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Coatings, Adhesives and Sealants

COATINGS, PAINTS AND INKS



Matting and Flattening Agents and Anti-Corrosion Pigments for Coatings, Paints and Inks

For manufacturers of coatings, paints and inks, the difficulties associated with meeting stricter environmental standards, adapting to new application or print technologies, and fulfilling the rigorous performance demands of end-users never stop.

For the past 50 years, PPG has helped customers meet those challenges by offering a diverse line of precipitated silica products for use in a variety of liquid, powder and gel-based coatings, paints, lacquers and varnishes:

- LO-VEL™ silica flattening and matting agents reduce the gloss of a variety of products including coatings, paints, lacquers, varnishes and inks, while providing lower viscosity and better stir-in capability. A broad array of non-treated and wax-treated products, covering a wide range of particle sizes, grind values and surface areas have been designed to lower manufacturing costs through improved incorporation times, dispersion stability and anti-settling behavior in solvent-borne and water-borne coatings.

Wax-Treated Silica Flattening and Matting Agents

	Particle Size* (µm)	Grind Value		N ₂ (BET-5) Surface Area (m ² /g)	Applications / Benefits
		Hegman	Fineness (µm)		
Lo-Vel 66	6	6	25	170	Smooth finishes, excellent coating package stability.
Lo-Vel 8100	8	6.5	19	240	High flattening efficiency, excellent settling resistance, heat-age

					stability and performance consistency.
<i>Lo-Vel 2023</i>	8	6	25	250	High flattening efficiency, good resistance to overgrind, low tendency to hard settle.
<i>Lo-Vel 2033</i>	8	6	25	250	Best transparency in clear coats, high flattening efficiency, good resistance to overgrind, package stability.
<i>Lo-Vel 2010</i>	11	5.5	32	250	High flattening efficiency, good resistance to overgrind, low tendency to hard settle.
<i>Lo-Vel 2018</i>	12	5.5	32	250	Gives films a gloss:sheen ratio of close to 1:1, resistance to overgrind.

* Median particle size by laser diffraction

Non-Treated Silica Flattening and Matting Agents

Product	Particle Size* (µm)	Grind Value		N ₂ (BET-5) Surface Area (m ² /g)	Applications / Benefits
		Hegman	Fineness (µm)		
<i>Lo-Vel 27</i>	6	6	25	170	Smooth finishes, low oil absorption, easy stir-in (including post-addition).
<i>Lo-Vel 6200</i>	8	6.5	19	715	Highest flattening efficiency, high porosity, resistance to overgrind, smooth finishes, stir-in grade.
<i>Lo-Vel 275</i>	8	6	25	175	Low oil absorption, easy stir-in

					(including post-addition).
<i>Lo-Vel</i> 2003	9	6	25	240	High flattening efficiency, resistance to overgrind, stir-in grade.
<i>Lo-Vel</i> 6000	10	5.5	32	750	Highest flattening efficiency, high porosity, resistance to overgrind, stir-in grade.
<i>Lo-Vel</i> 2000	10	5.5	32	240	High flattening efficiency, resistance to overgrind, stir-in grade.
<i>Lo-Vel</i> 29	10	5	38	170	Gives films a gloss:sheen ratio close to 1:1, stir-in grade.
<i>Lo-Vel</i> 39A	11	3.5	57	170	Gives films a gloss:sheen ratio close to 1:1, surface texture, stir-in grade.
<i>Lo-Vel</i> HSF	13	5	38	170	High flattening efficiency, gives films a gloss:sheen ratio close to 1:1, surface texture, stir-in grade.

* Median particle size by laser diffraction

- INHIBISIL™ silica-based anti-corrosion pigments are used in solvent-based and water-borne protective metal finishes. Available in three grades, they are highly effective, environmentally responsible alternatives to chrome-based and other toxic anti-corrosion pigments.

***Inhibisil* Anti-Corrosion Pigments**

Product	Particle Size* (µm)	Grind Value		Calcium Oxide (%)	pH	Applications / Benefits
		Hegman	Fineness (µm)			

<i>Inhibisil</i> 33	3	7.1	11	3	9.5	Highly effective for thin-film, acid-cured primers, designed for use in solvent and waterborne systems, heavy metal-free, non-toxic.
<i>Inhibisil</i> 73	3	7.1	11	7	10	Higher calcium oxide content, elevated protective effectiveness for thin-film primers (solvent and waterborne), heavy metal-free, non-toxic.
<i>Inhibisil</i> 75	5	6.6	18	7	10	Higher calcium oxide content, elevated protective effectiveness for high-film-build primers (solvent and waterborne), heavy metal-free, non-toxic.

* Median particle size by laser diffraction

Lo-Vel and *Inhibisil* are trademarks of PPG Industries Ohio, Inc.

Related Resources

[Coatings Application Overview](#)

[Lo-Vel Non-Treated Silica Summary Sell Sheet](#)

[Lo-Vel Wax-Treated Silica Summary Sell Sheet](#)

[Lo-Vel 6200 Silica Sell Sheet](#)

[Lo-Vel 8100 Silica Sell Sheet](#)

[Lo-Vel 8100 Silica Performance Data Sheet](#)

[Inhibisil 33 Silica Sell Sheet](#)

[Inhibisil 73 Silica Sell Sheet](#)

[Inhibisil 75 Silica Sell Sheet](#)

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