefore not be a single value, but a **range of values**.*

In the case of a result of 4 with an uncertainty of ±1:

value without uncertainty   *value with uncertainty*

- indicate the **decision rule** applied:
  When the laboratory must state the compliance of a product, it must compare the result obtained with the limit to be exceeded, but in order to do so it must take into account the measurement uncertainty.
  In the example above, the result with ±1 uncertainty will have an equal probability of exceeding the limit or not exceeding it. If the result is 4, as in the example provided, there will be only a 50% probability that it complies with the standard, that's why there is only an alleged compliance.

  To make these considerations, the laboratory relies on the **relaxed acceptance/stringent rejection decision rule**, which consists in judging the result as non-compliant only if it does not exceed the limit with the whole range of uncertainty. If, on the other hand, it exceeds the limit with the whole range, it would certainly be compliant, while if the range of uncertainty lies across the limit, as in the example, compliance is only alleged.

  This rule is used for all NUMERICAL ASSESSMENTS (e.g. abrasion resistance, scratch resistance) and for DIMENSIONLESS ASSESSMENTS as the one in the example (e.g. dry heat, humid heat).

  In the case of multi-line assessments (chemical resistance, thermal shocks, cross-cut), the **simple acceptance/rejection decision rule is applied:** measurement uncertainty is not taken into account; only the result obtained is considered.

- indicate the confidence level applied.
  This factor is not related to the truthfulness of the statement of compliance, but to the quality of the result, because it depends on the accuracy with which the laboratory has determined the measurement uncertainty. For the uncertainty associated with the tests performed, the Performance Lab always has a confidence level of 95%, which means that in 5% of cases the measurement uncertainty may be greater than stated.
  For the example provided above, theoretically, out of 100 tests, 5 may have greater uncertainty and give a result of 2.

  The following page includes a table summarizing the decision rules adopted by the Performance Lab.

Table summarizing the decision rules adopted by the Performance Lab

Standard title	Standard code	Decision rule adopted	Use of measurement uncertainty
Assessment of surface resistance to cold liquids	UNI EN 12720:2013	1 chemical agent: Relaxed acceptance/stringent rejection Multiple chemical agents: Simple acceptance and simple rejection	Yes No
Assessment of surface resistance to dry heat	UNI EN 12722:2013	Relaxed acceptance/stringent rejection	Yes
Assessment of surface resistance to humid heat	UNI EN 12721:2013	Relaxed acceptance/stringent rejection	Yes
Determination of hardness - pencil test	UNI 10782:1999	Relaxed acceptance/stringent rejection	Yes
Surface abrasion resistance assessment	UNI EN 15185:2015/EC 1:2011	Relaxed acceptance/stringent rejection	Yes
Pendulum damping test	ISO 1522:2006, UNI EN ISO 1522:2007	Relaxed acceptance/stringent rejection	Yes
Determination of the specular gloss of the non-metallic paint film at 20°, 60° and 85°	UNI EN ISO 2813:2016	Relaxed acceptance/stringent rejection	Yes
Assessment of the surface resistance to scratching	UNI EN 15186:2012 – Only method B	Relaxed acceptance/stringent rejection	Yes
Behavior with S42abrasion	DIN 68861-2:2020	Relaxed acceptance/stringent rejection	Yes
Determination of the film thickness	UNI EN ISO 2808:2019 method 10	Relaxed acceptance/stringent rejection	Yes
Assessment of the surface resistance to microscratching - Martindale	UNI CEN/TS 16611:2016	Relaxed acceptance/stringent rejection	Yes
Corrosion tests in artificial atmospheres - Salt-spray tests	UNI EN ISO 9227:2017 – excluding para. 5.2.3 and 5.2.4	Relaxed acceptance/stringent rejection	Yes
Determination of surface resistance to temperature changes	UNI 9429:2015	Simple acceptance and simple rejection	No
Assessment of the effects of light exposure	UNI EN 15187:2007	Relaxed acceptance/stringent rejection	Yes
Standard test method for film hardness by pencil test	ASTM D3363-20	Relaxed acceptance/stringent rejection	Yes
Cross-cut test	UNI EN ISO 2409:2013	Simple acceptance and simple rejection	Yes
Determination of the tendency of surfaces to retain dirt	UNI 9300:2020	Relaxed acceptance/stringent rejection	Yes

Abrasion resistance for HPL laminates	UNI EN 438-2: 2019 par 10	Relaxed acceptance/stringent rejection	Yes
Resistance to abrasion for flooring grade laminates	UNI EN 438-2: 2019 par 11	Relaxed acceptance/stringent rejection	Yes
Resistance to dry heat for HPL laminates	UNI EN 438-2: 2019 par 16	Relaxed acceptance/stringent rejection	Yes
Resistance to wet heat for HPL laminates	UNI EN 438-2: 2019 par 18	Relaxed acceptance/stringent rejection	Yes
Resistance to staining for HPL laminates	UNI EN 438-2: 2019 par 26	Simple acceptance and simple rejection	Yes
Light fastness for HPL laminates	UNI EN 438-2: 2019 par 27	Relaxed acceptance/stringent rejection	Yes
Microscratch resistance for HPL laminates	UNI EN 438-2 par 30	Relaxed acceptance/stringent rejection	Yes

Civitanova Marche, 1/03/2022

ICA SpA - Performance Lab
Via Sandro Pertini 52, Zona Ind.le A - 62012 Civitanova Marche (MC) Italy
C.F. e P.IVA n. IT00909430431 - T. + 39 0733 8080 - F. + 39 0733 808140
www.performancelab.tech - performancelab@icaspa.com
The ICA Group accredited testing lab - www.icaspa.com