

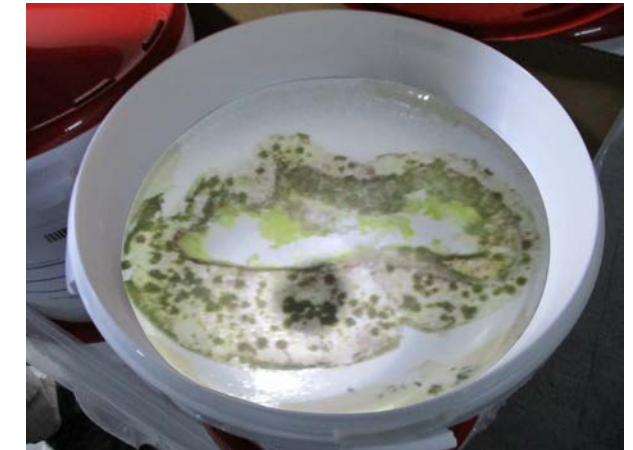
Hygiene guidelines Dispersions



**Professional handling of dispersions
for production and craft**



Apart from creating a strong bond, adhesives in general and dispersion adhesives in particular, are also expected to be low in emissions, odourless, toxicologically safe, and skin-friendly. Modern formulations meet most of the aforementioned requirements and have a better environmental compatibility than in the past. But this also means they provide an ideal breeding ground for the growth of microorganisms like bacteria, mould and yeast fungi. Contaminations can lead to a change in viscosity, the formation of odours and gases, discolouration, a shift in pH value, or even to the growth of a visible mould layer (biofilm) on the



surface of the adhesive. In short, contaminations have a detrimental effect on the quality of the adhesive, and can make it unusable in the worst case. Preservatives are added to dispersions to protect the adhesive in closed containers and to minimise the risk after the containers have been opened. However, the effect of those preservatives is only of limited duration and depends on the amount added. The already limited amount of preservatives added to dispersion is further restricted by new legal requirements. This is inevitable and cannot be avoided by e.g. using alternative preservatives or modifying the formulation. As a consequence, the contamination risk of dispersion adhesives with microorganisms will increase in future, making it more important than ever that a minimum level of hygiene be maintained.

The best before date we give as an adhesives manufacturers refers to the unopened, “properly closed original containers”, and does not cover already opened containers. Dust, wood chips and dirt carrying spores or other microorganisms can enter the IBC, drum or bucket as soon as they are opened (e.g. to take out adhesive or even only for aerating purposes), leading to a microbial contamination. Furthermore, air in general can also carry microorganisms which means that the adhesive can also be contaminated by air entering the container.

Therefore, it is of utmost importance to keep a minimum level of hygiene at the workplace. The cleaner the working environment is where the adhesive is being processed, the lower is the risk of a contamination. In addition, once a container has been opened, the adhesive should be used up as soon as possible and the container should not be put back into storage. Unfortunately, it is not possible to indicate a general maximum pot life due to the many factors on which it depends (e.g. formulation, age of the batch, storage temperature, risk of potential contamination, etc.).

Please ensure the necessary level of hygiene in your company, especially in places where the adhesives are stored and processed as well as at the corresponding workplaces. On the following pages we provide some general hygiene recommendations for companies processing adhesives and their employees.

The following can be a source of contaminations:

- **Operating equipment**
- **Employees**
- **Air**
- **Environment**

1. Operating equipment

- All operating equipment for adhesive processing should be cleaned on a regular basis. This applies to machine parts that come into direct contact with the adhesive (storage and dispensing reservoirs, application heads, closed or briefly open reservoirs, mixing units, etc.) as well as indirectly connected parts (connecting devices, storage spaces, tools...).

- Sometimes it may also be necessary to disinfect the equipment after it has been cleaned mechanically. This is especially the case if there has already been a contamination in the past.

- It is good practice to prepare a cleaning schedule for cleaning tasks and to specify a responsible person for cleaning with appropriate training.

- In addition, the operating equipment should also be cleaned after any maintenance, repair or refitting work because within the framework of such work a contamination of the adhesive itself or the machine parts carrying adhesive cannot be avoided.

- Adhesives should be protected against increased ambient temperatures in storage and during processing (e.g. by storing it inside buildings). Apart from an improved storage stability, this also inhibits the growth of microorganisms in possibly contaminated containers.

