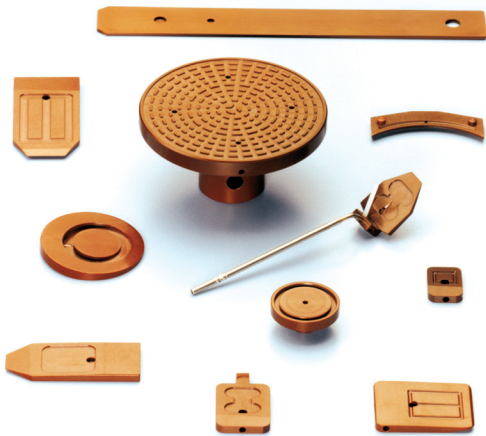


# DuPont™ Vespel®

## POLYIMIDE PARTS AND SHAPES

### Consistent Performance for High Yields



DuPont™ Vespel® polyimide parts come with a documented record of reliability and durability in wafer handling, wafer processing, IC handling and testing, and other semiconductor manufacturing operations. As an alternative to ceramics, quartz and unproven types of plastics, Vespel® parts reduce ownership costs with longer life in the chamber and extended maintenance intervals.

#### Super Clean to Improve Die Yields

Vespel® parts give you the cleanliness needed to deliver consistently high yields. DuPont process research and manufacturing controls have kept pace with the fabricator's needs for cleaner materials. Vespel® parts are exceptionally clean, providing extremely high purity, negligible trace metal content, and virtually no particulate shedding plasma and insignificant outgassing. To meet tightening contamination requirements, DuPont is continuously improving the cleanliness of Vespel® parts.

#### Strong and Tough to Resist Damage

Vespel® parts provide a unique combination of strength, toughness and low wear to withstand the rigors of repeated handling, cleaning cycles, mechanical abuse and permanent deformation.

#### Withstands High Temperatures

Vespel® parts serve reliably at temperatures up to 288°C (550°F) in many applications. For limited periods, they can endure temperatures of 482°C (900°F) or more. Elevated temperatures have little effect on mechanical properties such as tensile strength, elongation, flexural modulus and compressive strength.



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### Low Wear and Friction

With low friction and superior wear performance over a broad temperature range, Vespel® parts are a good choice for sliding contact and applications where interfacial temperatures are high.

### Holds Close Tolerances

Compared with other polymer components, Vespel® parts provide superior dimensional stability. Vespel® has no observable softening or melting point, and its coefficient of thermal expansion is low. Creep resistance is high.

### Resists Chemical Attack

Vespel® parts are compatible with most gases typically used in key semiconductor process vessels, including epitaxial reactors, photoresist developers, dry etchers and ion implanters. Most solvents, etchants, electronic chemicals, vacuum fluids and hydraulic oils have no significant effect on Vespel® parts.

### First-class Electrical Insulators

Vespel® parts provide the excellent dielectric properties required for semiconductor processing components.

For more information on Vespel® or other DuPont Semiconductor Materials Solutions, please contact your local representative:

#### Americas

DuPont Engineering Polymers  
Pencader, Delaware  
Tel: 800 222 VESP

#### Asia

DuPont K.K.  
Tokyo, Japan  
Tel: 03 5434 6989

#### Europe

DuPont de Nemours  
Belgium  
Tel: 32 15 441384

One DuPont: Your Source for Semiconductor Materials

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