Floors, paints, adhesives and environment. The Babel of the terms ...

Franco Bulian

When we talk about the environmental aspects that affect the world of parquet and in particular the "chemical" products involved, such as paints and adhesives, we often find ourselves faced with a rather varied terminology whose nuances and lexical hurdles often risk confusing us if we do not lend them the due attention.

All this is even more relevant if we consider the legislative and regulatory aspects that are involved in these issues and which increasingly influence our sector.

With these brief notes we therefore try to do some sort of order in this area, examining one by one the various terms normally used in the information supplied with the adhesives, paints and all the other "chemical products" used in this sector.

"NOT DANGEROUS" PRODUCT

When a producer defines his own product as "not dangerous" he generally refers to the European Regulation EC 1272/2008 known as CLP.

CLP (Classification, Labeling and Packaging) is the European regulation for the classification, labeling and packaging of chemicals and their mixtures.

A product referred to as "not dangerous" is usually the one that, on the basis of this regulation does not provide for labeling the product with risk symbols and with risk phrases.

However, this does not mean that the product does not contain dangerous substances, but only that their presence is below the concentrations that require the warning signs provided by the CLP regulation.

Ultimately, a product indicated as "non-hazardous" must in any case be stored, handled, used and disposed of according to the instructions and care indicated in the safety data sheet which, we recommend, must always be read carefully by users of products deriving from the industry chemical also in the case of products reported by the manufacturer as "non-hazardous".

PRODUCT "LOW CONTENT OF VOLATILE ORGANIC COMPOUNDS (SOLVENTS)"

We recall that many products in the world of chemistry, especially paints, are supplied in the liquid state as they must be properly applied on a substrate before their subsequent hardening. The liquid state is often obtained by dissolving the resins, the main ingredient of paints, into a solvent which evaporates in the atmosphere during application and subsequent hardening of the product.

A product with a low solvent content will therefore produce limited emissions of volatile organic substances during its application and its subsequent drying.

This basically means a healthier work environment for workers and even less "troubles" for any neighbors who might complain about the smells produced by solvents during processing.

When a product is declared with a low content of volatile organic substances, it would be useful, however, to also know the real value of this content in order to make comparisons between one product and another.

It is important to consider, in any case, that the products used "in situ" there is an obligation to comply with a maximum content of volatile organic compounds specified in the European Directive 2004/42/EC.

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PRODUCT WITH A "LOW EMISSION VOLATILE ORGANIC SUBSTANCES" (INDOOR EMISSIONS)

In this case the declaration refers to the indoor emissions emissions, being those released by chemical products in the long term and to which end users are exposed.
It is the effect that sometimes we call "smell of new" because these emissions are greater especially in products that have just been made or treated and in which residual solvents or other volatile organic substances are still present in adhesives, paints or other similar products.
These residual substances are slowly released into living environments creating an effect known as "indoor pollution" that toxicologists and public health experts increasingly consider a serious problem in the modern world.
In this regard, there are national laws and product certifications well known to operators in the sector. As far as the legislative sphere is concerned, the best-known law is the French one, which classifies building materials into four classes according to their VOC emissions, from A + (the lowest emissions one) to C (the highest emission class).
As far as voluntary certifications are concerned, the GEV-Emicode certification is well established in this sector. It essentially considers the chemical industry products and it was born some years ago in the northern Europe countries from the initiative of some multinational companies whose intention, with this certification system, was to protect their market against this problem.

SUSTAINABLE PRODUCT (GREEN)

Sustainable is defined as a product that derives essentially from the natural world and that possesses in itself the characteristic of being renewable. On this issue sensitivity is growing at all levels as there is the awareness that humanity cannot continue to base its development solely on fossil oils and their derivatives, to produce raw materials (plastics, paints, adhesives, etc.) and energy with the risk of gradually and irreversibly depleting the world from these resources. Sustainability therefore represents a development path that exploits raw materials of natural origin which can be continuously reproduced and therefore leaving to future generations a world with renewed resources and therefore still fully available.
A "green" product, for example a varnish, is therefore that which has been created with ingredients that not only come from the natural world, but which contain within them this concept of protection of future generations.
In this case, however, there is currently no "law" or regulation that allows an objective parameter to be used to evaluate or "measure" the sustainability of a product in a univocal way.

CONCLUSIONS

The intention of these brief notes was simply to highlight the true meaning of some terms regarding the environmental aspects of the chemicals used in our sector.
What is important to point out as a conclusion is that the various terms analyzed above are not interchangeable.
A "green" product could therefore contain high amounts of organic solvents (there are in fact vegetable-oils dissolved in organic solvents) as well as a "safe product" could still produce high indoor emissions.
It is evident that the possible combinations of the terms proposed above are many and only the knowledge or investigation on their true meaning (with numerical data to support of course!) can therefore help us to get acquainted in this kind of tower of Babel of the environment.

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