Ensinger

Product Information

TECASINT Polyimide
Outstanding Characteristics for Aerospace Applications

TECASINT offers high purity and low outgassing values in accordance with ESA-regulation. Furthermore TECASINT shows excellent heat distortion temperature up to 470 °C and is suitable for use at operating temperatures up to 350 °C. High mechanical strength and low creep even at elevated temperatures above 250 °C dictates TECASINT for applications where other high performance plastics will fail.

Applications with stringent requirements for low coefficient of friction and wear under cryogenic and vacuum conditions can be realised with TECASINT 2391.

Low outgassing

Tests in compliance with ESA regulation (ECSS-Q-70-02) indicate no condensable impurities for the following TECASINT grades. Test reports are available upon request.

Typical TECASINT properties

- → High strength over a wide temperature range from -270 °C to +350 °C
- → HDT / A up to 470 °C
- → High compressive and creep strength
- → Excellent friction and wear properties even without lubrication
- → Good cryogenic properties
- → High purity and low outgassing under vacuum

TECASINT 2011: Wire reel

TECASINT 1011

Grade with good temperature resistance up to 280 °C. High stiffness for use in electrical insulation systems in satellite applications such as spacers and thermal washers.

TECASINT 2011

Good toughness and stiffness for use in electrical insulation systems in satellite applications. Better thermal ageing and lower outgassing compared to TECASINT 1011.

TECASINT 2391

TECASINT 2391 contains molybdenum disulphide which shows excellent tribological properties in the space environment. Ideal candidate for gears and bearings.

TECASINT 4011

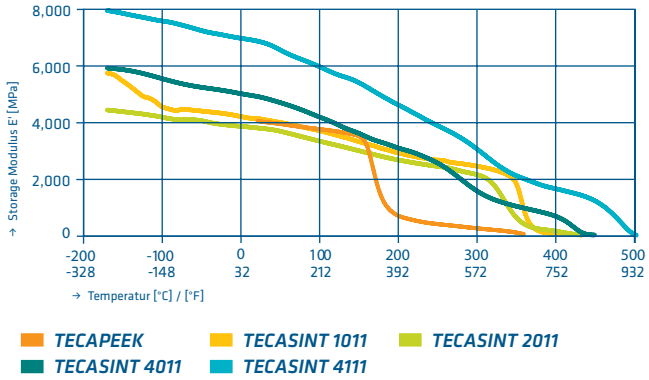
High temperature grade with good toughness and excellent dimensional stability for use in high demanding aerospace applications such as valve seats in propulsion systems.

TECASINT 4111

Dedicated for space missions with highest thermal requirements. Lowest thermal ageing for all TECASINT grades. High stiffness without any fillers. Excellent heat distortion temperature of 470 °C. Lowest water absorption. Ideal for satellite components exposed to extreme heat.

Storage Modulus

3 point bending test – 1 Hz, 2 K/min



Flight Heritage Missions

Material	Mission	Applications
TECASINT 1011	BepiColombo / Mercury Planetary Orbiter	Thermal washers and spacers
TECASINT 2011	Estcube 1	Wire reel
TECASINT 2011	Electrical solar wind sail for space propulsion	Wire reel for metal wire
TECASINT 2011	Coarse Earth Sun Sensor (CESS)	Thermal spacer
TECASINT 2391	Sentinel 5 Precursor (S5P)	Cone inlay
TECASINT 2391	Electrical solar wind sail for space propulsion	Hub for wire reel
TECASINT 4011	Mission Eutelsat 172 B / SES-12	Components for ionic propulsion
TECASINT 4111	NORSAT 2	Bracket for antenna

TECASINT 1011: „BepiColombo“

More information: ensingerplastics.com/en/aircraft-aerospace

Contact

Ensinger Sintimid GmbH
Ensingerplatz 1
4863 Seewalchen
Austria
Phone +43 7662 88788 0
tecasint@ensingerplastics.com
tecasint.com

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