ZIEGLER

Data Sheet

SAFT-24

Shear Adhesion Failure Temperature

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easy to use – precise temperature control –
24 simultaneous measurements

Product Description

The ZIEGLER SAFT-24 (Shear Adhesion Failure Temperature or Resistance to shear from a standard surface) is a shear tester and was developed for vertical shear tests of self-adhesive materials on test panels and their ability to withstand high temperatures. In accordance with PTSC-17, a shear test is carried out with constantly increasing temperature. Samples are tested in the heating chamber for temperature control and monitoring.

The shear force tester tests the resistance of a pressure-sensitive adhesive to static loading in the plane of the label material. It provides information on the interpretation of the type of fracture, such as adhesive or cohesive fracture. An electric, remote-controlled lifting platform is integrated. This enables the uniform and simultaneous loading of all samples to be tested.

The test conditions are defined in advance. The SAFT tester corresponds to the specifications and test requirements of various institutions.

Model

ZIEGLER SAFT heating chamber for PDL: BINDER* heating chamber ZM240-230V-9110-0203 special production with built-in electrically operated lifting device.

Test Methods

- PSTC-17** Shear Adhesion of Pressure Sensitive Tape
- ASTM*** D 4498, Standard Test Method for Heat-Fail Temperature in Shear of Hot Melt Adhesives
- FINAT**** FTM 8 (without heat)
- Afera***** 5012 Self Adhesive Tapes Measurement of Static Shear Adhesion (without heat)

* Fa. BINDER GmbH

** Pressure Sensitive Tape Council

*** ASTM, American Society for Testing and Materials

**** Féderation internationale des fabricants et transformateurs d'adhésifs et thermocollants sur papiers et autres supports.

***** Afera, the European Association for the Self Adhesive Tape Industry

Software and Manuals

- ZIEGLER Software SAFT-24 for Microsoft® Windows® 10-11

- SAFT Tester device and SAFT-24 software manual

- Operating instructions for the BINDER heating chamber (BINDER manual M_ E2_04-2019_en)

Scope of Delivery

Heating chamber:	BINDER Model ZM240-230V-9110-0203 special production
Dimensions:	B 1035 mm x H 985 mm x T 900 mm
Total weight incl. lifting device, without weights:	180 kg
Heating chamber weight:	131 kg
Diameter exhaust pipe outside:	52 mm
Temperature range:	25 °C - 220 °C
Inside lighting:	30 W
Dimensions door window:	2x à 350 x 240 mm
Query of the switching contacts:	24-channel DIO-USB interface
Wall clearance behind:	min. 100 mm
Wall clearance lateral:	min. 160 mm

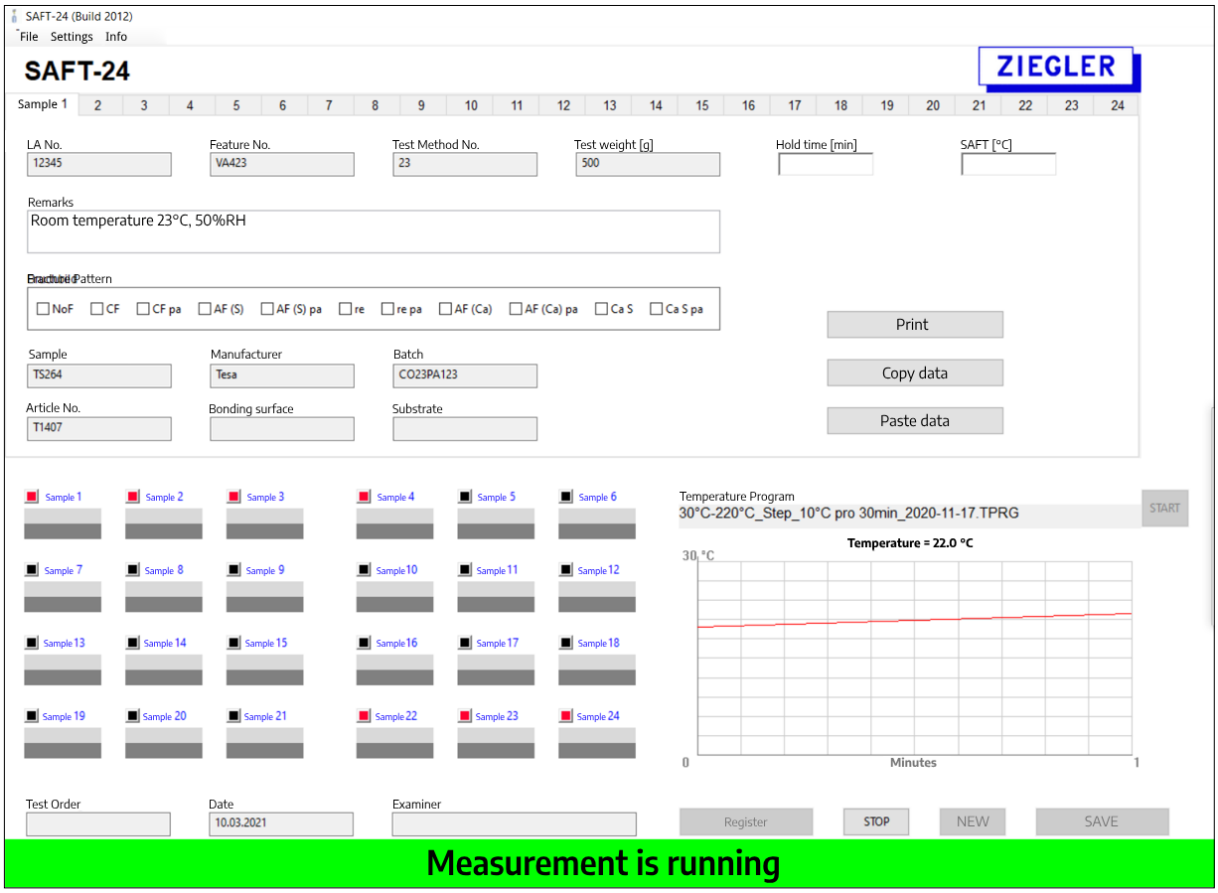
Lift drive:	24V-/2A
Data transfer:	RS422 USB interface
Voltage:	230 V (+/- 10 %) 50/60 Hz
Rated capacity:	2,7 kW
Connection:	Safety plug
Fuse:	16 A external
Country of Manufacture:	Germany

