



烟台优联新材料有限公司

YANTAI YOLIAN ADVANCED MATERIALS CO.,LTD

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Charge Modified Agent CM-138 (Substitute of Lupareen 308)

1.Product Introduction:

The biggest drawback of electrostatic coating is the "Faraday" effect caused by electrostatic shielding, which makes it extremely difficult to coat the edges and concave and convex parts. At the same time, due to the accumulation of a large number of free electrons in the electrostatic coating on the coated surface, the increase of the coating film thickness will lead to the repulsion and ignition phenomenon, and affect the further deposition of powder coating, reduce the powder coating's spraying efficiency. CM-138 can effectively avoid these defects, it not only can reduce the Faraday effect, but also can effectively increase spraying ratio, improve spraying effect on edges and corners. This product can completely replace the American imported Lupareen 308 charge enhancing agent.

Most charge modified agents sold on the market are composed of quaternary ammonium salt or quaternary ammonium imidazoline and other compounds. Although these products also have a certain charge modified effect, but there are obvious following limitations: easy to cause yellowing of the coating film (more serious after baking); Catalytic effect on the surface affects leveling property of the epoxy powder coating system (due to the catalysis of ammonium).

Charge modified agent CM-138 is one kind of macromolecular compound specially prepared by a special method. It has a very strong surface charge modified effect, no catalysis for all powder coating, never affect coating film leveling, not to cause the film yellowing, on the contrary it also has the effect of promoting the leveling, so by using it ,more filler could be used and spraying effect is better.

2.Technical Parameter:

Appearance	Fine white particle or powder
Melting range	68-75

3.Test Effect:

Add CM-138 with the dosage 0.1%, 0.2%, 0.3% of the total formula weight or add other similar products for a test comparison, spraying rate test is defined by the weight



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difference before and after spraying process, yellowing index as ΔB , the appearance use visual method, the test formula is as follows:

	Parameter	CM-138	Similar Item1	Similar Item2
0.1%	Spraying ratio	5.1%	2.3%	3.3%
	Yellowing index Δb	$\Delta b0.05$	$\Delta b0.21$	$\Delta b0.11$
	Appearance	Normal flow	Normal flow	Normal flow
0.2%	Spraying ratio	10.2%	5.6%	6.7%
	Yellowing index Δb	$\Delta b0.03$	$\Delta b0.35$	$\Delta b0.41$
	Appearance	Flow is ok	Flow is ok	Flow is ok
0.3%	Spraying ratio	28%	10.3%	12.3%
	Yellowing index Δb	$\Delta b0.04$	$\Delta b0.65$	$\Delta b0.81$
	Appearance	Flow is ok	Affect flow	Affect flow

Test Conclusions:

1. This product will not cause yellowing because it is not an ammonium product;
2. There is no acceleration, so it will not affect the leveling;
3. Add 0.1%-0.3% before extrusion. Please determine the specific dosage according to the experiment.

4.Application and Precautions:

It should be noted that when produce metal powder coating, please add the right dosage carefully according to the specific demand. It can be applied to all powder coating systems by extruding with other materials.

5.Storage and Package:

Store in a cool and dry place, pay attention to moistureproof, valid for two years.
25kg per Kraft bag lined with polythene bag.