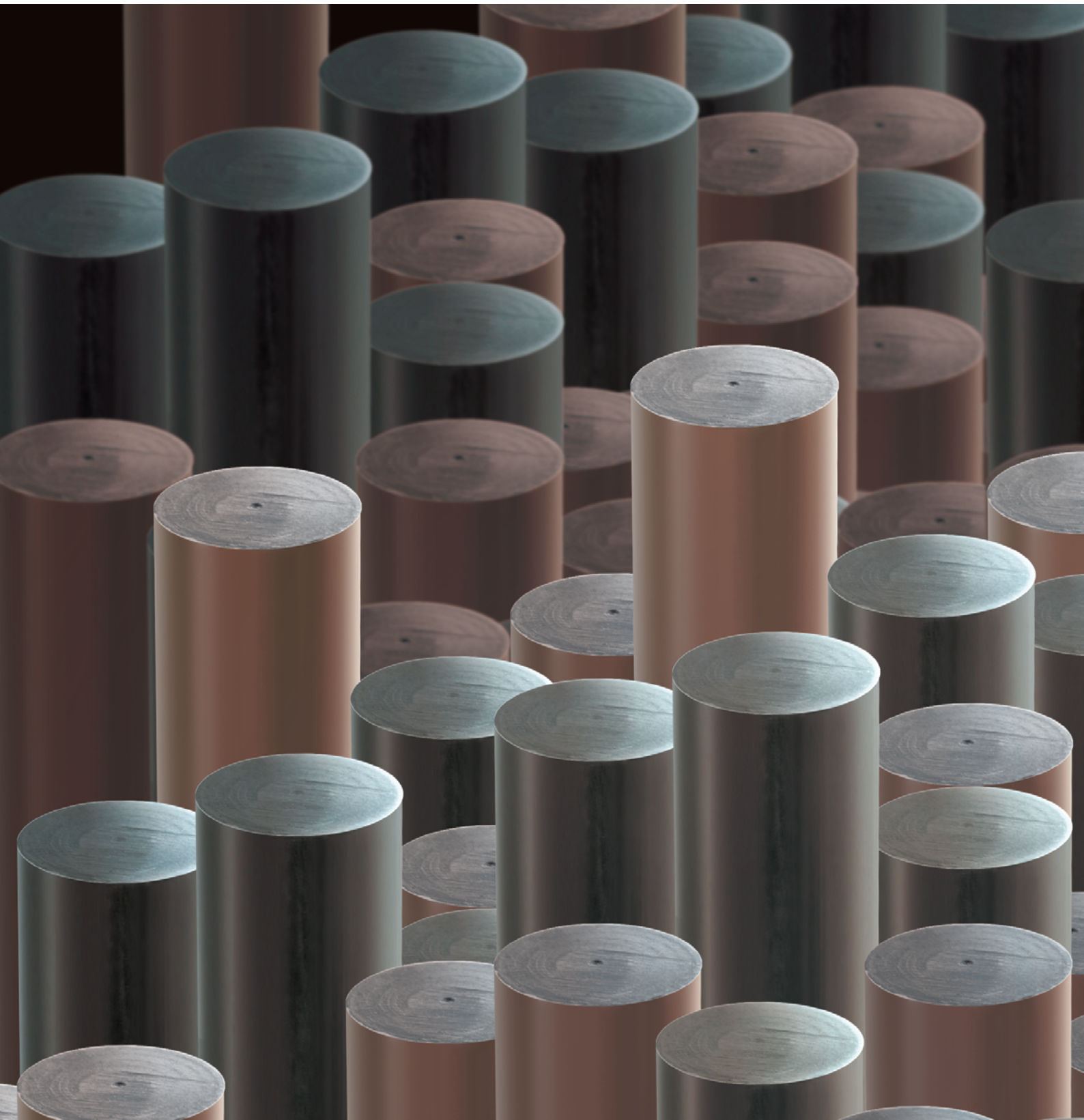




# DuPont™ Vespel® Shapes

Dependable Performance in Demanding Applications



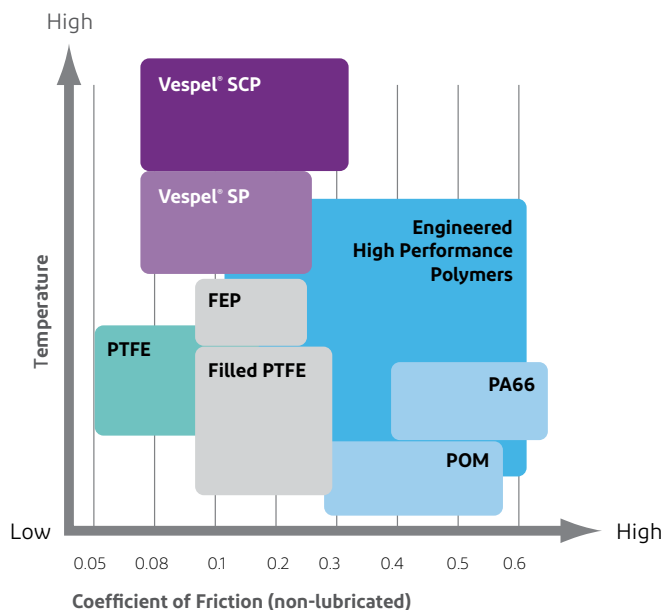
# DuPont™ Vespel® shapes perform beyond conventional material

**If you need dependable performance critical to your operations...**



Vespel® shapes can be machined into seals and rings, bushings, thrust washers, balls, test sockets or any shape where you need excellent long-term performance.

Vespel® shapes come in various grades to provide a balance of friction and temperature resistance in demanding applications.



Vespel® shapes provide outstanding design flexibility combined with a unique combination of the physical properties common among engineered plastics, metals and ceramics.

## **Vespel® shapes offer:**

- Proven performance when used continuously in air up to 300 °C (572 °F) and for short excursions to as high as 500 °C (932 °F).
- Low wear and friction at high pressures and velocities (lubricated or unlubricated)
- Outstanding creep resistance
- Strength and impact resistance
- Exceptional chemical resistance
- Excellent machinability

Vespel® shapes enable superior performance in demanding physical environments, where metals or ceramics may not meet your specification.

## **As an alternative to metals, Vespel® shapes offer:**

- Reduced weight
- Design flexibility
- Less wear

## **As an upgrade from ceramics, Vespel® shapes offer:**

- Increased ease of machinability
- Impact resistance
- Low design cost