Test Points for Samples

- 1x lifting device with 24-speed switching unit
- 4 bridges for 6 specimens each, angle of inclination 2° to the vertical
- 2 guide rails for mounting in the cabinet
- 50 sample triangle
- 24 test weights 500g
- 24 test ring weights 500g

Software

ZIEGLER Software SAFT-24 for Microsoft® Windows® 10-11



The testing of the samples is carried out using the included SAFT-24 software. The program offers you maximum comfort when processing your data. The clear and intuitively designed user interface convinces by reducing the training to a minimum of time. Within the software, 24 test stations can be edited and checked individually.

More features:

- User specification of test properties
- Status overview of samples
- Real-time diagram of the temperature
- Extensive input options
- Excel export
- Printing the test report

Setup

The SAFT tester consists of a modified BINDER heating chamber, a PC and printer, as well as test beams, test weights, triangles and cylinders for test weights.

Electrical Control

- The heating chamber temperature is controlled through a built-in RS-422 USB interface connected to the PC.
- The individual test stations are monitored using a USB cable connected to the PC.

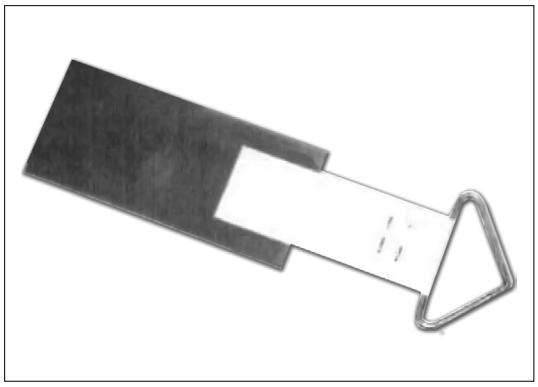
Controls

Power is supplied via a Schuko plug connection.

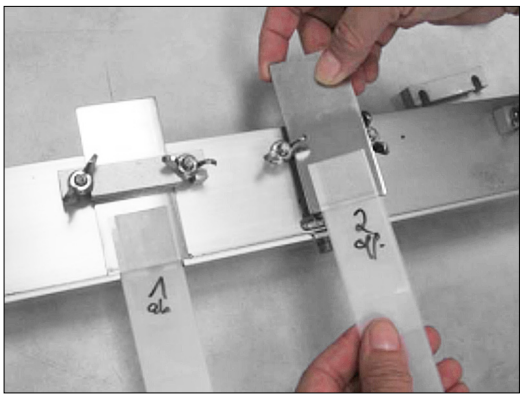
Test Procedure

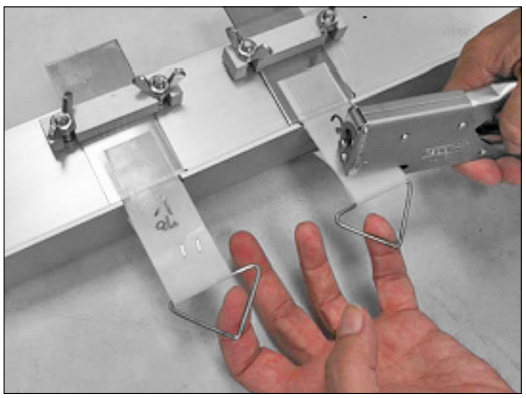
Before the SAFT heating chamber is started, the test specimens with the weights must be installed in the heating chamber.

1. Attach the prepared test specimens to stainless steel test plates with a 2 kg pressure roller (e.g. ZIEGLER hand roller according to FINAT).



2. Place the test plates with test specimens in the bridges and lightly fix them with the crossbeam and screws.





3. Fasten the triangle at the end of the specimen with a pair of pliers. When doing so, ensure that the distances from the lower edge of the bridge to the triangle are as equal as possible. Equal distances are important for the test process, this ensures that all weights hang sufficiently high in the guide sleeve in the SAFT heating chamber.

4. Insert test weights only into the sleeves/ cylinders that are to be tested.

5. Push in the first test beam to the rear. Raise the test platform until the weight hooks are loose in the triangles.

6. Gradually equip the SAFT heating chamber with the prepared bridges.

7. Raise the lift with the test weights until the hooks of the test weights are loose in the triangle of the triangle.

8. Prepare software for measurements.

9. Close the doors.

10. Turn on the SAFT heating chamber.

11. Start the SAFT-24 software on the PC.

12. Carry out the test and evaluation with the respective temperature test program of the PC software SAFT-24.

13. During the measurement, no operations may take place on the heating chamber.

14. After completing the measurement, turn off the main switch of the heating chamber

Manufacturer and Copyright

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Technical data and equipment are subject to change and correspond to the knowledge on the day of publication. They can be changed at any time without notice.