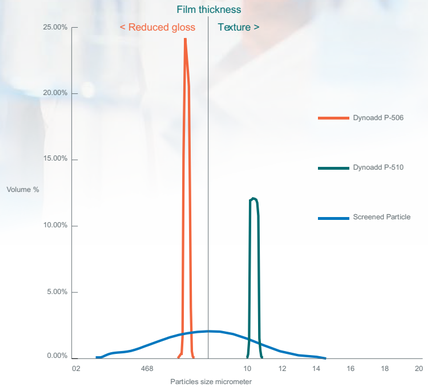
The monodisperse advantage

This graph illustrates how wasteful and ineffective traditional particle additives can be compared with Dynoadd monodisperse particles. With traditional particle technology up to 80% of the additive can be wasted and potentially have a detrimental effect on the quality of the desired surface finish.



Polygon Chemie AG · Solothurnerstr. 121 · 4600 Olten, Switzerland
Phone +41 62 205 50 20 · Fax +41 62 205 50 30
mail@polygon.ch · www.polygon.ch

dynoadd®
by dynea

High Performance

INDUSTRIAL COATINGS ADDITIVES

dynea®

Monodisperse Crosslinked PMMA Particle Technology

Texture / Structure Additives

a different approach

What is monodisperse technology?

Particle additives produced using traditional technology result in products containing a range of particle sizes, which often require screening to obtain the particular size of particles required - a wasteful and time consuming process.

The technology behind Dynoadd monodisperse polymethyl methacrylate particles not only provides perfect spherical particles but also every particle produced is of exactly the same size as every other particle.

So, if your application calls for a 6 or a 10 µm particle then that is what you get; each and every particle creating the desired effect with no waste, which means you need less particle additive and so you reduce your costs.

Our PMMA particles are available in 6, 10, 15, 20, 30, 40 and 60µm sizes

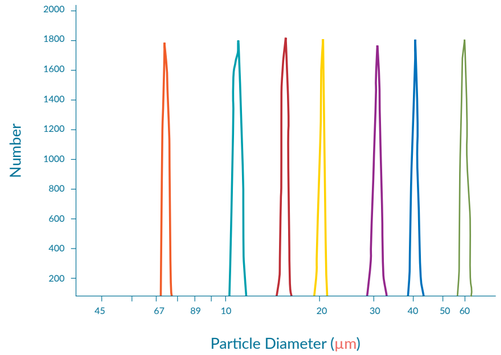
What effects can be created with Dynoadd particles?

Their main uses are to:

- Generate a uniform textured effect
- Create a wide range of textured appearances
- Modify the feel of a surface
- Reduce gloss without haze in clearcoats
- Improve burnish resistance
- Added as uniform spacer

Texture and gloss properties may be independently controlled by combining different particle sizes and varying quantities.

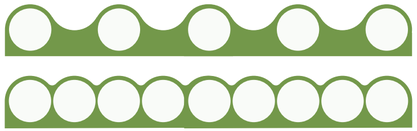
Differential Number



Why choose Dynoadd monodisperse particles?

- Every particle added counts
- Available in 6, 10, 15, 20, 30, 40 and 60µm sizes
- Low addition levels 0.25% - 2.5%
- Achieve required finish at a lower cost
- Optically transparent particles
- Improved reproducibility / quality
- Heat resistant
- UV and weather resistant
- Solvent resistant
- Easy to change the appearance of a formulation

How to create structure and feel



How is gloss affected?

How to create structure and feel

A particle size larger than the dry film thickness gives structure and creates surface texture. A certain distance between the particles is needed in order to see and feel the structure, thus, increasing the number of particles added will result in a smoother surface.

How is gloss affected?

Particle sizes smaller than the dry film thickness give a smooth feel and reduce gloss. The more particles you add, the higher the degree of matting achieved. Burnish resistance is improved with increasing addition independant of particle size.

What volume of particles is needed ?

How much you need is related to how many particles you need on a surface to get the effect you want. The number of particles per gramme of product is a direct function of the particle size. The smaller the particle size the more particles per gramme.

Typical addition levels

	Average particle size(µm)	Typical addition (weight %)
P-506	6	0.25 – 0.75%
P-510	10	0.5 – 1.5%
P-515	15	0.5 – 1.5%
P-520	20	1 – 2%
P-530	30	1.5 – 2.5%
P-540	40	2 – 3%
P-560	60	2-4%