## **Unlike other high performance engineered plastics, Vespel® shapes offer:**

- Higher temperature compatibility
- Creep resistance
- Better wear and friction

# Specify the most suitable DuPont™ Vespel® product to meet your application requirements

**For more than 50 years, DuPont™ Vespel® parts and shapes have delivered innovative solutions for demanding applications.**

## **Vespel® SP-1 for physical and electrical properties**

- superior wear, maximum strength and elongation
- minimal electrical and thermal conductivity
- low outgassing with high purity

## **Vespel® SP-3 for unlubricated sealing and low wear in vacuum or dry environments**

- maximum wear and friction resistance
- ultra-low outgassing

## **Vespel® SP-21 for balanced low wear and physical properties**

- low-friction properties work with or without lubrication
- long elongation and high stiffness

## **Vespel® SP-211 for low coefficient of friction and unlubricated wear**

- lower coefficient of friction even without lubrication than SP-21
- excellent creep resistance

## **Vespel® SP-22 for low wear and dimensional stability**

- enhanced resistance to wear and friction
- minimal thermal expansion
- oxidative stability

## **Vespel® SP-202 for electrical conductivity with low wear rates**

- electrostatic charge removal
- maintains tolerances in high heat and through multiple cycles

## **Vespel® SCP-5000 for strength and hardness**

- chemical resistance over broad temperature range
- high wear resistance with low outgassing and high purity
- thermal oxidative stability

