



## **DOW Styrene-DVB Copolymers**

### Plastic Ball Bearings

DOW Styrene-DVB Copolymers are free flowing, spherical beads made from tough styrenic polymers that have been cross linked with divinylbenzene. They are sold as clear to colorless opaque spheres that are often used as plastic ball bearings. Typical physical and chemical properties are shown in the table below.

DOW Styrene-DVB Copolymers are useful for many applications, such as:

- Lubrication
- Void space maintainers
- Grinding media
- Absorption and decolorization
- Precision fillers

#### **Lubrication**

Because of their hardness and spherical nature, they act like tiny, plastic ball bearings and have found use in many lubrication applications. One such application is well drilling, where the copolymer is added to the drilling mud for enhanced lubrication in difficult rock formations and in horizontal drilling. Other customers use Styrene-DVB Copolymers to “float” sheet metal in their work area.

#### **Void Maintainers**

Packed spheres naturally have a void space between the beads of about 1/3 of the volume of the container. Styrene-DVB Copolymers are used as proppant in oil field fracturing due to their excellent crush strengths and natural void area.

#### **Grinding Media**

Styrene-DVB Copolymers are also useful as grinding media due to their good crush strengths and spherical nature. They have found application in sand blasting and deburring of metal and plastic parts.

#### **Absorption**

Styrene-DVB Copolymers are made of polymerized styrene so they act as absorption media for a wide variety of organic compounds. They can be particularly useful for removing higher molecular weight oils. Because of their relatively low cost, they are often used as a disposable absorption media.

#### **Precision Fillers**

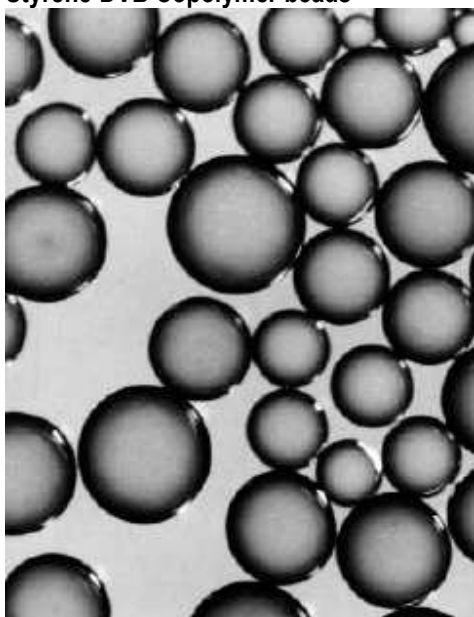
Styrene-DVB Copolymers are made from cross linked polystyrene, so they will not melt at elevated temperatures. The beads can be used as whole beads or ground and used in a wide variety of filler applications. The ground copolymer is often used as a mold release agent.

### Typical Physical and Chemical Properties†

Physical appearance	Opaque spheres
Color	Clear to colorless
Chemical composition	Copolymer of styrene and divinylbenzene
Particle size	18×50 mesh 18×100 mesh Other sizes may be available on request
Ash content	Available as low ash (< 0.03%)
Crush strength	1,500 - 2,000 g per bead

† These properties are typical of the product and should not be confused with or regarded as specifications.

### Styrene-DVB Copolymer beads



#### DOWEX Ion Exchange Resins For more information about DOWEX resins, call the Dow Liquid Separations business:

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Warning: Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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