

## SP Series™ SHP5500-1

### Ultra High Molecular Weight Polyethylene (UHMWPE) Fine Particle Powder

#### CHARACTERISTICS

- Ultra High Molecular Weight
- Chemical Resistance
- High Melt Point
- Superior Hardness
- Impact Resistance
- Scuff and Abrasion Resistance
- Narrow Particle Distribution
- No Residual Chemicals

#### APPLICATIONS

- Sintered Filters
- Activated Carbon Filters

#### CUSTOMIZE

- Particle Size
- Narrow Cut Particle Size Distribution

#### Description

SP Series™ SHP5500-1 is a ultra high molecular weight high density polyethylene (UHMWHDPE) polymer in fine particle powder form. These unique materials exhibit very high toughness. SP Series™ materials are pure polyethylene with broad regulatory compliance and contain no residual chemicals or additives that may interfere with some application requirements. SP Series™ powders are well suited for use in water, chemical and gas filter applications. SHP5500-1 can be independently sintered into a filter or used as a binder for activated carbon.

Property	Test Method	Unit	Test Value
Average Molecular Weight	TWO H Method	g/mol	5.0 X 10 <sup>6</sup>
Density	ISO 1183-3 ASTM D 1505	g/cm <sup>3</sup>	0.930
Melting Point (DSC)	ISO 3146 ASTM D 3418	°C	135
Mean Average Volume Weighted Particle Size	Laser Diffraction	µm	60 ~ 90
Maximum Particle Size	Sieve Test	Mesh / µm	100 / 150 Pass
Powder Bulk Density	ISO 60 ASTM D1895	g/cm <sup>3</sup> lb/ft <sup>3</sup>	0.40 24.97
Tensile Strength	ASTM D 638	kg/cm <sup>2</sup>	> 170
Elongation	ASTM D 638	%	> 300
Shore D Hardness	ISO 868 ASTM D2240		62
Visual Appearance	Naturally White Powder		
Packaging	25 Kg PP woven Kraft paper bag/ PE inner bag		

The product described herein is manufactured by TWO H Chem Ltd.  
SP series™ is a trademark of TWO H Chem Ltd. The above data and results obtained are average values from laboratory testing and are not to be construed as specifications.

#### **Safety and Handling Considerations**

Material Safety Data (MSD) sheets for are available from TWO H Chem Ltd. and its distributors. MSD sheets are provided to help customers satisfy their own handling, safety, and disposal needs, and those that may be required by locally applicable health and safety regulations, such as OSHA (U.S.A.), or WHMIS (Canada). MSD sheets are updated regularly; therefore, please request and review the most current MSD sheets before handling or using any product. All users of our products are urged to retain and use the MSDS. The following comments apply only to materials which are used unmodified and processed according to good manufacturing practices; additives, processing aids or other materials used in formulating, fabrication and/or finishing steps have their own safe-use profile and must be investigated separately.

**WARNING: Polymer dust particles in the atmosphere are combustible and present a potential explosion hazard. Prevent dust accumulations and dust clouds. Dust layers can be ignited by spontaneous combustion or other ignition sources. Keep away from heat, sparks, flame and all other ignition sources. Keep container closed. Clean up dust accumulations. For proper safety of personnel and property, the container should be emptied in compliance with NFPA 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries." Processes using spray application or fluidized bed operation should be in accordance with NFPA 33, "Standard for Spray Application Using Flammable and Combustible Materials." Exercise caution when dispensing this product in or around combustible environments as the possible occurrence of a static discharge could ignite dust or vapors and cause a fire or explosion. Evaluate the need for grounding of equipment and container. Modification or use of the product in a way that enhances the dispersion of the particles in the atmosphere could significantly increase the potential for an explosion.**

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