



TRANSIMAX™ COATING

Transparent hard silicon nitride coating

Overview

Entegris uses its innovative, low-temperature Plasma Enhanced Chemical Vapor Deposition (PECVD) process to deposit a family of silicon nitride coatings for various industrial applications, including semiconductor equipment OEMs. The coating is also suitable for high-temperature oxidation/corrosion protection of ceramic materials. The TranSiMax™ coating has good barrier properties and thus can be used for encapsulation/minimize permeation. The coatings have very high electrical resistivity can be deposited on a wide variety of substrates. The coatings are amorphous and exhibit high reflectance/high emissivity in the extreme ultraviolet, making them suitable for EUV optical components.



Applications

- High emissivity requirements during semiconductor wafer processing
- Oxidation/corrosion protection

Features

- Optically transparent
- Excellent breakdown voltage

Specifications

Substrate:	Compatibility	Most metals and ceramics
	Size	Up to 91 cm (36")
	Geometry	Any shape, including complex geometries
Structure:	Amorphous	
Temperature:	Deposition	<150°C (302°F)
	Use	650°C (1202°F)
Coating thickness:	A few nm to over 100 μm	
Electrical resistivity:	~10 ¹³ Ω-cm	
Hardness:	1200 HV	
Dielectric strength:	80 V/micron	
Purity:	99.95%	
Wear resistance:	Very good	
Corrosion resistance:	High-temperature oxidation resistance in air up to 650°C (1202°F)	
	Excellent aqueous corrosion resistance	

For More Information

To learn more about how Entegris' high-purity specialty coatings help customers enhance yields, improve productivity and meet future technological needs, call Entegris at +1 781-538-8745.

To review Entegris' specialty coatings offering, visit Entegris' website at www.EntegrisSpecialtyCoatings.com.

Terms and Conditions of Sale

All purchases are subject to Entegris' Terms and Conditions of Sale. To view and print this information, visit www.entegris.com and select the Legal Notices link from the footer.

Entegris®, the Entegris Rings Design®, Creating a Material Advantage® and TranSiMax™ are trademarks of Entegris, Inc.

ENTEGRIS, INC.

Corporate Headquarters | 129 Concord Road | Billerica, MA 01821 USA
Customer Service Tel. +1 952 556 4181 | Customer Service Fax +1 952 556 8022
In North America 800 394 4083 | www.entegris.com