



Product information

## TECASINT Polyimides Low friction and less wear at high pv-values

### TECASINT for high-performance tribological applications

TECASINT is recommended for demanding bearing applications such as journal bearings and roller bearings for use at temperatures ranging from -270°C to above 300°C.

The superior tribological properties exhibited by TECASINT makes it an ideal choice for applications which see high mechanical loads, high sliding contact speeds - even in dry conditions - where other high performance materials fail.

Test results for TECASINT show low friction and less wear, resulting in higher lifetime along with reduced maintenance. Another benefit is weight saving versus conventional materials.

### Benefits using TECASINT

- pv-values up to 30 MPa • m/s
- Less Wear
- Low friction
- Higher lifetime
- Dry running properties
- Maintenance free
- Noise vibration harshness (NVH)
- Energy savings

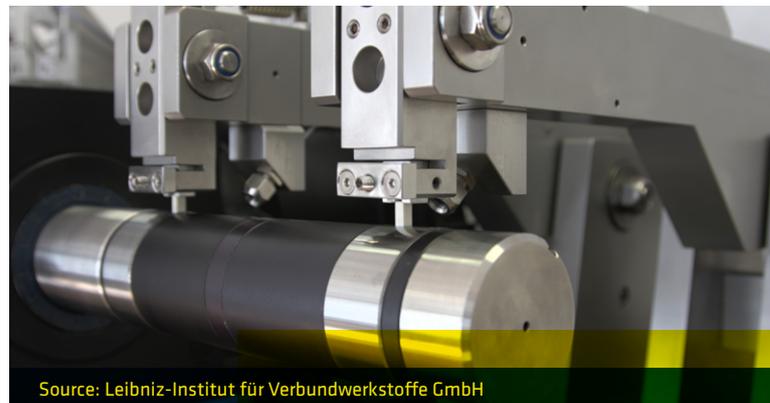
Therefore, TECASINT can successfully substitute metal and ceramic systems in bearing applications.

### Typical applications

- Bushings and bearings
- Ball bearing cages
- Linear guides
- Thrust washers
- Piston rings
- Valve seats and valve bodies
- Components for textile machines

### General TECASINT properties

- Excellent friction and wear properties
- High strength in the temperature range from -270°C up to +300°C
- Outstanding creep resistance
- Good toughness for cryogenic temperatures down to -270°C
- High purity and low outgassing for vacuum applications



Source: Leibniz-Institut für Verbundwerkstoffe GmbH

## Lubricated TECASINT-grades

### TECASINT 2021

Grade modified with 15% graphite with good tribological properties. Low friction and less wear. Standard grade for tribological applications.

### TECASINT 2061

Grade modified with graphite and PTFE. Reduce stick-slip-behaviour under low sliding speed.

### TECASINT 2391

Grade modified with 15% MoS<sub>2</sub>. Excellent wear and friction properties under vacuum condition. For the use in space, in vacuum or inert gas environments.

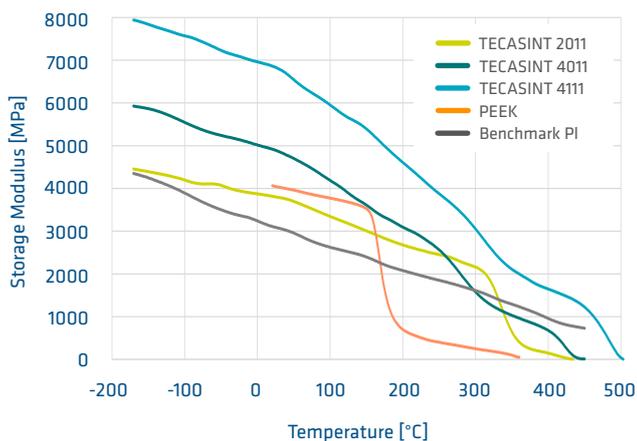
### TECASINT 4021

Grade modified with 15% graphite. High heat resistance. Good impact strength and elongation. Less wear particularly under high sliding speed and mixed friction.

### TECASINT 4121

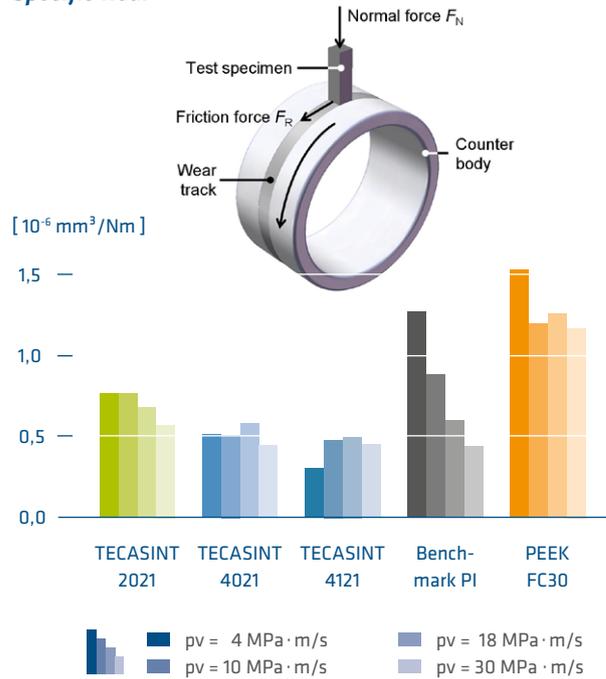
Grade modified with 15% graphite. Highest heat distortion temperature for TECASINT. Less specific wear under high load.

## 3 point bending test, 1 Hz, 2K/min



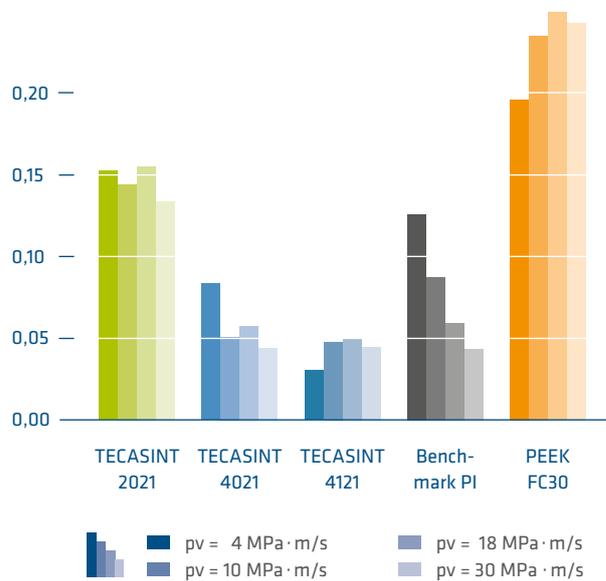
## Block on ring tribometer

### Specific wear



## Block on ring tribometer

### Dynamic friction



## Contact

Ensinger Sintimid GmbH  
 Ensingerplatz 1  
 4863 Seewalchen  
 Austria  
 Phone +43 7662 88788 401  
 tecasint@ensingerplastics.com  
 tecasint.com