

OBERFLÄCHENVEREDELUNG AUF HÖCHSTEM NIVEAU
SURFACE REFINING AT THE HIGHEST LEVEL



Borate-free cleaners
for the environmentally safe
pretreatment of aluminium surfaces

finish

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Background

Due to their excellent properties, cleaners containing borates have been successfully used as mildly alkaline cleaners of aluminium and other metal surfaces for many years. Borates have important functions in the cleaning system, for instance by buffering the bath solution in practical applications, ensuring favourable pH stability and at the same time a consistent removal of metal.

Legal situation

Based on new insights and subsequent legislation [Directive (EEC) No. 790/2009 for the Amendment of Directive (EEC) No. 1272/2008 (1st Amendment Directive)], products containing borates and boric acid have now been reclassified. Accordingly, preparations containing 8.5% borax (sodium tetraborate) or 5.5% boric acid, or a higher content of the same, must be classified as follows by 1st December 2010 at the latest:

T (toxic), toxic for reproduction, category 2 (verified in animal experiments)

or acc. to:

GHS (Global Harmonised System of Classification and Labelling of Chemicals)
reproduction toxicity, category 1B
Symbol: GHS08



R Statements: R60 and R61

Signal word: Hazardous
H360FD

In addition to the new classification, on 18 June 2010 the candidate list of SVHCs (Substances of Very High Concern) was extended by the European Chemicals Agency (ECHA) who added a further eight substances to this list. These include the two above mentioned substances sodium tetraborate, decahydrate (EEC No. 215-540-4) and boric acid (EEC No. 233-139-2).

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Consequences

Firstly, cleaning products containing borates (8.5% and more), which were previously classed as non-hazardous, must be in future be classified and labelled. In other words: the product will suddenly be marked with a “skull and crossbones” or “exploding torso” label which was not necessary up to now. Depending on the storage situation in your company, this may call for quantity restrictions or for a separate storage space. Changes in the risk assessment and working safety measures in your plant will also be necessary.

Secondly, the supplier (Alufinish) and you as the manufacturer of products have the obligation to provide information to your commercial customers concerning the revised list of SVHCs.

What does this mean in concrete terms?

In compliance with this duty to provide information, Alufinish will send you safety data sheets for their cleaners containing borates with the relevant amendments. As a manufacturer of products, you in turn have the obligation to inform your commercial customers, unsolicited, (private customers are to be informed within 45 days on request), if any of your articles contains a substance on the candidate list of SVHCs (substances of very high concern) in a concentration of more than 0.1% (w/w).

This is, however, not anticipated in the case of borates in cleaners since their application is followed by numerous steps during pretreatment (pickling, dip pickling, anodising, chromating, rinsing, etc.) during which any possible borate residues will have been removed from the surface. You can therefore confirm to your customers that products of yours that have been treated with Alufinish cleaning products with borate content are free of the substances on the SVHC list. There are currently no further obligations on your part in this matter.

In principle, however, the new legal requirements do **not** mean that the use cleaners with borate content will be banned, although it is to be expected that such systems will gradually disappear from the market. In the event that the substances (in this case borates) are incorporated into Appendix XIV of the REACH directive some time in the future, their use will then have to be reported to the ECHA (European Chemicals Agency). To date, however, no such substances have been classified here.

Is there any alternative?

Yes – simply change to a borate-free cleaning system!

In this case we can offer you our newly developed, borate-free cleaning systems.

One example is **Alficlean 139/2**, a mildly alkaline cleaner in powder form. Apart from being environmentally safe, this product achieves an excellent cleaning performance with a low level of metal removal. Thanks to its low foaming properties, this cleaner can also be applied directly prior to alkaline E6 long-term pickling (without intermediate rinsing).

Other borate-free cleaners can be supplied – we will be pleased to advise you.

The logo for Alufinish, featuring the word "alufinish" in a stylized, blue, outlined font. The letters are interconnected, with the 'a' and 'l' being particularly prominent.

The advantages of the new, environmentally safe cleaner Alficlean I39/2 at a glance:

- Borate-free, thus environmentally friendly
- Anticipated duty to notify the ECHA does not apply
- No special storage conditions or quantity restrictions
- Excellent cleaning performance
- Minimal metal removal - the brightness of aluminium alloys is retained
- Low level of foaming
- Ideal as a cleaner prior to E6 long-term pickling
- Long bath lifetime
- Low emulsifying effect



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With this version all prior versions are invalid. The information is given according to the best of our knowledge and conscience at the time of printing and it reflects our experience in the laboratory and in practice. The given information should be considered only as non-binding recommendations which must be adjusted to specific requirements. Since the use of our products is not subject to our influence we can not accept the guarantee or assurance of properties.

Version 08/2010



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