

TECHNICAL SPECIAL INFORMATION 17

Fire hazard with oxidatively drying sealing products

Unfortunately, practice shows again and again that this topic and risk does not receive the necessary attention and care.

Although every specialist is well acquainted with this subject and has been using it for decades, there are always cases of fires or near fires that give cause for (pre-) concern. The fact that the employees of specialist companies also make these serious mistakes underlines the importance of thorough information.

Furthermore, one should be aware of how far the consequences of a fire can go, up to tragic personal injuries or property damage in the millions. In such cases the public prosecutor determines and insurances act without smallest beginnings of goodwill.

How does the risk of fire arise?

Oxidatively drying products dry by accumulation or reaction with oxygen from the air. This chemical process releases heat (exothermic reaction).

This is not a problem when drying the seal/oil or oil care product on the surface, as the heat generated in the ambient air is continuously and sufficiently removed and balanced. In this case, heat is not even perceived.

The situation is different, however, if these products are mixed with e.g. grinding powder or adhere to pads, cloths etc.... are exposed to heat accumulation. Then the heat is not transported away and balanced, but builds up and can reach a temperature, which can lead to smoke development and fire.

Measurements of the temperature in the dust bag of a belt grinding machine (grinding powder from intermediate sanding) have shown a value of over 53°C, for example.

Which products are basically affected?

Basically, all oxidatively drying products are affected. In particular, all oil CH seals/primers, oil/wax systems, fill-and-finish and oil care products.

From our range we currently name the following products:

- CLASSIC HARDOIL
- CLASSIC 100PROOIL
- CLASSIC BASEOIL
- CLASSIC BASEOIL COLOR
- CLASSIC OUTDOOROIL
- BRILLIANCE OILCARE
- BRILLIANCE FILLANDFINISH
- SOLVSEAL LT EXPORT EXTRA
- SOLVSEAL LT EXPORT THIXPRIMER

The list of products could be extended by one or the other product. For this reason, please pay attention to the additional information in our "Application Information Sheets" and on the labels.

Examples of fire emergencies

The following examples are intended to illustrate which situations and conditions lead to heat accumulation and fire hazard and how they can be prevented:

Grinding powder

Any form of grinding powder that may be contaminated with oxidative drying products must be handled carefully and safely. By the way, regardless of the type of sanding, i.e. whether intermediate sanding for new sealing or sanding as part of a renovation. The dust collection bag must be disposed of immediately and in a fireproof manner. This means, for example, storing outdoors, mixing or soaking with water or storing or transporting under complete exclusion of air.

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Stressed polishing cloths, cloths, fleeces, pads, grinding wheels, work clothing, etc...

In short, all materials that may come into contact with the products in question represent a potential risk of inflammation if the unfavourable conditions described above and heat accumulation occur.

In addition to the measures described above, the risk can be avoided by spreading the material and allowing normal drying with sufficient air exchange.

Careful inspection before leaving the construction site

This is particularly important and should be given to every employee as an instruction and routine measure. He should check and remove his complete working equipment and all equipment that may be used.

This should also include massive deposits in the housing of the belt grinding machine.

End users and private individuals

For this group of persons, the state of the art or the knowledge and sensitivity to the risk cannot be assumed in principle. Of course, the end user must also be able to expect the processing instructions and warning texts to be observed. One problem, however, could lie in the later verifiability.

This means that whenever the specialist company passes on products with oxidative drying to them, instruction is recommended. Similar to the care instructions according to DIN 18 356, this should be done in documented form in order to be adequately protected against possible claims. Since the reform of the law of obligations as of 01.01.2002, such information measures have become all the more important.

In particular, companies that lend grinding machines to do-it-yourselfers and sell the products concerned should take action here.

But also oil care product customers should be verifiably informed, e.g. in the form of a clear warning text on the invoice.

Avoidance through alternative products

Of course, the risk can be avoided or reduced by largely avoiding products with oxidative drying. For example, water-based products or PU lacquers do not have this risk. In some cases, however, oil CH products are still the technically more optimal choice or are simply requested by the customer for optical or ecological reasons (oil-wax systems).

To be on the safe side, private individuals should sell only non-oxidatively drying care and sealing products.