



# Jowat-Toptherm® & Jowatherm® End-of-Line Packaging



**Powerful hot melt adhesives for bonding cartons,  
trays and folding boxes**

**Low stringing, clean processing and high yield**

**Reduced maintenance, downtimes and costs**

**Bio-based, food safe and resilient solutions**





## Powerful hot melt adhesives for modern packaging processes

Be it primary or secondary packaging, from folding boxes to cartons, trays, wrap-arounds, paper inliners and special shelf-ready packaging – the requirements for packaging material and processes are rising rapidly. Clean, energy-efficient and sustainable solutions are increasingly demanded in the industry – including in the development and application of adhesives.

Modern **Jowatherm®** and **Jowat-Toptherm®** hot melt adhesives play a major role in facilitating highly efficient processes as expected by processors. These high-performance adhesives impress with a high yield, excellent adhesion and clean processing. **Jowat®** adhesives have been established for many years in the different packaging processes and are highly valued by customers due to major economic benefits, such as reduced application amounts, minimised maintenance and less downtimes. **Jowat-Toptherm®** and **Jowatherm®** adhesives also show an excellent performance in very demanding processes. Due to short setting times and high initial strength, they facilitate a secure closure of the packaging, even at high feed speeds and in unfavourable pressing conditions – while resisting the challenging restoring forces of the material. **Jowat-Toptherm®** hot melts are characterised by a broad spectrum of adhesion and reliably join surfaces which are difficult to bond. The adhesives in granulate form are very colourfast in the melt, virtually odourless and can be dispensed easily with all established auto-feed systems.

Whether at high ambient temperatures during filling or transport, or at -40 °C in deep-freeze applications, powerful Jowat adhesives provide a reliable bond in extreme temperatures.

About half of all packaging manufactured worldwide comes into contact with food. Food safety has therefore always been a major focus of Jowat – from using suitable raw materials, meeting strict guidelines, as well as supporting our customers to ensure food safety compliance. So processors benefit from the comprehensive know-how of our enterprise as well as from food safe products. Jowat understands the challenges in the industry and provides the expertise necessary to meet the high requirements.

No matter what the requirements are in your packaging process, the modern adhesive products from Jowat provide a suitable solution for your application. Our permanent focus is to facilitate optimised manufacturing conditions and to meet the customer expectations in the best possible way.

## Jowat | Your partner in bonding

- Most helpful adhesive company
- Comprehensive technical service plus support in food safety
- Specialized in end-of-line packaging applications
- Trusted global supplier of well-known brands
- 100 year old family-owned enterprise | 1,200 employees | 5 plants in 4 countries on 3 continents



# Technical Information

## Application

For bonding cartons, trays and folding boxes in packaging processes.

## Directions for use

The Jowat hot melt adhesives shown in this document can be processed with all established tank melters as well as with tankless melting units. They can be used on automatic feed systems.

For a gentle processing, we recommend to increase the adhesive temperature gradually by 5 °C from the tank to the hose and to the nozzle (typical settings: 150 °C – 155 °C – 160 °C).

The properties of the substrates and the processing conditions will influence the processes of joining and bonding. Customer trials before use are therefore recommended. The materials to be bonded must be free of grease and dust and be dry. Ideal processing conditions are met by conditioned substrates. Minimum temperature should not be below 18 °C. Avoid draught.

## Cleaning

Preliminary cleaning while hot by scraping with a spatula (made of wood or another soft material). Remove any residues when cold with Jowat® Cleaner 402.40.

## Packaging

Standard packaging unit 25 kg bag; other units upon request.



## Tips & Tricks

### Adhesive transition to Jowat-Toptherm® products:

Transition from other established PO hot melts to **Jowat-Toptherm®** PO adhesives is easy and uncomplicated. Processors of EVA-based hot melts have to observe a few things when switching to adhesives based on PO. Our Application Technology Department and Application Specialists are fully equipped with the skills necessary to ensure a fast and smooth transition. We are ready to support you with our deep expertise and a top-quality advisory service.