## **Vespel® SCP-5009 for high temperatures and excellent compressive strength**

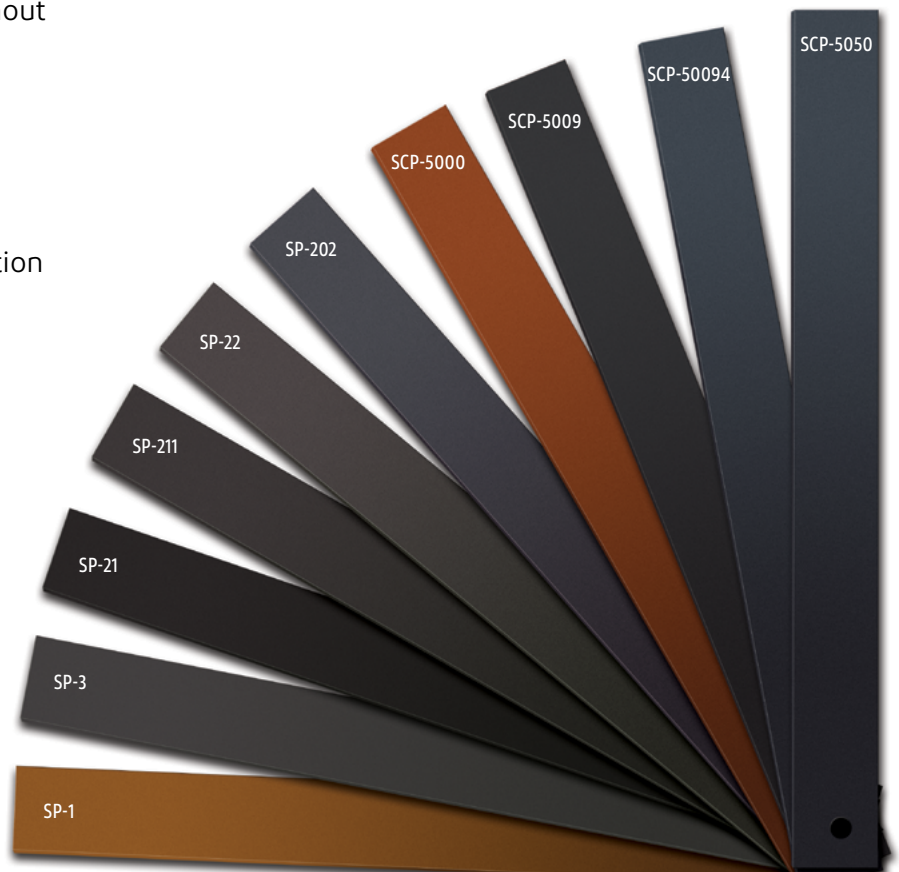
- lower coefficient of friction without lubrication
- excellent sealing capability

## **Vespel® SCP-50094 for high temperatures and wear resistance**

- superior wear
- thermal oxidative stability

## **Vespel® SCP-5050 for high temperatures, wear resistance and exceptional coefficient of friction**

- improved high temperature and wear resistance
- coefficient of thermal expansion similar to steel





## Specify Authentic DuPont™ Vespel® shapes

Authentic DuPont™ Vespel® shapes are a combination of material composition, geometric size/shape and process method. They are manufactured only by DuPont and sold only through authorized distributors of DuPont™ Vespel®. The DuPont™ Vespel® parts and shapes business uses compression and isostatic molding methods to manufacture shapes. These two methods produce shapes with different properties. For example, a rod machined from compression molded plaque will not perform the same as a rod produced by isostatic molding. Therefore, it is essential that you ensure you are getting the product you require or performance may suffer.

We do not guarantee availability of the specified shapes in all the stated sizes below. For example, an OD range of 165–470 mm (6.5–18.5 in) does not imply that any OD within this range is available for sale. Contact an authorized distributor if you require any of the sizes below or if you have other size requirements.

### Vespel® S Family Sizes

Shape	Grade	Size Range*
Rod**	SP-1, SP-21, SP-22, SP-211 and SP-3	OD: 3.1-82.5 mm (0.125-3.25 in) Max. Length: 965.2 mm (38 in)
	SCP-5009, SCP-50094 and SCP-5050	SCP-5009: OD: 6.3-38.1 mm (0.25-1.5 in) SCP-50094: OD: 6.3-50.8 mm (0.25-2 in) SCP-5050: OD: 6.3-82.5 mm (0.25-3.25 in) Max. Length: 914.4 mm (36 in)
	SCP-5000	OD: 6.3-69.8 mm (0.25-2.75 in) Max. Length: 482.6 mm (19 in)
Tube	SP-1, SP-21, SP-22, SP-211 and SP-3	OD: 40.6-317.5 mm (1.6-12.5 in) ID: 27.9-266.7 mm (1.1-10.5 in) Max. Length: 838.2 mm (33 in)
Plaque Square**	SP-1, SP-21, SP-22, SP-211, SP-3 and SP-202	Max. Size: 254 x 254 mm (10 x 10 in) Max. Thickness: 50.8 mm (2 in)
Plaque Disk	SP-1	OD: 165.1-469.9 mm (6.5-18.5 in) Thickness: 22-59.8 mm (0.87-2.35 in)
	SCP-5000	OD: 215.9-414 mm (8.5-16.3 in) Thickness: 25-46 mm (.98-1.8 in)
Plaque Ring	SP-1, SP-21 and SCP-5000	OD: 125-545 mm (4.9-21.5 in) ID: 55.9-419.1 mm (2.2-16.5 in) Thickness: 1.2-63 mm (0.05-2.5 in)

\*There are some special sizes available not included on this list. Not all sizes listed are available in all grades

\*\*Rods and square plaque are available through distribution.

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