



tesa[®] 58729

Product Information

250 µm low temperature reactive structural bonding film

Product Description

tesa[®] LTC 58729 is a reactive structural bonding film activated at moderate temperatures. This black film has a 100 µm thick PET 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 thin design gaps
- Activated at low temperature and pressure
- Excellent shock resistance
- Chemical resistant
- Strong reliability performance especially on metals
- Low oozing ratio
- tesa[®] LTC 58729 is free of halogen and compliant with current RoHS directive.

Application Fields

tesa[®] LTC is especially recommended for structural bonding of various substrates inside electronic devices:

- Structural bonding of metals
- Mounting of sensitive electronic components

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 | PET | • Total thickness | 250 µm |
| • Type of adhesive | low temperature
activated reactive
adhesive | • Color | black |
| • Type of liner | PE-coated paper | | |

Properties/Performance Values

- | | |
|-------------------------------|-----------------------|
| • Bonding strength (push-out) | 5.5 N/mm ² |
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Additional Information

Technical recommendations:

For latest information on this product please visit <http://l.tesa.com/?ip=58729>



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tesa® LTC 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 film onto the first component. Setting:

- Temperature¹ 50-60 °C
- Pressure² 1-5 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 the film after the pre-lamination step. Position the second component. Apply temperature and pressure for the bonding time to reach sufficient bonding strength. Setting:

- Temperature¹ 75 – 110 °C
- Pressure² 5 – 10 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.

Bonding strength values were obtained under standard laboratory conditions (Material: PC/PC; bonding conditions: temperature = 90 °C; pressure = 10 bar; time = 300 sec).

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.

Storage

- tesa recommends storage in original packaging in cool and dry conditions.
- tesa® LTC should not be exposed to more than 35°C at any time before bonding (during transport, storage and converting). Long term storage should remain below 25°C.
- The shelf life is 12 months after production. For the actual shelf life please refer to the best before date on the label in the log roll core.
- More details are available in our transportation guideline.

¹ 'Pre-lamination' and 'Bonding' temperature refer to the data that is measured in the bond line. ² 'Pre-lamination' and 'Bonding' pressure refer to the force that is transferred from jig surface directly to the bonding area.



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