### Generally, increasing the temperature of the adhesive also leads to:

- Lower viscosity (as a general rule, increasing the temperature by 20 °C reduces the viscosity by 50 %).
- Longer setting time and open time.
- Reduced stringing.
- Positive effect on adhesion.
- Increased thermal stress.

### How to minimise stringing:

- Use straight nozzles with drill holes and a short capillary length.
- Reduce distance between applicator head and substrate to a minimum (a few millimetres).
- Increase adhesive temperature.
- Choose bead length and positioning on the substrate according to available surface.
- Prevent draught.

### Parameters to adapt the application amount:

- Unit pressure (usually between 1.5 and 4.5 bar).
- Nozzle diameter (usually between Ø 0.31 and Ø 0.51 mm) and, if applicable, capillary length.
- Processing temperature and viscosity of the adhesive.
- For carton closing, the compressed adhesive bead should have a width of at least 8 mm (note: 1 m of hot melt bead, Ø 2 mm, weighs 2 – 3 g).

### Maintenance:

- Tear tests should be carried out in regular intervals to check the quality of the bond.
- The final strength of the bond should be tested again 24 hours after bonding.
- Check the adhesive amount and positioning of the adhesive bead in regular intervals.
- Store the adhesive in closed containers to prevent contaminations.
- Regularly check inline filters and equipment filters.



Product overview

The following table shows a selection of our hot melt adhesives from the **Jowat-Toptherm®** and **Jowatherm®** product series for bonding cartons, trays and folding boxes. The technical data, characteristics and field of application provided in the table outline the differences between the individual adhesives of the product portfolio. Our Application Technology Department and our Sales Representatives are on hand to provide advice and find the best adhesive for your particular application.

		BEST ALL-ROUNDER		MASTERS TOUGH CONDITIONS		BIO-BASED		LOW MOAH	
		Jowat-Toptherm® 851.10		Jowat-Toptherm® 851.15		Jowatherm® GROW 853.20		Jowat-Toptherm® 256.10	
Technical Data	Viscosity at 160 °C [mPas]	approx. 1,100		approx. 1,600		approx. 500		approx. 1,100	
	Processing temperature [°C]	140 - 180		140 - 180		120 - 150		140 - 180	
	Open time [s]	approx. 10		approx. 10		approx. 5		approx. 11	
	Setting time	very short		very short		very short		very short	
	Softening point ring & ball [°C]	approx. 110		approx. 115		approx. 110		approx. 110	
Characteristics	Low temperatures	+++		++(+)		++		+++	
	High temperatures	++(+)		+++		++		++(+)	
	Difficult surfaces	+++		++(+)		+(+)		+++	
	Adhesive tear-off	++(+)		++		+++		++(+)	
	Thermal stability	+++		+++		+++		+++	
	Restoring forces	++(+)		+++		++		++(+)	
	Approved for food contact according to	EU 10/2011, FDA 175.105		EU 10/2011, FDA 175.105		EU 10/2011, FDA 175.105		EU 10/2011, FDA 175.105	

The information given in this leaflet is based on practical experience and on results of tests in our laboratory, and does in no way constitute any guarantee of properties. In light of the huge diversity of materials and the fact that we have no influence either on the substrates or on the process, no liability may be derived from these indications nor from the recommendations made by our free technical advisory service. Customer trials are absolutely necessary. Before processing, please request the corresponding data sheet and comply with the indications in it!

+++ excellent ++ very good + good



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The information given in this leaflet is based on test results from our laboratories as well as on experience gained in the field, and does in no way constitute any guarantee of properties. Due to the wide range of different applications, substrates, and processing methods beyond our control, no liability may be derived from these indications nor from the information provided by our free technical advisory service. Before processing, please request the corresponding data sheet and observe the information in it! Customer trials under everyday conditions, testing for suitability at normal processing conditions, and appropriate fit-for-purpose testing are absolutely necessary. For the specifications as well as further information, please refer to the latest technical data sheets.

**Jowat – Kleben erster Klasse**  
**Jowat – first class bonding**

[www.jowat.com](http://www.jowat.com)

**Jowat**  
Klebstoffe

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