- When new production lines are planned, it should also be made sure that they are easy to clean. In addition, the length of pipes and the number of valves, connecting elements and other connectors should be minimised, and “dead pipe ends” should be eliminated completely.



2. Employees

- Employees who come into direct or indirect contact with adhesives, machine parts, tools, etc. and might thus contaminate the products with dirt or germs should take extra care over hygiene practices, e.g. hand washing before and after eating, drinking or using the toilet.



- It is of utmost importance that all workplaces where adhesives are processed are kept in a clean and orderly condition. All employees working in those areas should receive adequate instruction and hygiene training as part of their induction within an appropriate period of time.

- Smoking as well as eating and drinking should only be permitted in designated, separate areas and/or rest facilities.

- The prescribed work clothing including appropriate and clean personal protective equipment is to be worn in the areas concerned. Work clothing should be accommodated separately from the worker's own clothing.

- Only use working materials and process materials that are clean (trowels, cups, gloves...).

- Wiping cloths and cleaning materials are to be disposed of safely. Waste is to be stored and disposed of separately.

3. Air

- The air is full of bacteria and different fungal spores. When they come into contact with the adhesive, they can use it as a nutrient source and multiply rapidly.

- Unnecessary draught should be avoided to prevent bacteria and fungal spores from spreading. The adhesive should be kept at a minimum distance of 5 metres away from waste receptacles and other possible sources of contamination.

- Adhesive containers as well as any openings in the application unit should be opened only when necessary and closed as fast as possible.

- If possible, use filters to clean air intake of adhesive containers.



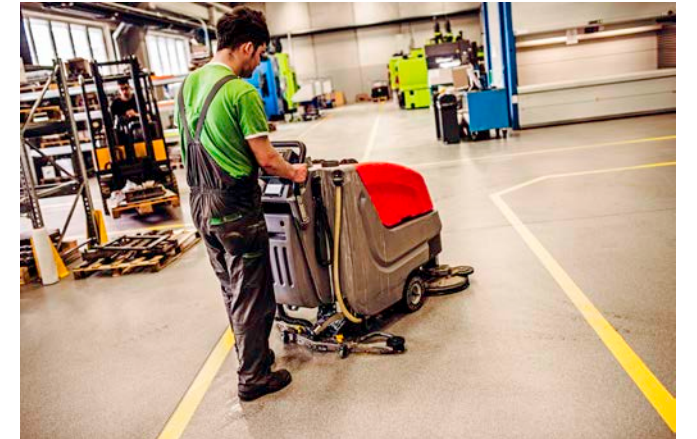
4. Environment

- Premises and installations where the adhesives are processed should be cleaned in accordance to a fixed cleaning schedule, and responsibilities for cleaning should be clearly specified.

- Thorough cleaning (surface of floors, etc.) should be carried out and stores be checked for cleanliness regularly.

