

- Paletten aus Aluminium und Edelstahl
- Handling-Geräte für die Logistik
- Mobile Wägetechnik
- Konstruktionen aus Alu und Edelstahl
- Mehrzweck-Container aus Alu



Why aluminium pallets, in particular, are more suitable for complying with the current and future requirements of the GMP regulations in the pharmaceutical or hygiene-oriented industries than, for example, plastic pallets.

Aluminium pallets with **AluClean® Hygiene Polish** open up a new hygienic dimension in clean rooms

Pallets made of aluminium have become standard in most clean room areas in the pharmaceutical, cosmetic and food industries. The aluminium pallet, with **AluClean® Hygiene Polish** from *Schneider LEICHTBAU*, is now the front runner for the internal handling of goods. It not only meets the hygienic standards of the Good Manufacturing Practice (GMP) regulations, but also high in-situ expectations – and thus already provides tomorrow's state-of-the-art today.

Aluminium. One of the world's most important metals, characterised by a low specific gravity, great strength, good corrosion resistance and lasting value – capable of 100% recycling.

Some ideas would merely remain a dream without aluminium. Flying, for example. For without the characteristic properties of this metal neither aircraft nor automobiles would be conceivable in their current form. And food chemists and pharmacists would still be dreaming the same old dream of a dependable standard of hygiene during the internal transport of goods. Because there is not a lot of hygiene when plastic or wooden pallets are used in clean room areas. Special measures must be taken here to prevent contamination by particles, micro-organisms and germs. Aluminium is better qualified for this sensitive area than almost any other material.

While the aluminium pallet has become **the standard almost everywhere**, in practice plastic pallets are unfortunately still all too often used. They may be cheaper to purchase, but the material presents a hygienic risk. **Unlike aluminium alloys, whose constituents are firmly anchored in a grid-like structure, plastic always poses the risk of a migration of ingredients, for example tenderisers, from the product itself.** And in terms of disinfection, comparative examinations show that plastic results in far higher cleaning costs – if only because of the larger overall area (the ratio is about 1 to 2.5). Thus comparative calculations over a five-year period prove that aluminium pallets can

be about 50% cheaper than pallets made of plastic. This brings some purchasing staff back down to economic earth.

In pharmaceutical production and the food industry, microbial germs pose ever-present risks and any reduction in quality has direct consequences for the health of consumers.

Thus quality assurance, in the sense of product safety and consumer protection, plays a central role: from food legislation, the Machine Directive, production regulations for pharmaceutical companies, the EU's GMP regulations, the Qualified Hygienic Design testing system, and right up to the ASTM standards. These regulations are deliberately worded with open formulations so that both the specific requirements of the production process, and the conditions within which it takes place – the internal logistics – can be precisely defined in individual cases: the GMP regulations, for example, on lifting and transport systems.

