

Product Information

## TECASINT 5000 – Cost-effective polyimide types for the semiconductor industry

### TECASINT 5000 - Product family

The TECASINT 5000 product family is based on non-melting, amorphous polyimides that are characterised by high thermal stability. Furthermore outstanding dimensional stability and exceptional mechanical properties are additional advantages for typical parts in the semiconductor industry. TECASINT 5000 products do not melt or soften even if they are briefly exposed to temperatures up to 330°C.

### Typical properties

With a higher glass transition temperature compared to competitive products, this offers a technical solution for moderate temperature requirements up to 280°C. TECASINT 5000 offers significant advantages versus compression molded polyamidimides (PAI) and polyetherimides (PEI).

- High creep strength
- Excellent dimensional stability
- High ball indentation and Rockwell hardness
- Very good wear resistance
- Long lifetime

### TECASINT 5111

Unfilled grade with good mechanical properties, better toughness and machinability compared to previous grade. Electrically insulating.

### TECASINT 5051

30% glassfibre reinforced grade with low thermal expansion and high glass transition temperature. Excellent wear resistance and good dimensional stability. Electrically insulating.

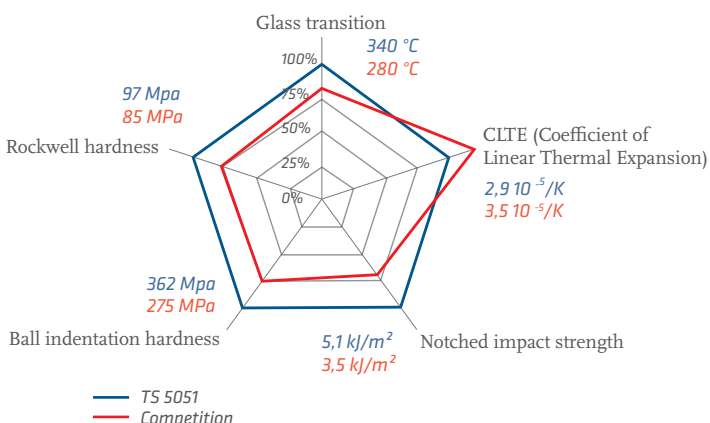
### TECASINT 5501 (SD-grade)

Electrostatically dissipative polyimide grade with a surface resistance of  $10^6$  to  $10^8$  ohm. Low thermal expansion.

### TECASINT 5511 (SD-grade)

Electrostatically dissipative polyimide grade with a surface resistance of  $10^9$  to  $10^{12}$  ohm.

Both SD-grades are characterised by low thermal expansion and good dimensional stability.



**Sensor housing TECASINT 5011:**  
Thermal resistance up to 300 °C.  
Very good electrical insulation.

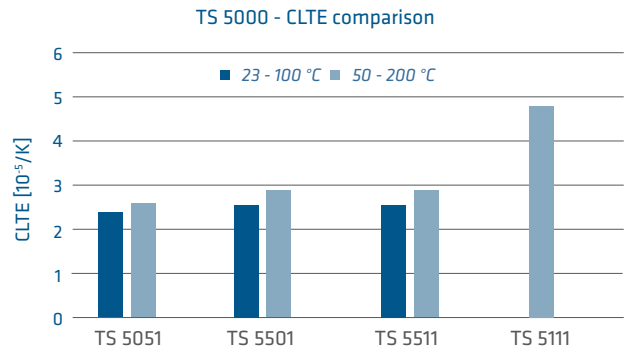
## Applications and target industries

Typical applications can be found in the semiconductor and electronics industry and in the field of automation.

TECASINT 5000 products are used for contactors, lead backers and test sockets for microchip test equipment

These materials are mainly intended for use in Wafer handling systems and for sensitive electronic components.

## Thermal expansion



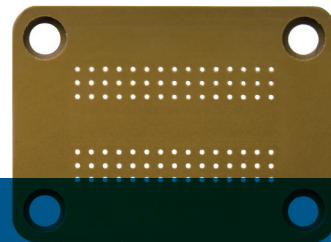
## Summary

The TECASINT 5000 family offers cost-effective solutions for high temperature requirements, unrivalled compared to other thermoplastic materials.

For applications with even higher requirements in terms of temperature and dimensional stability we recommend our TECASINT 2000 and TECASINT 4000 product families.

## Test socket

TECASINT 5011:  
Thermal resistance up to 300 °C.  
High strength.  
Good electrical insulation.



## Lead Backer

TECASINT 5051:  
Low thermal expansion.  
Thermal resistance up to 300 °C.  
Wear resistant.

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