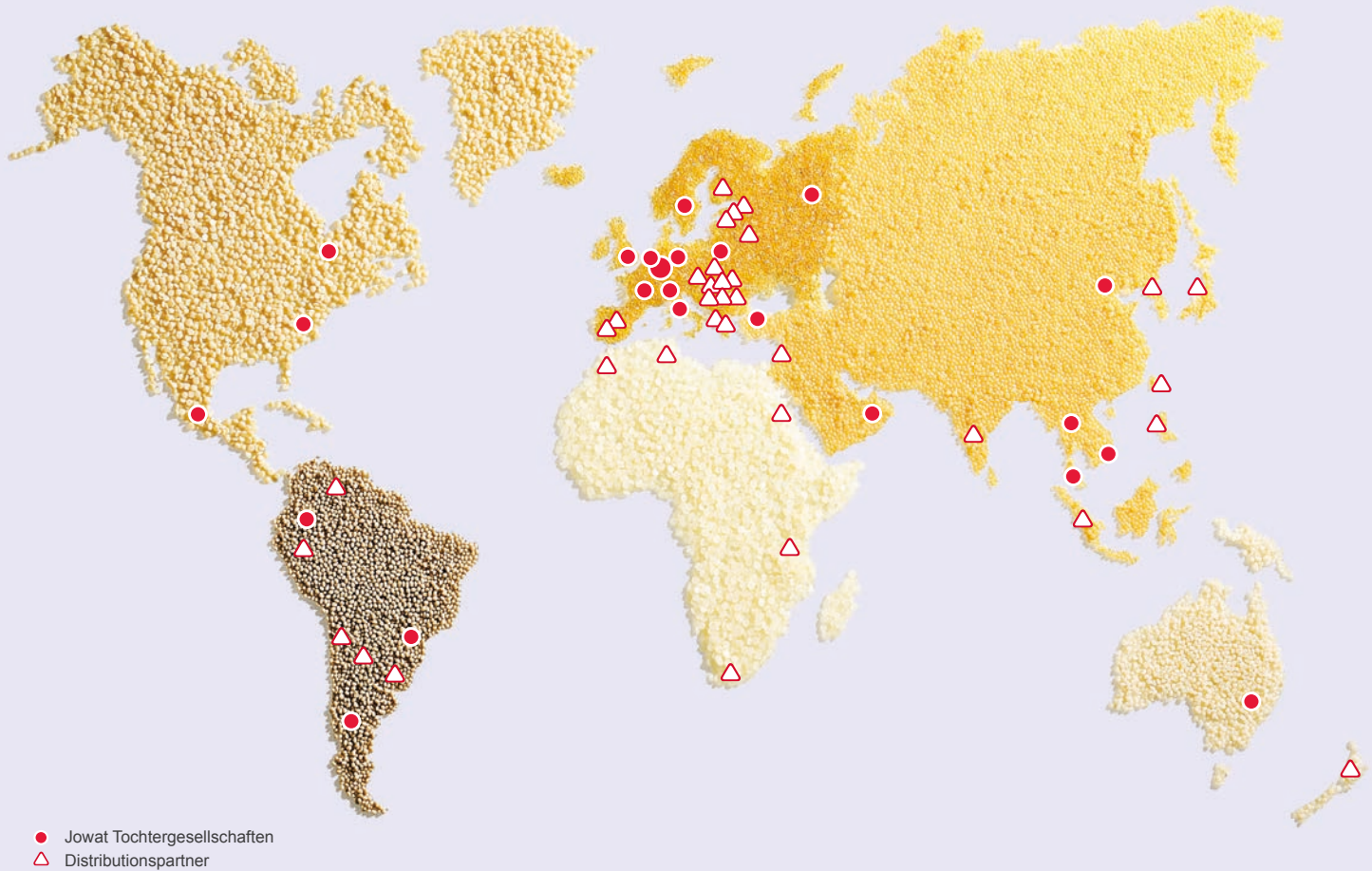
- Materials that are no longer needed (empty containers, pallets, etc.) should be removed from the workplace straight away, and waste bins should be emptied as soon as they are full.

- Workplaces should generally be kept clear of unnecessary materials, unused equipment and personal items.



Jowat | Ihr Partner in Sachen Kleben

Jowat | Your Partner in bonding



Die Angaben in dieser Broschüre beruhen auf von uns selbst durchgeführten Laborprüfungen sowie Erfahrungswerten aus der Praxis und stellen keine Eigenschaftszusicherungen dar. Aufgrund der Vielzahl von Anwendungen, verwendeten Werkstoffen und Verarbeitungsweisen, auf die wir keinen Einfluss haben, kann aus diesen Angaben sowie aus der Inanspruchnahme unseres kostenlos zur Verfügung gestellten technischen Beratungsdienstes keine Verbindlichkeit abgeleitet werden. Vor der Verarbeitung bitte Einzeldatenblatt anfordern und beachten! Die Durchführung von eigenen Versuchen unter Alltagsbedingungen, Eignungsversuche unter Produktionsbedingungen und entsprechende Gebrauchstauglichkeitsprüfungen sind zwingend erforderlich. Die Spezifikationen sowie weitere Informationen sind den aktuellen Technischen Datenblättern zu entnehmen.

Jowat – Kleben erster Klasse
Jowat – first class bonding

www.jowat.com

Jowat
Klebstoffe

Australia Brasil Canada Chile 中国 Colombia Deutschland France Italia Malaysia Mexico Nederland Polska Россия
Sverige Suisse ประเทศไทย Türkiye United Kingdom United States of America دوحتمل اتيبرعل تارامال Viet Nam