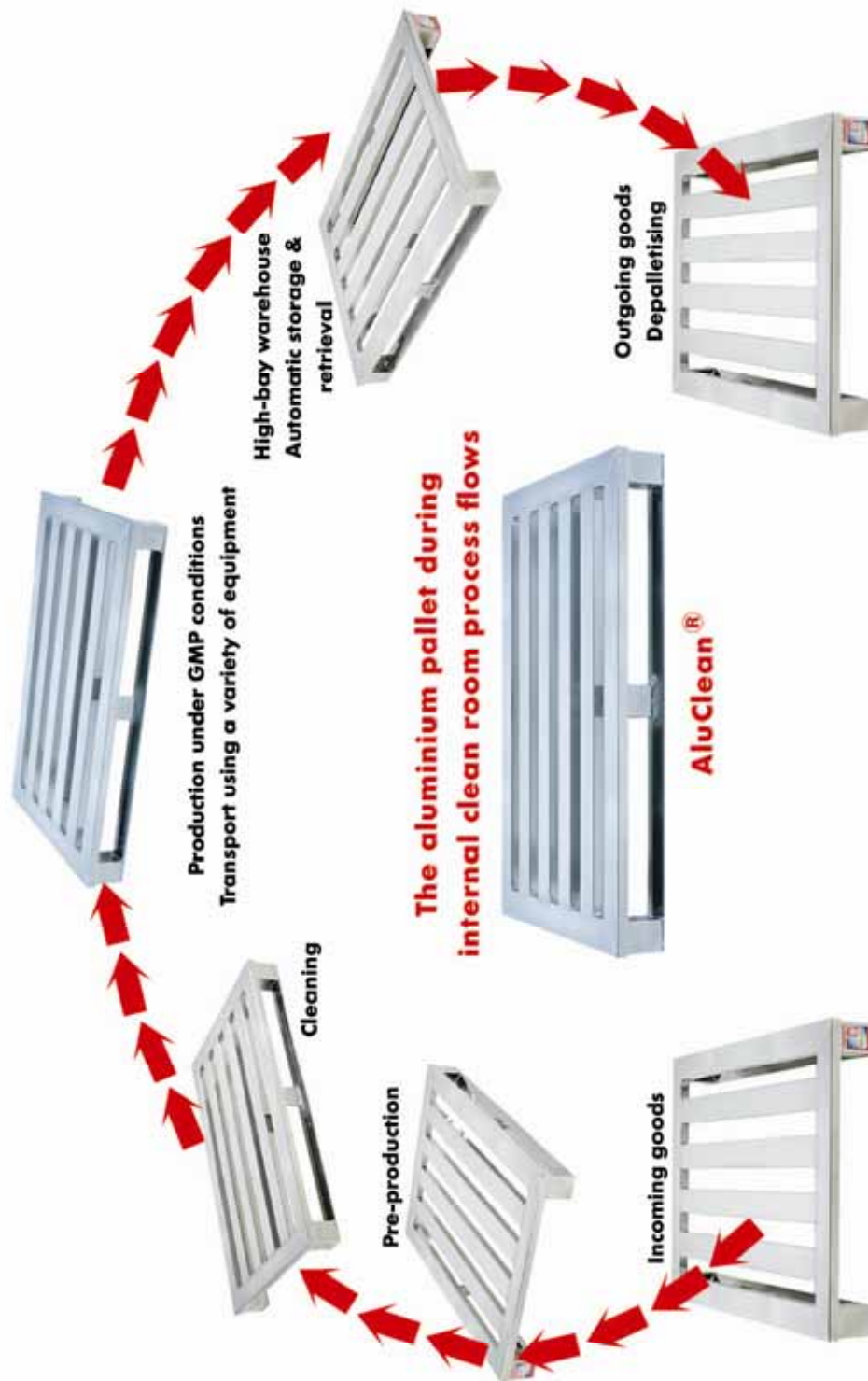
SCHNEIDER LEICHTBAU took the initiative early on, and examined the implementation and improvement of quality standards in clean rooms. The result: the patented **AluClean®** hygiene polish process – a real development in the sector.



Examples: (from top to bottom)

- Flat Pallet 816 (with skids and crossbars)
- Fully Sheeted Pallet 816 (with skids)
- Flat Pallet 816R (with skids and longitudinal bars)
- Flat Pallet 512R (with skids and longitudinal bars)

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Another advantage of aluminium: not only can objects made of this material, particularly flat aluminium pallets, be produced individually, but also processed and qualitatively improved through the **AluClean[®]** process. For this reason, many pharmaceutical companies are also switching from their old plastic pallets to aluminium pallets.

During the **AluClean[®]** process, developed by **SCHNEIDER LEICHTBAU**, the surface of the aluminium pallet is smoothed, reduced and compressed. A more intensive oxide layer is formed, continuing to provide protection despite the subsequent effects of wear and tear. In addition, surface roughness is reduced to the ideal value of Sterile Classes 4 and 5 according to DIN 4768/1, with an average peak-to-valley height (Ra) of 0.4 to 0.8. Thus the surface gains in stress relief and adhesive power is reduced – so that liquids trickle away and foreign substances cannot adhere. Then there is the highly welcome hygienic effect in the clean room, also retained during intensive use: aluminium pallets with **AluClean[®]** are super-hygienic and antibacterial, they are lighter and cheaper to disinfect, as well as being longer lived and more value-retentive.



Example:
 Flat pallet 520
 with blister foil for protecting loads

So it is no surprise that this innovation from **SCHNEIDER LEICHTBAU** is more in demand today than ever – aluminium pallets with **AluClean[®]** are used in hygiene-oriented companies worldwide. They not only meet all the important criteria of the EU's GMP regulations in clean rooms, but actually go beyond them and already offer tomorrow's state-of-the-art today.

Pharmaceutical and hygiene-oriented sectors can relax – the dream of the absolute clean room has taken another step forward...