



# 58489

## Product Information

300µm black low temperature reactive structural bonding film

### Product Description

tesa® Low Temperature Reactive (LTR) 58489 is a reactive structural bonding film activated at moderate temperatures. This black double-sided tape has no backing. It is protected by a PE-coated paper liner.

It is activated by moderate heat and pressure applied during the assembly process.

### Product Features

- Extremely high bonding performance and reliability, even on slim bonding areas and thin design gaps
- Excellent shock resistance
- Activated at low temperature and pressure
- Sebum resistant
- Very low oozing ratio
- At room temperature tesa® LTR 58489 is not tacky.
- tesa® LTR 58489 is free of halogen and compliant with current RoHS directive.

### Application Fields

tesa® LTR 58489 is especially recommended for structural bonding of temperature sensitive substrates:

- Bonding of fabrics
- Bonding of plastics
- Mounting of sensitive electronic parts

### Technical Information (average values)

The values in this section should be considered representative or typical only and should not be used for specification purposes.

### Product Construction

- |                    |   |                   |        |
|--------------------|---|-------------------|--------|
| • Backing          | none  | • Total thickness | 300 µm |
| • Type of adhesive | low temperature activated reactive adhesive | • Color           | black  |
| • Type of liner    | PE-coated paper                             |                   |        |

### Properties/Performance Values

- |                               |                       |           |           |
|-------------------------------|-----------------------|-----------|-----------|
| • Bonding strength (push-out) | 7.5 N/mm <sup>2</sup> | • Low VOC | very good |
|-------------------------------|-----------------------|-----------|-----------|

For latest information on this product please visit <http://l.tesa.com/?ip=58489>



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### Additional Information

Technical recommendations:

tesa® LTR 58489 is not self adhesive. It is activated by heat and pressure over a certain interval. The following values are recommendations for bond line parameters to start with.

#### 1. Pre-lamination:

During pre-lamination, laminate the adhesive tape onto the first component.

Setting:

- Temperature<sup>1</sup> 50 – 60 °C
- Pressure<sup>2</sup> 1 – 3 bar
- Time 5 – 20 s

Short-time exposure to 60°C bond line temperature during pre-lamination does not impact final bonding potential.

#### 2. Bonding:

Remove the liner from tape after the pre-lamination step.

Position the second component. Apply temperature and pressure for the bonding time to reach sufficient bonding strength.

Setting:

- Temperature<sup>1</sup> 75 – 110 °C
- Pressure<sup>2</sup> 2 – 4 bar
- Time 10 – 480 s

Temperature, pressure and time will depend upon the type and thickness of the substrates. Generally, thicker substrates or lower bonding temperatures will require longer bonding times. Short cycle times can be achieved at 110 °C bond line temperature. For activation at lower temperatures, increase the heat-press time or combine a short heat-press step with oven curing. To reach maximum bonding strength, surfaces should be clean and dry. Allow at least 1-2 hours dwell-time after bonding before performance testing. Final bonding strength will be reached after 24 hours.

Bonding strength values were obtained under standard laboratory conditions (Material: PC/PC; bonding conditions: temperature (jig) = 90 °C; pressure = 5 bar; time = 120 sec).

Storage:

tesa recommends storage in original packaging in cool and dry conditions. Low Temperature Reactive should not be exposed to more than 35°C before bonding (during transport, storage and converting).

The minimum guaranteed shelf life is 15 months after coating. For the actual shelf life please refer to the best before date on the label in the log roll core.

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### Additional Information

<sup>1</sup> 'Pre-lamination' and 'Bonding' temperature refer to the data that is measured in the bond line.

<sup>2</sup> 'Pre-lamination' and 'Bonding' pressure refer to the force that is transferred from jig surface directly to the bonding area.

### Disclaimer

tesa® products prove their impressive quality day in, day out in demanding conditions and are regularly subjected to strict controls. All information and recommendations are provided to the best of our knowledge on the basis of our practical experience. Nevertheless tesa SE can make no warranties, express or implied, including, but not limited to any implied warranty of merchantability or fitness for a particular purpose. Therefore, the user is responsible for determining whether the tesa® product is fit for a particular purpose and suitable for the user's method of application. If you are in any doubt, our technical support staff will be glad to support you.



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