

How to clean a conveyor belt?



PROPER AND REGULAR BELT
SANITATION IS AN ESSENTIAL
ASPECT OF MAINTAINING
A SAFE AND HYGIENIC
PRODUCTION.

WOULD YOU LIKE
TO FIND OUT MORE?

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Introduction



Belt cleaning and disinfection is an essential process ensuring the efficient and safe operation of the equipment. A dirty or improperly cleaned conveyor belt can result in reduced performance, product contamination, or even permanent damage to the system. Let's focus on the importance of conveyor belt cleaning, the different cleaning systems, and how to select the right detergent for your application.

Key highlights:

- **Regular disinfection** influences hygiene, safety, maintenance, and overall performance of the belt.
- Although **cleaning, disinfection, and sanitation** are often used as synonyms, they do not mean the same thing.
- Belts can be sanitised manually or automatically.
- Always contact your **detergent supplier** to choose the appropriate cleaning agent and check if it matches your belt type and the product conveyed. Use the proper concentration of the product. You can contact us for more details so we can help you with this verification.
- **Validation of sanitation** confirms that your equipment is effectively cleaned and prevents contamination of products.

The difference between cleaning, sanitation, and disinfection

Before we dive into specific belt cleaning methods, let's first focus on the differences between terms that are often confused with one another, namely **cleaning, disinfection, and sanitation**.



Cleaning

is the process of removing unwanted substances, such as soil, dirt, infectious agents or other impurities from an object or an environment.



Disinfection

is the second step after cleaning to obtain the microbe-free level.



Sanitation

is cleaning and disinfection combined, integrating the purpose and function of both steps.

Before sanitising or disinfecting your belt, you must clean it first. Sanitation and disinfection are the final operations, performed on a clean belt.



Why is belt disinfection necessary?



Belt disinfection is extremely important for several reasons. First, **it improves the level of hygiene and product safety**. A clean belt reduces the risk of contamination, which is of utmost importance, especially in the food and pharmaceutical industries.

Regular and proper cleaning also helps to maintain the belt in good condition, eliminating frequent replacements and repairs. By removing dirt and debris, **you extend belt life and reduce maintenance costs over time**.

This leads to another advantage – **optimal performance**. A clean belt ensures effectiveness and prevents slippage, tracking issues, and other problems that could disrupt production.

Last but not least, regular cleaning improves **the safety of your team**. A well-maintained belt reduces the risk of accidents and injuries in the workplace.

Types of conveyor belt sanitation systems



Belt sanitation can take place either **off the line** or **on the line**.

In the former case, you disassemble the belt from the conveyor, and in the latter, the belt stays on the conveyor. On-line sanitation can take place while the conveyor is operating. The belt goes through the system of **clean-in-place stations (CIP stations)** designed for dry or wet cleaning.

Dry cleaning stations use for example **rotating motorised brushes** and/or **scrapers**. Choose durable scrapers to ensure the highest level of hygiene and food safety and prevent the risk of foreign body contamination. A good example is the UltraScraper made of abrasive-resistant polyurethane material. The scraper soft lip is metal detectable and relies on ion technology fostering **antimicrobial properties, reducing bacterial buildup, and improving food safety**. Unlike rigid scrapers, UltraScraper is equipped with a soft lip that follows the true surface of the belt and lets it pass smoothly through itself without incurring damage to both the belt and the scraper extending their lifetimes.

Wet CIP stations may use **spray jets** or **steam nozzles**, which can be fixed or mobile. Mobile nozzles very often move in a circular pattern to distribute the liquids evenly over the entire surface of the belt. Fixed nozzles, on the other hand, concentrate their impact on one particular area and thus might damage the belt surface. You can also clean your belt **manually**, however, it's more labour- and time-intensive than automated solutions.

Suitable detergent



To clean a conveyor belt, **you use a detergent of a certain density or dilute it with water.** Because cleaning, sanitation, and disinfection of working areas may be frequent to ensure, for example, a high level of food safety, **automated water and detergent mixing systems** are often used. They are equipped with valve control units to mix water, chemicals, and disinfectants at the desired proportions. The mixture thus prepared automatically fuels the system. Automated mixing systems bring benefits such as **improved efficiency, saved labour, and less time spent on sanitation.**

When choosing a detergent, always opt for a sanitation agent **compatible with the belt material and items conveyed.** There are many different types of applications and, consequently, also belt types vary in number. We use different belts for conveying meat and yet others for sticky confectionery. As a result, detergent suppliers need a variety of sanitation agents to match the belt and the type of soil to be cleaned as some substances, like fats, oils, starch, or protein, are more difficult to remove than others.



REMEMBER!

Always contact your detergent supplier to choose the appropriate sanitation agent. Check if it matches your belt type in Ammeraal Beltech **cleaning references**. Follow sanitation instruction procedures and use proper concentration of detergent.

Some belts are intrinsically easier to clean than others due to their design. However, no matter how innovative the technology and materials may be, **proper sanitation is still mandatory.**

Improper belt sanitation



Improper belt sanitation and incompatibility of the belt and chemical agents can result in:

- cracks on the belt surface
- discolouration
- decreased efficiency of the conveyor system
- increased maintenance costs due to premature wear and tear of the belt.

But the problems may reach even further. Inadequate sanitation can compromise the **level of food safety** at your facility and increase **the risk of product contamination**, making you just a step away from costly product recalls and downtimes, not to mention damage to your reputation.

Lack of proper cleaning can also mean **increased energy consumption**, as the motor must work harder to compensate for the friction caused by the debris.

What is the validation of sanitation?

Validation of sanitation is a critical process that helps ensure that your equipment and surfaces are properly sanitised to prevent contamination of products. This step involves testing and establishing documented evidence to confirm that the sanitation methods used are effective in removing residues, bacteria, and other hazardous factors and that the equipment and surfaces are safe to process the next batches of products.

Validation of sanitation is an essential part of quality assurance in industries where cleanliness and hygiene are critical to product safety and efficacy. One example is the food industry, where the health and safety of consumers are top priorities. By performing validation of sanitation, you can feel confident that your equipment is properly sanitised and your products are safe for consumption.



About Ammeraal Beltech

Ammeraal Beltech, a member of the AMMEGA Group, is a global leader in the design, manufacturing, fabrication, and servicing of high-quality, high-performance processing and conveyor belts.

Our products are available in over 150 countries around the globe. We employ over 3 000 of the best people in the business who are passionate about what they do – making your business move.

Thanks to our unique combination of experience, market expertise, and engineering know-how, you can find our belting solutions in the majority of industrial sectors and applications.



AMMERAAL BELTECH

Our extensive product portfolio is available globally in over 40 countries and 170 locations to support our OEM and SEM clients' businesses in their sustainability efforts. After decades of growth, Ammeraal Beltech continues to excel with a diverse portfolio of comprehensive conveyor belting and product handling solutions for all industry segments.



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The local partner of choice for sustainable conveyor belting solutions – around the globe.

Contact our experts!

www.ammeraalbeltech.com

