

DUTCH VOC REDUCTION ACT (SO 4)

THE DUTCH VOC REDUCTION ACT

- ✓ The so-called Dutch OPS Directive or the Dutch VOC Reduction Act is a law passed by the Dutch parliament to prevent the OPS syndrome.
- ✓ The law requires the substitution of VOCs or products containing VOCs by alternative products that contain no or less VOCs. However, exceptions are allowed where such substitution is not possible. Replacing products containing VOCs is the most effective way of reducing VOCs and is therefore clearly more important than occupational safety measures such as extraction. Exceptions may be justified by the absence of technical alternatives, economic constraints or processing difficulties. However, such exceptions will only be allowed after individual examination by national monitoring bodies.
- ✓ The OPS Directive shows a similarity in content to the German Hazardous Substances Ordinance of 1986 and the Technical Rules for Hazardous Substances (TRGS) 610 of 1992 and is therefore not fundamentally new.

WHAT IS OPS?

- ✓ The OPS Syndrome = Organic Psycho Syndrome (Organic Psycho Syndrome) is a serious disease of the central nervous system that can be triggered by VOCs (Volatile Organic Compounds) during professional work.
- ✓ VOC is a collective term for various types of chemical compounds that are so volatile that they can be detected in appreciable concentrations in ambient air. The main substances are organic liquids such as solvents or plasticisers, but also gases such as formaldehyde or fission products from resins, etc. Solvents are the most important VOCs. Dutch law defines VOC as follows: Organic substances or mixtures of these having a vapour pressure of ≥ 0.01 kPa at 293.15 K (20°C) or a similar volatility under the specific processing conditions.
- ✓ It is estimated that about 500,000 people in the Netherlands are regularly exposed to VOCs during the course of their work. The occupational groups concerned include: Painters, varnishers, floor installer, parquet installer, workers in paint and varnish production, workers in polymer chemistry and other chemical branches and people working in chemical laboratories.

- ✓ OPS is caused by the chronic effects of VOCs on people in their working environment and can lead to a temporary, but usually permanent, incapacity to work. OPS has been observed among workers in the printing industry, construction industry, plastics industry, metal industry and in laboratories. There is no treatment method for OPS, and a recovery of the person is only possible in the case of early detection of OPS.
- ✓ Based on Scandinavian studies since the 1970s, it is estimated that there are around 2,500 workers affected by OPS in the Netherlands, with a marked upward trend. Currently, there are about 250 medical reports per year that could be related to OPS and VOC exposure; OPS has been diagnosed in about 25% of these cases.

CONSEQUENCES FOR THE PARQUET INSTALLING TRADE

- ✓ The content of the OPS Directive explain in more detail by further legislation. A law that establishes working conditions itself to painting, flooring, parquet and tile work. It contain more precise specifications regarding VOC limits, substitute products, working conditions, possible exceptions, etc.
- ✓ As things stand, the use of solvent synthetic resin parquet adhesives with a high VOC content is prohibited. It is assumed that there is an urgent need for VOC reduction in the parquet-laying trade, that the primary measure must be the substitution of solvent synthetic resin parquet adhesives, that organisational protective measures such as ventilation, extraction or respiratory protection are only the second best alternative and also difficult to implement, and that technical alternatives are available which are also economically viable and justifiable in terms of the workflow.
- ✓ The situation is therefore similar to that in Germany, where TRGS 610 also prescribes the substitution of solvent-rich primers and adhesives, but the quality of the regulations is different, since a law will directly prohibit the use of certain construction chemicals.
- ✓ The OPS Directive only applies to the professional sector, so the private DIY enthusiast will still be allowed to process adhesives, paints and varnishes etc. with a high solvent content.

TECHNICAL DATA SHEETS

TECHNICAL ALTERNATIVES

- ✓ Technical alternatives to the solvent synthetic resin parquet adhesives which (like in Germany) have also been predominantly used in the Netherlands to date, are dispersion adhesives and reactive adhesives (PU, SMP, SPU-types).
- ✓ The types of parquet installed in Holland and the installing technique differ in some cases considerably from German conditions:
 - ✓ A lot of tapis parquet is installed, which is additionally nailed.
 - ✓ In addition to bonding, 9/10 mm solid parquet is also nailed.
 - ✓ Exotic wood has a larger market share than in Germany.
 - ✓ Many plank elements with strongly chamfered edges are laid.
 - ✓ Often chipboards, which then serve as the subfloor, are bonded to the screed first.
- ✓ The installation practices outlined above already allow the extensive use of dispersion adhesives in the Netherlands today. The nailed parquet types are completely insensitive to the dimensional changes produced by the adhesive. The use of exotic wood and the chamfer of the planks, which conceals minor cupping, is also favourable in terms of wood swelling caused by the adhesive. The installation of chipboard as a subfloor eliminates potential adhesion problems with dispersion adhesives, increases the evenness of the substrate and thus reduces the risk of cavities that exists with dispersion adhesives.
- ✓ The types of parquet adhesives that will be used in the Netherlands in the future are dispersion adhesives and reactive adhesives (PU, SMP, SPU types). Polyurethane adhesives will be used where wood swelling needs to be minimised, substrate adhesion is more difficult to achieve and large format elements are to be bonded. Dispersion adhesives will also be used for parquet types that are additionally nailed, for small-format parquet types (e.g. mosaic parquet) and for large-format parquet types if the absorbency and evenness of the substrate allow this.

The information provided above corresponds to the current status of development. The information is purely indicative and non-binding, since we have no control over the laying process and because the actual laying conditions on site vary. Thus no claims can be made based on this information. The same is true for the commercial and technical advisory services that are provided without obligation and free of charge. We therefore recommend carrying out sufficient testing of your own in order to determine whether the result is suitable for the intended purpose. 26112018